Colombia

The Economic Foundation of Peace

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Marcelo M. Giugale, Olivier Lafourcade, and Connie Luff
Washington D.C. and Mexico City
October 2002
Preface

Colombia faces a future of challenge—and of opportunity. Long besieged by conflict, it has been unable to free itself from the shackles of poverty. Rich in human and natural endowments, the country has yet to become a prosperous, equitable nation. The scourge of violence has repeatedly tested the resilient effort of its people. Even its impressive record of economic growth seems less remarkable when one sees the poor, the homeless, and the refugees. It need not be like that. And the time has come to leave the past behind.

The resounding election victory of President Uribe on May 26, 2002 and his underlying mandate for change have opened the door for Colombians to think beyond war—to articulate a shared vision and a path toward it. Economic development will be an integral part of that path. Jobs, education, and a clean environment need to be as much a foundation of peace as security and political agreement. The World Bank was thus honored by the new authorities’ invitation to publish this set of policy notes which, from an independent point of view, provides an account of Colombia’s development agenda—the problems, many of the reasons behind those problems, and some options to address them. The analysis here does not provide definite answers. Rather, the intention is to contribute to the national debate, to Colombians’ own search for solutions.

The required reforms would be difficult for any government. For a government trying at the same time to end a decades-old war, they are even harder. Current regional and international conditions are not facilitating matters, and are unlikely to facilitate them in the near future. The financial crisis in Argentina is restricting access to external funding for other emerging market countries, including Colombia. Sagging global growth is dampening Colombia’s exports. Prospects of military action in the Middle East have heightened the volatility of oil prices. Terrorism and its financing have fostered the illegal drugs trade. Yet, the cost of inaction seems unbearably high: without reform, the Colombian economy risks spiraling into a cycle of recession, increasing poverty, and intensifying conflict.

The government of President Uribe is determined to address, head on, the double challenge of peace and reform. In the few months since taking office, the new administration has rallied support for some major changes in policy direction—for example, in the fiscal area. We at the World Bank stand ready to support the government’s efforts. This is central to our institution’s mission of poverty reduction. And, more personally, it is central to our staff’s desire to see Colombia succeed.
Finally, I wish to express our gratitude to the Colombian authorities for giving us the privilege of being part of their country's quest for development, and to the editors, authors and producers of this book.

David de Ferranti
Vice President
Latin-America and Caribbean Region
Washington, D.C.
October 2002
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Acronyms and Abbreviations

ACODAL  Asociación Colombiana de Ingeniería Sanitaria y Ambiental
ACOLGEN  Asociación Colombiana de Generadores, Syndicate of Colombian Electricity Generators
ACP  Asociación Colombiana de Petroleo, Association of Oil and Gas Companies
ACPM  p. 14 of Taxation Note
ADBs  Agricultural Development Bonds
ADT  Average daily traffic
AFP  Administradora de Fondos de Pensiones, Pension Fund Managers
AGD  Accountant General's Department
AGO  Attorney General's Office
ALM  Asset and Liability Management
ALMACAFE  Almacenes Generales de Depósito de Café S.A.
APU  Agricultural Production Unit
ARP  Administradoras de Riesgos Profesionales, Administrators of Professional Risks
ARS  Administradora de Régimen Subsidiado, Administrator of the Subsidized Regime
ASOCODIS  Asociación Colombiana de Distribuidores, Colombian Distribution Companies Association
AVSC  Association for Voluntary Surgical Contraception
BANCAFE  Commercial Bank in Colombia
BANCOLDEX  Banco de Comercio Exterior de Colombia, S.A. (the export bank)
BANRURAL  Banco Nacional de Crédito Rural (Mexico)
BaR  Budget-at-risk
BCH  Banco Crédito Hipotecario
BIBOR  Bogotá Inter-Bank Operations Rate
BOD  Biochemical Oxygen Demand
BOMT  Build, operate, maintain, and transfer contracts
BOT  Build-Operate-Transfer
BRI  Bogotá River Interceptor
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>BSE</td>
<td>Bovine spongiform encephalopathy (&quot;mad cow&quot; disease)</td>
</tr>
<tr>
<td>B2B</td>
<td>Business-to-business</td>
</tr>
<tr>
<td>CAA</td>
<td>Centro de Atención Ambulatoria, Centre for Ambulatory Care</td>
</tr>
<tr>
<td>CAF</td>
<td>Corporación Andina de Fomento</td>
</tr>
<tr>
<td>CAIPs</td>
<td>Centros de Atención Integral al Preescolar</td>
</tr>
<tr>
<td>CAJANAL</td>
<td>Caja Nacional de Previsión Social, Government Employees Pension Fund</td>
</tr>
<tr>
<td>CAMEL</td>
<td>Capital/Assets/Management/Earnings/Liquidity (an international prudential and regulatory diagnostic tool for assessing financial soundness of banks)</td>
</tr>
<tr>
<td>CAN</td>
<td>Comunidad Andina</td>
</tr>
<tr>
<td>CAPRECOM</td>
<td>Caja de Previsión Social de Comunicaciones</td>
</tr>
<tr>
<td>CARBOCOL</td>
<td>Carbones de Colombia</td>
</tr>
<tr>
<td>CARs</td>
<td>Corporaciones Autonomas Regionales, Autonomous Regional Corporations</td>
</tr>
<tr>
<td>CAS</td>
<td>Country Assistance Strategy</td>
</tr>
<tr>
<td>CASA</td>
<td>Corporación Casa de la Mujer</td>
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<tr>
<td>CAV</td>
<td>Corporaciones de Ahorro y Vivienda, Housing Savings and Loan Associations</td>
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<tr>
<td>CC</td>
<td>Cajas de Compensación, Compensation Associations</td>
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<tr>
<td>CCF</td>
<td>Caja de Compensación Familiar, Family Compensation Fund</td>
</tr>
<tr>
<td>CCI</td>
<td>Corporación Colombia Internacional</td>
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<tr>
<td>CDM</td>
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<td>CEDAW</td>
<td>United Nations Committee on the Elimination of Discrimination Against Women</td>
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<td>CEFA</td>
<td>Centro de Estudios Ganaderos y Agrícolas</td>
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<td>CEJ</td>
<td>Corporación Excelencia en la Justicia</td>
</tr>
<tr>
<td>CENCOA</td>
<td>Central de Cooperativa Agraria, Central Agrarian Cooperative</td>
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<td>CENICAFE</td>
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<td>CEPAL</td>
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<td>CESU</td>
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<td>CGR</td>
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<td>CICADE</td>
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<td>CMO</td>
<td>Collateralized Mortgage Obligation</td>
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<td>Acronym</td>
<td>Description</td>
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<td>Consejo Nacional de Seguridad Social en Salud, National Council of Social Security in Health</td>
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<td>CODENSA</td>
<td>The Bogotá distribution company</td>
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<td>Fundación Colombiana Francisco José de Caldas para el Fomento de las Ciencias</td>
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<td>Consejo Superior de Política Fiscal</td>
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<td>Comisión Nacional de Política, Económica y Social, National Commission for Economic and Social Policy</td>
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<tr>
<td>COP</td>
<td>Colombian pesos</td>
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<td>CORPOICA</td>
<td>Corporación Colombiana de Investigación Agropecuaria</td>
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<tr>
<td>CPI</td>
<td>Consumer price index</td>
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<td>CPS</td>
<td>Caja de Previsión Social, Social Health Insurance Fund</td>
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<tr>
<td>CRA</td>
<td>Comisión Reguladora de Agua Potable y Saneamiento Básico, Water Regulatory Commission</td>
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<td>CRE</td>
<td>Comisión de Regulación de Electricidad</td>
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<td>CRECE</td>
<td>Centro Regional de Estudios Cafeteros y Empresariales</td>
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<td>Center for Reproductive Law and Policy</td>
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<td>CREG</td>
<td>Comisión de Regulación de Energía y Gas</td>
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<td>DANSOCIAL</td>
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<td>Defined contribution</td>
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<td>DESEPAZ</td>
<td>Program Programa Desarrollo, Salud y Paz</td>
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<td>Dirección General de Crédito Público, General Directorate for Public Credit</td>
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<td>DHS</td>
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<td>DIAN</td>
<td>Dirección de Impuestos y Aduanas Nacionales, National Tax and Customs Administration</td>
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<td>Abbreviation</td>
<td>Description</td>
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<td>DNP</td>
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<td>Department of Prevention and Attention of Disasters</td>
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<td>DRI</td>
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<td>DTF</td>
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<td>Empresa de Acueducto y Alcantarillado de Bogotá</td>
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<td>EAP</td>
<td>Economically active population</td>
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<td>EC</td>
<td>European Community</td>
</tr>
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<td>ECAT</td>
<td>Traffic Accidents and Catastrophic and Terrorist Events</td>
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<tr>
<td>ECD</td>
<td>Early childhood development</td>
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<tr>
<td>ECHO</td>
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<tr>
<td>ECOGAS</td>
<td>Empresa Colombiana de Gas, a public gas transmission enterprise</td>
</tr>
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<td>ECOPETROL</td>
<td>Empresa Colombiana de Petróleos, State oil company</td>
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<td>Empresa Colombiana de Recursos para la Salud</td>
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<td>ECV</td>
<td>Encuesta de Calidad de Vida, Survey of Living Conditions</td>
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<td>EDA</td>
<td>Enfermedad Diarreica Aguda, Acute Diarrhea Disease</td>
</tr>
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<td>EDUSAT</td>
<td>Mexico's Educational Broadcast System</td>
</tr>
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<td>Empresa de Energía de Bogotá (Bogotá electricity holding company-controls EMGESA and CODENSA)</td>
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<td>ELN</td>
<td>National Liberation Army</td>
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<td>EMAs</td>
<td>Environmental Management Agencies</td>
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<td>EMCALI</td>
<td>Empresas Municipales de Cali (Cali water, electricity and telephone distribution municipal company)</td>
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<td>EMGESA</td>
<td>Generation company under EEB</td>
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<td>EN</td>
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<td>Encuesta Nacional de Hogares, National Household Survey</td>
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<td>Empresas Promotoras de Salud, Entities of Health Promotion</td>
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<td>Energy Sector Management Assistance Program</td>
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<td>ESP</td>
<td>Autonomous public service enterprises</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
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<tr>
<td>ESS</td>
<td>Empresa Solidaria de Salud, Health Solidarity Entity</td>
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<td>Energy Sector Technical Assistance project</td>
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<td>ETB</td>
<td>Empresa de Telecomunicaciones de Bogotá</td>
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<td>ETIS</td>
<td>Entidad Territorial Indígena, Territorial Indigenous Entity</td>
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<td>European Union</td>
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<td>FAEP</td>
<td>Petroleum Stabilization Fund, Fondo de Ahorro y Estabilización Petrolera</td>
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<td>FAG</td>
<td>Fondo Agropecuario de Garantías</td>
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<tr>
<td>FAO</td>
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<td>FAOSTAT</td>
<td>Food and Agricultural Organization Statistics</td>
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<td>FARC</td>
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<td>FEC</td>
<td>Fondo de Crédito Educativo</td>
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<td>FEN</td>
<td>Financiera Energetica Nacional (the energy sector bank)</td>
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<td>FES</td>
<td>Fundación para la Educación Superior, Financiera (a finance company for educational funding)</td>
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<td>FINAGRO</td>
<td>Fondo para el Financiamiento del Sector Agropecuario</td>
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<td>FINDETER</td>
<td>Financiera de Desarrollo Territorial</td>
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<td>Fideicomiso Institudo en Relacion con la Agricultura (en el Banco de Mexico)</td>
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<td>Fondo Nacional de Café, National Coffee Fund</td>
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<tr>
<td>FNC</td>
<td>Fondo Nacional de Calamidades</td>
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<td>FNUAP</td>
<td>Fondo de Poblacion de las Naciones Unid</td>
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<td>Fondo de Desarrollo de Educación Superior</td>
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<td>Fondo de Garantías de Instituciones Financieras, Financial Institutions Guarantee Fund</td>
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<td>FONADER</td>
<td>Fondo Nacional para el Desarrollo Rural</td>
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<td>FONCO2PETROPTOS</td>
<td>Pension fund of port workers</td>
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<td>Costa Rica National Fund for Coffee Stabilization</td>
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<td>FONPET</td>
<td>Fondo de Pensiones Territoriales, National Fund for Regional Pensions</td>
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<td>FONPRECON</td>
<td>The pension fund for members of Congress</td>
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<td>FOPEP</td>
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<td>Fondo para la Reconstruccion y el Desarrollo Social del Eje Cafetero</td>
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<td>FOSIT</td>
<td>Programa Para el Fortalecimiento del Sistema de Información Financiera Territorial, Territorial Financial Information System</td>
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<td>FOSYGA</td>
<td>Fondo de Solidaridad y de Garantía, Solidarity Fund</td>
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<td>Fondo de Estabilizacion de la Cartera Hipotecaria</td>
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<td>FSAP</td>
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<td>Fiscal Strengthening Loan Matrix</td>
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<td>Abbreviation</td>
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<td>Fund for Pension Solidarity</td>
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<td>GDP</td>
<td>Gross domestic product</td>
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<td>GEF</td>
<td>Global environment facility</td>
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<td>GNP</td>
<td>Gross national product</td>
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<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>GWh</td>
<td>Gigawatt-hour</td>
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<tr>
<td>HBI</td>
<td>Hogares de Bienestar Infantil</td>
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<td>HCBs</td>
<td>Hogares Comunitarios de Bienestar</td>
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<tr>
<td>IAvH</td>
<td>Instituto de Investigaciones Alexander von Humboldt</td>
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<tr>
<td>ICA</td>
<td>Impuesto de Industrias y Comercio</td>
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<td>ICA</td>
<td>International Coffee Agreement</td>
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<tr>
<td>ICBF</td>
<td>Instituto Colombiano de Bienestar Familiar, Colombian Family Welfare Institute</td>
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<td>ICETEX</td>
<td>Instituto Colombiano de Credito Educativo y Estudios Técnicos en el Exterior, The National Scholarship Institute</td>
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<td>ICFES</td>
<td>Instituto Colombiano de Fomento para la Educación Superior</td>
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<tr>
<td>ICO</td>
<td>International Coffee Organization</td>
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<tr>
<td>ICR</td>
<td>Incentivo a la Capitalización Rural</td>
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<td>ICRC</td>
<td>International Committee of the Red Cross</td>
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<tr>
<td>ICT</td>
<td>Information and communication technologies</td>
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<tr>
<td>ICVs</td>
<td>Indices de Calidad de Vida, Quality of Life Indicators</td>
</tr>
<tr>
<td>IDB</td>
<td>Inter-American Development Bank</td>
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<td>IDEAM</td>
<td>Instituto de Mercadeo Agropecuario, National Hydrology, Meteorology and Environmental Studies Institute</td>
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<td>IDEMA</td>
<td>Instituto de Mercadeo Agropecuario</td>
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<tr>
<td>IDP</td>
<td>Internally displaced population</td>
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<td>IEA</td>
<td>International Association for the Evaluation of Education</td>
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<td>IFI</td>
<td>Instituto de Fomento Industrial (the State Industrial Development Bank) (the national development bank)</td>
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<td>Information infrastructures</td>
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<td>International Institute for Environment and Development</td>
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<td>International Labour Organization</td>
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<td>International Monetary Fund</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>INAT</td>
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<td>Índice de Desarrollo Municipal, Municipal Development Index</td>
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<tr>
<td>INDERENA</td>
<td>Instituto Nacional de Recursos Naturales Renovables y Medio Ambiente, National Institute of Natural Renewable Resources and Environment</td>
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<td>Instituto de Geociencias y Minas</td>
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<td>Instituto Nacional de Salud, National Institute of Health</td>
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<td>INURBE</td>
<td>Instituto Nacional para la Vivienda de Interés Social y la Reforma, Urbana; National Institute of Social Interest, Housing, and Urban Reform</td>
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<td>Instituto Nacional de Vías, National Highway Institute</td>
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<td>International Organization for Migrations</td>
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<td>IPC</td>
<td>Consumer price index</td>
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<td>Implicit pension debt</td>
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<td>IPR</td>
<td>Intellectual property rights</td>
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<td>Instituciones Prestadoras de Salud</td>
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<td>Infección Respiratoria Aguda, Acute Respiratory Infection</td>
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<td>Interconexión Eléctrica S.A.</td>
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<tr>
<td>ISAGEN</td>
<td>ISA Generación, a major, state-owned, power producer</td>
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<td>ISS</td>
<td>Instituto de Seguro Sociales, Institute of Social Security</td>
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<tr>
<td>IUD</td>
<td>Intrauterine device</td>
</tr>
<tr>
<td>kbps</td>
<td>Thousands of barrels per day</td>
</tr>
<tr>
<td>kWh</td>
<td>kilowatt-hour</td>
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<tr>
<td>LAC</td>
<td>Latin America and the Caribbean</td>
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<tr>
<td>LFR</td>
<td>Law of Fiscal Responsibility</td>
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<tr>
<td>LIBOR</td>
<td>London Inter-Bank Operations Rate</td>
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<td>Liquified petroleum gas</td>
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<td>MAFP2</td>
<td>Proyecto de Modernización de la Administración Financiera del Sector Público II</td>
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<td>Mbbl</td>
<td>Millions of barrels</td>
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<tr>
<td>MBS</td>
<td>Mortgage-backed securities</td>
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<tr>
<td>Mcfd</td>
<td>Million cubic feet per day</td>
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<td>Ministerio de Educación, Ministry of Education</td>
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<td>MHz</td>
<td>Megahertz</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>MISs</td>
<td>Management Information Systems</td>
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<td>Ministerio de Medio Ambiente, Environment Ministry</td>
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<td>MME</td>
<td>Ministry of Mines and Energy</td>
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<td>MOE</td>
<td>Ministry of the Environment</td>
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<td>Ministry of Finance and Public Credit</td>
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<tr>
<td>MT</td>
<td>Metric tons</td>
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<td>Ministry of Transport</td>
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<td>MW</td>
<td>Megawatts</td>
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<td>NBPTS</td>
<td>U.S. National Board for Professional Teaching Standards</td>
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<td>NPR</td>
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<td>NCF</td>
<td>National Coffee Fund</td>
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<td>National Federation of Coffee Growers</td>
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<td>NFPS</td>
<td>Nonfinancial public sector</td>
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<td>National Innovation System</td>
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<td>O&amp;M</td>
<td>Operation and maintenance</td>
</tr>
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<td>Old Age Poor Fund</td>
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<td>Organization for Economic Cooperation and Development</td>
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<td>Organización Latino Americana de Energía</td>
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<td>OMA</td>
<td>Displaced Pop</td>
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<td>Organización Mundial de la Salud, World Health Organization</td>
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<td>Oficina Nacional para la Prevención y Atención de Desastres</td>
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<td>PAC</td>
<td>Plan Anual de Caja</td>
</tr>
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<td>PAC</td>
<td>Plan de Atención Complementaria, Complementary Health Plan</td>
</tr>
<tr>
<td>PACES</td>
<td>Programa de Ampliación de la Cobertura y Mejoramiento de la Calidad de la Educación Secundaria y Media, Program to Improve Access and Quality in Lower and Upper Secondary Education</td>
</tr>
<tr>
<td>PAHO</td>
<td>Pan-American Health Organization</td>
</tr>
<tr>
<td>PAI</td>
<td>Programa Ampliado de Inmunizaciones, Expanded Programme on Immunization</td>
</tr>
<tr>
<td>PAYG</td>
<td>Pay as you go</td>
</tr>
<tr>
<td>PCBs</td>
<td>Polychlorinated Biphenyls</td>
</tr>
<tr>
<td>PCS</td>
<td>Personal Communication Service</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>PCMH</td>
<td>Por cada cien mil habitantes, for each hundred thousand inhabitants</td>
</tr>
<tr>
<td>PDS</td>
<td>Planes de Desarrollo y Expansión Sectorial</td>
</tr>
<tr>
<td>PDs</td>
<td>Primary Dealers</td>
</tr>
<tr>
<td>PDT</td>
<td>Planes de Desarrollo Territorial</td>
</tr>
<tr>
<td>PEIs</td>
<td>Proyectos Educativos Institucionales, Institutional Education Projects</td>
</tr>
<tr>
<td>PFMP</td>
<td>Public Financial Management Project</td>
</tr>
<tr>
<td>PICN</td>
<td>Participacion en los Ingresos Corrientes de la Nacion, Participations of Current National Income</td>
</tr>
<tr>
<td>PLANTE</td>
<td>Plan Nacional de Desarrollo Alternativo, Alternative Development Plan</td>
</tr>
<tr>
<td>PMP</td>
<td>Plan de Medicina Prepagada, Prepaid Medicine Plan</td>
</tr>
<tr>
<td>PNPAD</td>
<td>Plan Nacional para la Prevención y Atención de Desastres</td>
</tr>
<tr>
<td>PNR</td>
<td>Plan Nacional de Rehabilitación</td>
</tr>
<tr>
<td>POAT</td>
<td>Environmental zoning plan</td>
</tr>
<tr>
<td>POI</td>
<td>Programa de Obras e Inversiones, Works and Investment Program</td>
</tr>
<tr>
<td>POS</td>
<td>Plan Obligatorio de Salud, Mandatory Health Plan</td>
</tr>
<tr>
<td>POSS</td>
<td>Plan Obligatorio de Salud Subsidiado, Subsidized Mandatory Health Plan</td>
</tr>
<tr>
<td>POTs</td>
<td>Planes de Ordenamiento Territorial, Territorial Land Use Plans (Land Zoning Plans)</td>
</tr>
<tr>
<td>PRAN</td>
<td>Programa Nacional de Reactivación Agropecuaria</td>
</tr>
<tr>
<td>PRI</td>
<td>Programa de Desarrollo Institucional</td>
</tr>
<tr>
<td>PROAGRO</td>
<td>Programa de Oferta Agropecuaria</td>
</tr>
<tr>
<td>PRONATTA</td>
<td>Programa Nacional de Transferencia de Tecnología Agropecuaria</td>
</tr>
<tr>
<td>PSP</td>
<td>Private sector participation</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and development</td>
</tr>
<tr>
<td>RAS</td>
<td>Red de Apoyo Social, Social Support Network</td>
</tr>
<tr>
<td>RED</td>
<td>Red de Solidaridad Social</td>
</tr>
<tr>
<td>R/P</td>
<td>Reserves to Production ratio</td>
</tr>
<tr>
<td>RRPSC</td>
<td>Civil Society Reserves System</td>
</tr>
<tr>
<td>RRSC</td>
<td>Civil Society Reserves Network</td>
</tr>
<tr>
<td>RSS</td>
<td>Red de Solidaridad Social, Social Solidarity Network</td>
</tr>
<tr>
<td>RUT</td>
<td>Colombian Bishops Conference's Information System on Displaced Population</td>
</tr>
<tr>
<td>SABER</td>
<td>National Evaluation System for the Quality of Education</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
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</tr>
<tr>
<td>SAT</td>
<td>Sistema de Aprendizaje Tutorial, Tutorial Learning System</td>
</tr>
<tr>
<td>S&amp;T</td>
<td>Science and technology</td>
</tr>
<tr>
<td>SCAA</td>
<td>Specialty Coffee Association of America</td>
</tr>
<tr>
<td>SCD</td>
<td>SISBEN Classification Document</td>
</tr>
<tr>
<td>SCJ</td>
<td>Superior Council of the Judicature</td>
</tr>
<tr>
<td>SDS</td>
<td>Secretaría Distrital de la Salud, District Health Secretary</td>
</tr>
<tr>
<td>SECAB</td>
<td>Secretaria Ejecutiva del Convenio Andres Bello, Executive Secretariat of the Andres Bello Agreement</td>
</tr>
<tr>
<td>SECF</td>
<td>Sistema de Estimación de Desplazamiento Forzado por Fuentes Contrastadas, System to Estimate Forced Displacement through Compared Sources</td>
</tr>
<tr>
<td>SENA</td>
<td>Servicio Nacional de Aprendizaje, National Training Service</td>
</tr>
<tr>
<td>SF</td>
<td>Subsidio Familiar</td>
</tr>
<tr>
<td>SFAL</td>
<td>Structural Fiscal Adjustment Loan</td>
</tr>
<tr>
<td>SGP</td>
<td>Sistema General de Participaciones</td>
</tr>
<tr>
<td>SIIIF</td>
<td>Sistema Integrado de Información Financiera, Integrated System of Financial Information</td>
</tr>
<tr>
<td>SINA</td>
<td>National Environmental System</td>
</tr>
<tr>
<td>SINAP</td>
<td>Sistema Nacional de Areas Protegidas, National Protected Areas System</td>
</tr>
<tr>
<td>SINERGIA</td>
<td>Sistema Nacional de Evaluación de Resultados, Evaluation System for Public Management</td>
</tr>
<tr>
<td>SINTAP</td>
<td>Sistema Nacional de Tecnología Agropecuaria</td>
</tr>
<tr>
<td>SIRAP</td>
<td>Regional Protected Area System</td>
</tr>
<tr>
<td>SISBEN</td>
<td>Sistema de Selección de Beneficiarios para Programas Sociales, Selection System of Beneficiaries for Social Programs</td>
</tr>
<tr>
<td>SISDES</td>
<td>Sistema de Identificación de Desplazados</td>
</tr>
<tr>
<td>SNCTA</td>
<td>Sistema Nacional de Ciencia y Tecnología Agroindustrial</td>
</tr>
<tr>
<td>SNGyT</td>
<td>Sistema Nacional de Ciencia y Tecnología</td>
</tr>
<tr>
<td>SNPAD</td>
<td>National System for the Prevention and Attention of Disasters</td>
</tr>
<tr>
<td>SNSSS</td>
<td>Sistema Nacional de Seguridad Social en Salud, National System of Social Security in Health</td>
</tr>
<tr>
<td>SPI</td>
<td>Comprehensive Production Systems</td>
</tr>
<tr>
<td>SPNN</td>
<td>National Natural Parks System</td>
</tr>
<tr>
<td>SS</td>
<td>Suspended Solids</td>
</tr>
<tr>
<td>SSAL</td>
<td>Social Sector Adjustment Loan</td>
</tr>
<tr>
<td>SSPD</td>
<td>Superintendencia de Servicios Públicos Domiciliarios, Superintendency of Domiciliary Public Services</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>SUIFP</td>
<td>Sistema Unificado de Inversión y Finanzas Públicas, Integrated Public Investment System</td>
</tr>
<tr>
<td>SV</td>
<td>Superintendencia de Valores</td>
</tr>
<tr>
<td>TA</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>Tcf</td>
<td>Tera ($10^{15}$) cubic feet</td>
</tr>
<tr>
<td>TES</td>
<td>Treasury bonds</td>
</tr>
<tr>
<td>TIMSS</td>
<td>Third International Math and Science Study</td>
</tr>
<tr>
<td>TM</td>
<td>TransMilenio</td>
</tr>
<tr>
<td>UAESPNN</td>
<td>National Park System Special Administrative Unit</td>
</tr>
<tr>
<td>UAFs</td>
<td>Unidad Agrícola Familiar</td>
</tr>
<tr>
<td>UASB</td>
<td>Upflow Anaerobic Sludge Blanket reactor</td>
</tr>
<tr>
<td>UFW</td>
<td>Unaccounted-for water</td>
</tr>
<tr>
<td>UMARCO</td>
<td>Unidad de Análisis Macro-Económico en el Departamento Nacional de Planeación</td>
</tr>
<tr>
<td>UMATA</td>
<td>Unidad Municipal de Asistencia Técnica Agropecuaria</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>UNHCR</td>
<td>United Nations High Commissioner for Refugees</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<tr>
<td>UNSO</td>
<td>United Nations Statistical Office</td>
</tr>
<tr>
<td>UPAC</td>
<td>Constant Purchasing Power Unit</td>
</tr>
<tr>
<td>UPC</td>
<td>Unidad de Pago por Capacitación, Capitation Payment Unit</td>
</tr>
<tr>
<td>UPME</td>
<td>Unidad de Planeamiento Minero-Energética</td>
</tr>
<tr>
<td>URC</td>
<td>Unified Registry of Contributors</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USCR</td>
<td>United States Committee for Refugees</td>
</tr>
<tr>
<td>UTC</td>
<td>Unidad Técnica Conjunta, Joint Technical Unit</td>
</tr>
<tr>
<td>UVR</td>
<td>Unidad de Valor Real, Constant Value Unit</td>
</tr>
<tr>
<td>VaR</td>
<td>Value-at-Risk</td>
</tr>
<tr>
<td>VAT</td>
<td>Value added tax</td>
</tr>
<tr>
<td>VIS</td>
<td>Vivienda de Interés Social, Social Interest Housing</td>
</tr>
<tr>
<td>WAP</td>
<td>Working-age population</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
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<tr>
<td>WDI</td>
<td>World Development Indicators</td>
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<tr>
<td>WFP</td>
<td>World Food Program</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>WS&amp;S</td>
<td>Water supply and sanitation services</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wildlife Fund</td>
</tr>
<tr>
<td>Abbr</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>XL</td>
<td>Excess of loss</td>
</tr>
<tr>
<td>ZNIs</td>
<td>Zonas No Interconectadas (non-interconnected zones)</td>
</tr>
<tr>
<td>ZRCs</td>
<td>Zonas de Reserva Campesinas</td>
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</table>
Colombia
The Economic Foundation of Peace

Synthesis

This Chapter was written by Marcelo M. Giugale.

I. Rationale and Organization

It is the practice and the privilege of the World Bank to provide incoming Presidential Administrations in its client countries with a comprehensive diagnosis of their development position—and with independent policy recommendations to advance it. That practice appears particularly pertinent for Colombia today. President Uribe is to lead a nation of immensely talented people and with abundant natural resources that, for far too long, has been trapped in a deepening circle of violence, destruction, and poverty. There is now an opportunity to break that circle, and this volume is meant to help the new authorities sense that opportunity.

This chapter delivers a summarized account—a synthesis—of the development challenges that the incoming President is likely to face, and of the possible policy responses to address them. It distills the four thematic chapters that make up Part I of this book. Those chapters are, in turn, based on 31 sector-specific chapters contained in Part II. While the findings and analysis presented here respond to the country’s current realities, they have been enriched by five decades of development partnership—the first World Bank mission to visit Colombia took place in 1948, opening the way for some 150 projects and over a thousand pieces of analytical work spanning the entire development spectrum. Yet, the intention is not to provide definitive, foreign answers but, rather, to trigger and support policy debate in the country.

Below, the central messages in Colombia’s development agenda are presented, followed by the diagnoses and policy recommendations that make up that agenda. The chapter closes with a suggested path for the prioritization of actions. This book was finalized in August 2002, policy actions that may have taken place after that time are not reflected.
II. Central Messages

There is no doubt that the long-standing armed conflict is the most important issue facing Colombia as a nation, let alone as an economy. The cost of violence is difficult to overestimate. Since 1980, some 100,000 people have died directly as a result of the conflict, and two million desplazados have lost their jobs, homes and, increasingly, hope, and are now lingering at the fringe of society. Another million, perhaps the most educated million, left the country altogether. By some calculations, the conflict dampens GDP growth each year by two full percentage points—in other words, had the war stopped, say, 20 years ago, the income of the average Colombian would now be 50 percent higher, and an estimated 2.5 million more children would be above the poverty line. More fundamentally, the conflict has bred gross underallocations and misallocations of resources: frightened by violence, private investment has, over the last 30 years, rarely surpassed one tenth of GDP, and just the lost revenue due to sabotaged oil pipelines (some US$500 million per year) would be enough to double the country’s annual budget for social assistance. And, behind these costs, lies a less quantifiable but even more disturbing consequence of the conflict—the dilution of Colombia’s “social capital,” that is, its citizens’ basic trust in societal contracts and institutions that make nations function.

It is indeed a tribute to the resilience and ingenuity of the Colombian people that, in spite of so long a conflict, they managed, until 1998, to keep their economy growing every single year for the previous seven decades. While other countries in the region stumbled (notably in the early 1980s), Colombia achieved income, education, and health standards that made it stand out in the developing world. As recently as three years ago, the country whose image had been so tarnished by drug-fostered violence, still inspired investment-grade confidence among international financiers. A disturbing message is, however, embedded in that economic resilience—material prosperity alone has not and will not stop the war. But impoverishment may spin it out of control. When the economy collapsed in 1999, the country found itself unable to cater for its people, three million of whom fell into poverty and one in 10 into unemployment, and the many efforts at peacemaking faltered.

It is therefore argued here that economic development will be a necessary, but not a sufficient, condition for peace—it will be one of the foundations, perhaps a cornerstone, on which an eventual settlement (and national reconciliation) will stand and from which a new nation will be built. This brings us to the central question of this book: Given its quest for peace, what is the development agenda that the new administration should follow? The answer has three main components.

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1 Not all violence in Colombia is, however, due to the armed conflict, and much of it is driven by common criminal activities (especially drug-related)
• Achieve fast and sustainable growth
• Share the fruits of growth with all Colombians
• Build a government of quality

The first priority is indeed to reach fast and sustainable growth. Growth has been Colombia's best and most effective social safety net; on average, each percentage point increase in per capita GDP, reduces poverty by 0.6 percent (or, at present, a quarter million people). Given the historical, geographical, and military fragmentation of the country, and the related weakness of the state, the possibility of earning income within a growing economy has held the nation together. That order came to an end in 1999, wiping out within a year the previous decade of decline in poverty levels.

Putting the economy back on a rapid, sustainable growth path will not be easy, but it is feasible. It requires action on five fronts. First, and foremost, a more conducive macroeconomic framework (which Colombia once had) is necessary and, in particular, redressing the large financial imbalance in the public sector and the associated, rapid debt accumulation problem. The key will be to spend less and tax more, but without slowing down the economy. The ensuing adjustment will need to be “locked in” through a stabilizing fiscal responsibility law and a professionalized debt management function. Second, the reform of the financial sector needs to be completed, if the sector is to become an engine for growth rather than another liability for the state—both the conclusion of the bank-reshuffling program and the fiscally all-important pension reform are pending. Third, the institutional, regulatory, and cross-subsidization arrangements in infrastructure provision should be adjusted for further private participation to materialize and, at the same time, for service coverage to reach the poor (the state cannot afford the cost of replenishing the country’s much depreciated physical capital). Fourth, a rebirth of the rural economy is difficult but possible, even despite the armed conflict, the illegal crops, and the coffee crisis, if public policy is credibly reoriented toward facilitating, rather than resisting, market signals—policies and programs that shield producers from international commodity prices, distribute subsidies that are not farm-size neutral, distort the land market, or perpetuate institutional arrangements that, although traditional, have outlived their usefulness, should be abandoned. Finally, the intrinsic synergies between growth and environmental protection remain unexploited, both at the local and global level (notably, Colombia’s potential in the carbon emissions market remains untapped).

Growth will mean little to the 27 million Colombians that live in poverty if they are not given the tools to share in that growth. For most of them, better human capital formation mechanisms, and better markets in which to sell that capital, will be the answer. Both the public education and health systems need to be freed of the vested interests that now resist reform and accountability. In both systems, the government is paying too much, and getting poor and deteriorating quality. At the same time, the legal and regulatory framework of the labor market, where the poor
should be able to exploit their human capital, is out of tune with a modern economy and effectively shuts out one in three workers. A comprehensive labor reform is much overdue. But flexible labor markets and enhanced human capital will not be the answer for all Colombians—certainly not for those that cannot cope with systemic shocks, have been displaced by the conflict, or still face race- and gender-based discrimination. Colombia does not yet have a proper social safety net, and badly needs one.

Finally, the new government’s capacity will be challenged by the breadth of the attendant policy agenda and, at the same time, handicapped by the gradual but, by now, profound loss of credibility of the state. A reform of the state itself is thus critical, but this should not be about changes in bureaucratic organigrams (much as some of these may be needed) but about improving the way the state discharges its main functions—how it budgets, procures, audits, evaluates, regulates, supervises, and reports. Moreover, the context in which those functions are performed should be the subject of reform too, on three fronts: First, the decentralization of responsibilities is on an unsustainable path, and a new incentive framework is necessary if departments and municipalities are to raise the quality of their public services and maintain fiscal discipline. Second, the mechanisms to fight corruption need strengthening, especially because corruption in Colombia takes the perverse form of state capture. And, third, the judicial system is caught between its pre-1991-Constitution culture and its post-1991 mandate and, thus, delivers services of poor quality and insufficient quantity. A few, but critical, reforms can correct that problem (like the introduction of fee-for-services or the circumscription of the Tutela).

III. The Agenda’s Diagnoses and Policies

a) Achieving Fast and Sustainable Growth

Reaching a higher growth plateau will be a multidimensional task. Both macro and micro interventions will be necessary—adjusting the fiscal position, completing the reform of the financial sector, fostering private participation in infrastructure, diversifying the rural economy, and protecting the environment. Many of those interventions are urgent, and none is simple. However, in no case is the “do-nothing” scenario really an option, let alone a preferred option.

i. A Foretold Macro-Fiscal Adjustment

Recovering from the crisis of 1998–99 in effect dictated the macroeconomic policies of President Pastrana. Protecting that recovery will dictate President Uribe’s. More specifically, during the past four years, Colombia’s macroeconomic policy had to focus, and rightly so, on redressing the imbalance in the public purse. In the context of a three-year IMF Extended Fund Facility, the growth of territorial
transfers was delinked from the central government's revenues (through the Acto Legislativo), fiscal discipline among subnational governments was fostered (through Law 617/2000, Law 715/2001, and new regulations for municipal borrowing), public investment was further curtailed (regrettably, to a mere 1 percent of GDP), civil servants' real wages were reduced (a measure later reversed by the Constitutional Court), the base of the value-added tax (VAT) was widened, fuel taxes were increased, and a financial transactions tax was introduced. The Central Bank's independence was enhanced and its mandate to fight inflation was strengthened. Undoubtedly, those were all critical achievements, and perhaps all that could be done given the political space for reform. But they fell short of correcting the financial imbalance of the public sector—the deficit did not fall enough and still hovers at around three percent of GDP. As a consequence, the country's sovereign debt position deteriorated: total nonfinancial public sector debt as a proportion of GDP increased by half (to 45 percent) in the four years of the outgoing administration. And, today, Colombia spends more on interest payments than on education.

The main macroeconomic task of the incoming administration will therefore be to complete the fiscal adjustment that its predecessor initiated and put the accumulation of public debt on a sustainable path. More specifically, even under optimistic assumptions in terms of growth, interest rates, oil prices, and Central Bank seniority, the new authorities will have to immediately reach and maintain a primary surplus in the nonfinancial public sector of at least four percent of GDP per year just to keep debt accumulation on a manageable trend (that is, reaching about 52 percent of GDP by the end of the Presidential tenure in 2006). At present, that surplus stands at only one percent of GDP.

What can be done to achieve that three-percentage-point adjustment in the primary balance? A combination of three factors is in order—a major reduction in the size of the state, a growth-friendly tax reform, and better debt management. The Colombian government, at its various levels, consumes a third of what the country produces. One million people, or about five percent of the labor force, work for the state. In relative terms, these staffing figures are not particularly large; and, yet, the salaries and benefits to those employees (not to mention their pensions) amount to almost eight percent of GDP. The areas for potential contraction are many—linking subnational expenditure decisions to the political cost of having to raise local taxes to pay for them, reversing the exploding cost of servicing pension obligations, rationalizing the health branch of the Instituto del Seguro Social, eliminating over-

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2 While de-linking transfers from revenues and consolidating all transfers into one budget item were its major achievements, the Acto Legislativo also established specific annual rates of real growth for those transfers over the next ten years, something that could increase their relative burden on the central government's budget should the economy not grow fast enough.
lapping agencies, and so on. These structural reforms to the fiscal accounts, which are discussed in more detail later, will mean that the Colombian state will spend less. A parallel effort should also be put in place for the state to spend better. This implies upgrading the budgeting, procurement, financial management and, critically, evaluation and accountability mechanisms.

Lower expenditure will, however, not suffice—it will need to be accompanied by higher tax collection. The six partial reforms implemented over the last decade, all triggered by immediate revenue needs, left Colombia’s tax code riddled with loopholes, inequities, and distortions, and cumbersome to administer. This facilitates the rampant evasion of the two most important taxes—the income tax and the VAT, which together represent about 80 percent of the total tax collected. On average, about a quarter of every peso due on taxes is evaded. The current problems with the tax system are, however, also an opportunity—there is room to both increase revenue and make taxation fairer by removing the array of exemptions that plague it and without overrelying on hikes in tax rates. Specifically, in the corporate income tax, industry-, firm-, and location-based exemptions should all be eliminated (the list is long: public service enterprises, livestock funds, funds organized by financial institutions, firms with operations in the Magdalena River, publishing houses, lotteries, liquor producers, and cooperatives); presumptive income taxation should be based on gross assets (not net worth); and inventory valuations should be adjusted for inflation.

Similar rationalizations should also be applied to the personal income tax—the flat exemption of 30 percent of the wage should be eliminated, the general exemption should be set at three times the per-capita income (from its current three minimum wages), and the three rates should be scaled down to 15, 25, and 35 percent (from 20, 29, and 35). Finally, the VAT should be recovered as the broad-based tax it was supposed to be—a single rate of 16 percent should apply to all goods and services, instead of multiple rates and multiple exemptions. This will extend the 16 percent VAT to among others, food and medicines (currently at zero rate), capital goods (currently at 10 percent), and all previously exempted transactions (like those involving paper, printing, beer and tobacco, personal services, transportation and construction); it will also discontinue the “implicit” VAT, exempt exports, and make the VAT creditable against the VAT itself (not other taxes). At the same time, a flat-rate, national excise tax on luxury goods should be introduced.

Those reforms to the tax code, taken together, would not only make the system fairer and simpler to administer, but would also generate a much-needed three to four percent of GDP in additional revenue. This will allow for compensating the poor for the impact of extending the VAT to food and medicines—even doubling the size of the total social assistance budget to make cash transfers to the poor will

3 It should be noted that some of those “reforms of the state,” while necessary, would reduce fiscal costs only in the medium- and long-term (and may increase them in the short-run, for example, because of related severance payments)
only cost some 0.7 percent of GDP. But a word of caution is called for: if too much of a "tax shock" is applied, the risk that the fragile growth recovery will evaporate (or even turn into recession) is high. This could put the economy on a downward spiral—tax pressure reduces growth, which increases the need for a larger primary surplus, which calls for further tax pressure, and so on. The spiral would soon make the debt burden unbearable, especially in terms of access to refinancing (a regrettable example of this phenomenon is Argentina 1999–2002). That is why Colombia's tax reform should be more about tax rationalization and simplification than about higher or new taxes.

The adjustment in public finances will be politically costly, and pressure to undo it will not diminish. Thus, mechanisms to "lock in" the adjustment will need to be institutionalized. Two such mechanisms stand out. First, the currently proposed "fiscal responsibility law," which sets up a primary balance goal and regulates contingencies, arrears, tax expenditures, forward allocations (urgencias futuras), and other accounting tools that might weaken fiscal discipline, should be expanded to include mechanisms for aggregate revenue stabilization (for both budgeting and reserve accumulation purposes) and automatic expenditure reduction rules in case of revenue shortfalls. Second, the public debt management function needs to be professionalized and made directly accountable to the taxpayers for its performance; this will strengthen the incentive against the unwarranted assumption by the central government of liabilities from the parts of the public sector that refuse to reform (the contingent liability of the central government for the debts of subnational governments, banks, pensions, and toll roads already amounts to several times the size of GDP).

ii. Completing the Reform of the Financial Sector

Much as the macroeconomic policy of the new Presidential Administration will be dictated by the need to complete what its predecessor initiated, policy in the financial sector, the second key element in achieving fast and sustainable growth, will also be about completing and consolidating reforms. With decisive action and sheer ingenuity, the outgoing government managed to avert a systemic banking collapse in 1999. That action was, however, not without costs—the fiscal liability arising from rescuing, to varying degrees, borrowers, depositors, and bankers is so far estimated at about 8 percent of GDP. And the cleanup is far from over. While the letter of the legal and regulatory environment for banking operations is now up to internationally accepted standards, the government's deposit insurance and resolution agency (FOGAFIN) is still in the midst of supporting (through credit lines to their shareholders) a number of private banks and housing finance institutions that

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4 Still, the extension of VAT to food and medicines may be politically and, in some cases (like primary agricultural products), administratively infeasible. In this case, a second-best reform package could maintain the exemption for food and medicine, reduce the threshold of minimum non-taxable personal income to twice (rather than three) the per capita income, and generate a total additional revenue of 1.5 to two percent of GDP.
have not yet been fully capitalized or restructured; disposing of two large, failed, and rapidly deteriorating banks (Bancafe, Granahorrar); articulating a suitable strategy for an array of second-tier, state-owned lending institutions (IFI, FINDETER, FEN, FINAGRO, BANCODEX) that have a quarter of the industry’s assets, an outdated mandate and a weak balance sheet; and instilling needed expediency in its asset disposition subsidiary (CISA). In other words, Colombia’s banking system will over the next four years need to undergo a second, and perhaps larger, round of reform. The key will be to facilitate that reform without incurring further fiscal costs (which the government can ill afford anyway) or interrupting, and optimally fostering, the flow of bank lending to the private sector (which, as a percentage of GDP, has been continuously falling and is still only two thirds of what it was in 1999).

Two sections of the banking industry merit a closer look, because of both the fragile financial position of their main actors and the social role they are supposed to play—housing and rural finance. The mortgage industry has not yet been restored to soundness, following its virtual collapse in 1999 (when one in every five mortgaged properties had to be repossessed). A quarter of its loans are still nonperforming (and the rate is rising); various rulings by the Constitutional Court (capping interest rates, forbidding out-of-court foreclosures, and so forth) have fostered a spreading culture of nonpayment; the legally mandated inflation indexing mechanism (the UVR) makes payments highly volatile; and the mortgage-backed securities and mortgage bond market has been slow to take-off (the passing of the enabling legal framework—Housing Law 546/1999—has not yet been fully matched by investor interest). Not surprisingly, the financial sector’s portfolio of housing loans has shrunk every single month since 1999. This hints at a difficult reality: apart from technical improvements that can be achieved by amending various regulations (for instance, in basing the UVR on a moving average of, rather than on a previous month’s, inflation), a rapid revival of housing finance in Colombia may, for the time being, be beyond the reach of policymaking. This is a particularly distressing reality, because Colombia is estimated to have a deficit of one million new housing units, and two million in need of repair.

A similar situation exists in rural finance. Some 2,300 financial cooperatives, with primary focus in rural markets, spawned unregulated in the two decades to 1999; at their peak, they controlled one tenth of the financial system’s deposits. When the crisis took place, most of them went bankrupt, saddling the government (through FOAGFIN) with assuming responsibility for the largest among them. The government’s own rural banks, which as a group provided one quarter of all agricultural credit, fared no better (notably, Caja Agraria had to be reorganized into Banco Agrario). While arguments about the efficiency (that is, cost) and effectiveness (that is, impact on poverty) of the government’s continuing supply of rural funding (through Banco Agrario, FINAGRO, FONADER, and the like) are debatable, the

5. Although the stock of housing credit remains flat, the flow of new housing loans has recently restarted.
likelihood that private banks may be attracted back into rural finance, especially for small and medium borrowers, is marginal as long as the armed conflict rages. While there may be room for divesting from Banco Agrario and FINAGRO and using the released resources to subsidize private mobile rural banking, part-time branches, and risk-assessment tools that lessen the reliance on collateralization, the fact remains that, until peace returns to the rural areas, private banks will not venture in any significant way to provide additional services there—let alone services that cater for the poorer segments of the population.

The banking industry is not the only component of the financial sector the reform of which remains incomplete and poses a major contingent liability to the fiscal accounts—a more complex reform and larger liability are pending in the pension system. The consolidated pension system for public sector workers is technically insolvent, the total actuarial value of its liability (the “implicit pension debt”) is twice the size of GDP, and the annual fiscal transfers required to cover its cash deficit is now some 2.5 percent of GDP—that is, equivalent to the total health budget of the nation. This is a worrisome position for a country that is still demographically young and whose pension system only covers a third of the labor force. Moreover, partly because of the rich political debate that it has generated, pension reform has become an icon of the Colombian government’s resolve to address deep-rooted structural imbalances in its fiscal accounts—and international financial markets are pricing Colombia’s country risk accordingly. How did Colombia reach this point, and what can it do now to correct the situation?

Until 1993, Colombia had a large series of pension institutions for the public sector (the largest of which—CAJANAL—serving central government workers) and one for private workers (administered by the Instituto de Seguro Social, ISS). All of them were in practice unfunded, pay-as-you-go schemes with unsustainably generous benefits and high-levels of evasion. That year, a major reform was implemented, with five main components. First, the central government assumed explicit responsibility for all accrued pension rights. Second, the array of pension regimes was consolidated into one (with the exception of the staff of ECOPETROL, teachers, armed forces, and Congress) and its benefits package was curtailed by an increase in retirement ages and a tightening of eligibility conditions. This reduction in the benefit package would, however, be introduced only gradually through 2014, that is, a 20-year “transition” period was built in. Third, all public and private workers were given the choice to contribute to the pay-as-you-go regime (still administered by ISS) or to a defined-contribution system of individual accounts administered by new private fund managers but with a minimum pension guarantee. Workers were, however, given the option to switch back and forth between the two systems every three years. Fourth, the contribution rates were raised for all workers, in whichever regime. Fifth, workers above a certain salary level were forced to contribute toward a new noncontributory pension scheme for the poor (the so-called Solidarity Tax).

In retrospect, while the 1993 reform was important in introducing new concepts (lower benefits, defined contribution, private fund managers, and the like), it had
too long a transition period and too many exceptions. While the increase in contributions and the gradual reduction in the benefit package reduced the implicit pension debt of the government (by some 37 percent of GDP), it did not correct the structural imbalance in the system—between effective benefits that are still too generous and the contributions made by the workers. In its current form, the system is not sustainable, because the necessary fiscal transfers to cover its annual deficits will continuously grow, up to six percent of GDP in 2020.

There is therefore no question that a new round of pension reform is urgently needed. At the same time, contribution rates (13.5 percent for all concepts) are already too high and discourage participation in the formal labor market. Further reforms should thus primarily focus on a reduction of the benefits package and, critically, on how fast that reduction is introduced (to avoid yet another long-lingering "transition"). The guiding principle should be that, at the very least, the marginal worker entering the system after the reform, should not increase the implicit pension debt of the government. This can be achieved with many combinations of changes in the system's parameters (retirement ages, replacement rate, and so on).⁶ However, this type of reform will not bring fiscal relief soon. For that, it is also imperative to accelerate the "transition" of public sector workers out of the pre-1993 regime—that is, to actually implement the 1993 reform.⁷

Taken together, the acceleration of the 1993 transition and a new reform to the current regime could reduce the implicit pension debt by some 40 to 50 percent of GDP. It should be mentioned that complementary amendments will also be needed to armor the new system thereafter—like the reform of the currently exempted regimes, a predictable and sustainable mechanism to index the minimum pension guarantee, a provisioning mechanisms for regimes arising from collective bargaining agreements of public enterprises, and the discontinuation of the "switching" option between defined-contribution and defined-benefit regimes.

Finally, banking and pension reforms would be much facilitated if Colombia could count on a deeper, more liquid capital market. Today, financial intermediation is vastly dominated by banks, since not even creditworthy corporations venture much into the private bond markets. Similarly, administrators of the newly created private pension funds do not find many private debt securities into which they could diversify, especially out of the dominant Treasury bills. The capitalization of the country's stock market (equivalent to about 13 percent of GDP) is one of the lowest in the region. Fortunately, much activity is planned to develop Colombia's capi-

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⁶ As an example, one possible option is to introduce retirement ages of 60 for women and 65 for men, a replacement rate of 50 percent after 1,300 weeks of contribution, and an increase in contribution rates of one percentage point.

⁷ Again as an example, that acceleration could take the form of leaving untouched the regime for men and women that in 1994 were 50 and 45, respectively, or older; accelerating the transition for those that at that time were between 42 and 49, and 36 and 44, respectively; and bringing all other workers into the full effect of the 1993 reform.
tial markets. A proposed draft securities law currently in Congress would reduce obstacles for private issuance and would standardize mortgage instruments; a new securitization firm is now operating; market-making has been institutionalized for government bonds; and, critically, an almost complete range of Treasury bill maturities are now available as risk-free benchmarks. The new government should see these various reforms through, and prepare the relevant supervisory institutions to implement them (specifically, the Superintendency of Securities).

iii. Infrastructure: Making Private Participation Work for All

An adequate provision of physical infrastructure will be the third key element in returning Colombia to a path of fast and sustainable growth. This is particularly relevant for a country where armed groups systematically target and destroy bridges, transmission pylons, and pipelines—and kidnap those that could help rebuild them. It is therefore not surprising that private investment has been very low. But even at those low levels, Colombia has been unusually successful in attracting private participation into the provision of infrastructure services—with the exception of telecommunications, the private sector has a major role in all subsectors (oil, gas, coal, power, water, and the like). The problem is that those infrastructure services are both insufficient to support a higher growth plateau, seldom reach the poor, and there is no fiscal space to complement them with additional public investment. Thus, the policy dilemma for the next administration is how to make private infrastructure investment more appealing in the context of the conflict, increase the coverage for those that cannot pay for infrastructure services, and protect the fiscal accounts, all at the same time. The answer lies in removing the remaining institutional and regulatory constraints that prevent further private participation and in adjusting the mechanisms for subsidization across users.

More specifically, in energy, while the government has been extremely successful in adjusting the rewards of oil exploration to the heightened security risks (in the so-called contratos de asociación), the process of environmental licensing has become unduly cumbersome—and needs institutional resources to upgrade it. Similarly, wellhead gas prices are regulated rather than market determined, precluding the necessary investments to tap even larger fields (especially Cusiana) or explore for new ones. Price regulation is also an impediment to entrants in the downstream oil industry—the ex-refinery prices for gasoline and diesel are still set by the Ministry of Mines and Energy (and then taxed at the pump) rather than by the market. Regular disputes over the “capacity charge” for thermal power plants (a surcharge on the regulated price meant to ensure a minimum income in a primarily hydro system) and over the allowed return-on-assets for transmission and distribution services have cooled private appetite for further investment in electricity after the initial round of privatizations. Most important, the government still holds ownership of one major power generator (ISAGEN) and some 20 distribution companies (electricadoras). The privatization of the former was delayed in light of anti-trust concerns, whereas the privatization of the latter is proving elusive because of their already-fragile finan-
cial health and governance problems—an uncomfortable position, because they serve about half of the country's electricity consumers.

Beyond regulation, pricing, and ownership problems, the institutional framework of the energy sector needs reform, as well. On one hand, the Superintendencia de Servicios Públicos Domiciliarios (SSDS) is an ombudsman for consumers, a workout unit for distressed companies, and an asset manager for the corporations that the state decides to keep. Naturally, it struggles to handle such diverse roles and to fence off political interference in its management. On the other hand, the Comisión de Regulación de Energía y Gas, supposed an independent regulatory commission, sees many of its functions overtaken by the line ministry (for example, in oil price setting) and, partly as a result, its professional capacity diminished.

Similar impediments to private participation exist in water and sanitation, although, in this area, the investment gap is even bigger. While coverage is high by Latin American standards, only half of all drinking water and less than eight percent of municipal wastewater receive any treatment. The Comisión Reguladora del Agua (CRA), who deals with an atomized group of 1,700 operators, is not isolated from local political pressure and, thus, tends to set tariffs that do not cover costs—even if they did, the tariff-setting process is based on reported costs rather than performance benchmarks and quality standards, allowing for the cost of inefficient management to be transferred to consumers. Almost all providers in small and medium-size cities exhibit operational deficits that call for fiscal support. In many of those cities, and especially in rural areas, the consumer base is not affluent enough to pay for the investment and operation of the service, and public funding is indeed required. CRA's relative role vis-à-vis the policy-setting line ministry (the Ministry of Economic Development) and the consumer-protecting SSDS is not well defined, generating further uncertainty for private participants. And environmental standards for wastewater, as currently specified in the regulations, are so high as to be self-defeating; to meet nationwide the absolute level of minimum removal of biochemical oxygen and suspended solids (80 percent) would require an additional investment of about five percent of GDP—so the standard is ignored. A standard more endogenous to the use of the receiving water body may be more suitable.

The private sector has also participated in a major way in transport (especially toll roads, railroads, maritime terminals, and main airports). Given its dominant role in cargo, its absorption of 70 percent of public investment in transport, and its rapidly deteriorating physical status, the road subsector is perhaps the one in most urgent need of policy attention. The institutional setup is similar to other sectors: a line ministry establishes policy (Ministry of Transport), an independent commission regulates (Comisión Reguladora de Transporte), national and local institutions actually manage the roads (national INVIAS being the largest), and a supervisory authority controls and enforces (Superintendencia de Transporte). In practice, the division of responsibilities is less clear-cut: those institutions overlap in their activities, are not mutually independent, and engender uncertainty. This institutional weakness is particularly unfortunate in the context of the armed conflict—the government
(national or local) can neither reach certain areas to perform road maintenance nor
protect cargo from hijacking. This all but smothers interest in further road conces-
sions; the first generation of those concessions have demanded, and have called on,
a minimum revenue guarantee or complementary public funding absorbing about
one third of the central government's budget for roads.

Like other infrastructure sectors, and also following the mandate of the 1991
Constitution, the telecommunications service was opened to private participa-
tion—but with less success. Less than four percent of telephone lines are in the hands of
private companies, compared to 85 percent for Latin America as a whole. There are
only two cellular providers in Colombia, with high prices and low quality of service.
Private providers did enter BOT arrangements with public enterprises to pro-
vide local services, and the long-distance and international business was opened to
competition. But this put financial pressure on the national carrier (Telecom, which,
because of labor opposition, was not privatized) and forced the government to
default on the terms of the BOTs. The ensuing legal battles have stiffened further
private interest (notably in the otherwise profitable cellular service), already weak-
ened by the imposition of a hefty 16 percent tax on long-distance service and a pro-
posed 5 percent tax on the operators' gross revenues. To make matters worse, the
overlapping of regulatory functions seen in other infrastructure sectors is present
here as well—a tariff-setting Comisión Reguladora de Telecomunicaciones, a policy-
setting Ministry of Comunicaciones, and an enforcing SSPD.

The above suggests that the uncertainties associated with the armed conflict and
with the entanglement of institutional functions hampers all infrastructure sectors
alike. There is, however, a third, equally binding impediment for all sectors—cross-
subsidization. The Public Services Law classifies residential users of natural gas, elec-
tricity, water, sanitation, and telephones in six strata and forces the fifth, the sixth,
and commercial to pay a surcharge (up to 20 percent of service cost) in order to pro-
vide subsidized service primarily to the first and second (that is, the poorest). While
the system is ingenious and has politically facilitated the opening of the various
infrastructure sectors to private entrance, its application has been complicated by the
fact that not all companies have a balance between rich and poor consumers (call-
ing for support from the government) and the strata certification process is less than
accurate (it is based primarily on residence characteristics—neighborhood's overall
quality and house size—that are in practice misleading predictors of well-being). In
some municipalities, the entire population has been classified as poor, pushing, for
example, telephone operators into bankruptcy. This hints at two policy alternatives:
either the stratification system is improved to include better means-detection and
means-testing tools (not just housing quality); or a government-funded connection
and bare-minimum level of service is provided to all consumers, above which marginal
tariffs grow steeply to recover the initial investment.

The problems with the various infrastructure sectors also have a common geo-
ographical point of convergence—urban centers. Two-thirds of Colombians live in
urban areas, of which more than half live in poverty. The armed conflict feeds the
migration flow to cities, giving birth to peripheral towns burgeoning around already-congested metropolises (for example, Soacha on the outskirts of Bogotá). As will be explained later, those cities now operate within more binding budget constraints (a consequence of various laws and policies putting order into the decentralization process). This limits their capacity to support the arriving poor with cash, while suboptimal regulations (like minimum floor-to-area ratios and maximum construction densities) limit the support they can give through land allocations. Not surprisingly, it is estimated that one-fifth of all urban land developed each year is developed in informal settlements, where the subsequent provision of basic services is not only more expensive but also, under current legislation, technically illegal. In principle, local governments are compelled by law to produce Planes de Ordenamiento Territorial, nine-year land-development plans that are supposed to direct the new settlements toward efficient locations, but because of lack of resources, few municipalities do.

iv. Facilitating the Rebirth of the Rural Economy

The opening of the Colombian economy in 1991 brought about major reforms to the country's rural economy and, in particular, its agriculture. Protection against imports, subsidized credit, price supports, marketing monopolies, and the like were all to be abandoned as part of a change in development strategy domestically called the apertura. This was expected to foster productivity increases, a diversification away from traditional products, and eventually an export boom. It did not happen. The reason is simple: the apertura never really occurred. Marketing boards returned in 1992 (until 1997). Price bands, stabilization funds, and import barriers were reinstated on and off for certain crops, for certain periods of time. Although many of those interventions were relaxed in recent years, the ensuing uncertainty about policy direction left the sector's performance essentially unchanged—its productivity has not increased, its flagship product (coffee) is on the brink of collapse, and the one product that proves profitable and skews market incentives is illegal (coca leaf). More profoundly, 80 percent of the rural population remains poor and subject to the trauma of an armed conflict whose tactical epicenter is the control of land. In that inauspicious context, what, if anything, can policymakers do now to unlock the otherwise rich potential of Colombia's rural economy? The answer lies in a combination of market-based diversification and direct social assistance; the former is addressed below, while the latter is addressed in the next section.

The diversification, and through it, the revival of the rural economy, calls for four main policy reforms. First, the new authorities need to make an early, credible, and consistent statement about the direction of their sector policy—signaling their intention to put the sector permanently on a path of open markets and private-sector-led efficiency. One powerful signal will be a reduction in the dispersion and average level of agricultural import tariffs (which vary widely across crops) and a relaxation of nontariff barriers, both of which are perceived as volatile and captured by special interest groups.
Second, all public interventions in the sector should be made farm-size neutral. At present, only two percent of small farmers have ever managed to access the government's matching grant facility for investment financing (Incentivo a la Capitalización Rural). Even the state-owned institutions that remain engaged in rural finance (Banco Agrario, Fondo Emprender, and FINAGRO) require collateralization levels that, in practice, exclude small farmers and crops not linked to commodity markets. Those farmers increasingly find the municipality-based technology extension services (so-called UMATAs) not as relevant as they could be for the needs of small farming units. Much of this is a natural market response—between the uncertainty of ever-shifting sectoral policies and the insecurity of the armed conflict, a few standardized agricultural products turned out by large commercial establishments with export reach hold the best chance to survive and, thus, attract the bulk of the available support. The key is then to link those larger establishments to the rest of the sector without causing further distortions—this is the objective of the existing Acuerdos de Competitividad, whereby the government provides demand-driven support (financial, informational, trade representation) to local, private associations of producers that risk their own capital to exploit synergies among local participants of all sizes. Peso for peso, these Acuerdos are perhaps the most efficient use of public money in the sector.

Third, distortions to the land market should be removed. Colombia has one of the most concentrated land ownership structures in the world (with a land Gini of 0.86), and is getting still more concentrated. More than half of the land is considered "large farms," and only two thirds of plots—mostly the largest two thirds—have titles. Money laundering by the illegal drugs industry fuels the concentration of land. Limited cadastral coverage, market-insensitive valuation mechanisms, and weak collection capacities keep municipalities from exploiting the land tax (the predial), exacerbating the regressivity of land ownership. Limited cost recovery for irrigation favors low-margin crops and pasture, activities more suitable for large plots. And, most of all, the insecurity associated with the armed conflict pushes those that have no alternative means of living (typically small farmers) to cash out, and those that can retain their land (typically commercial ventures and richer absentee owners) to refrain from difficult-to-reverse investment. All these factors combine to produce a worsening mismatch between the natural vocation of the soil and its actual use: livestock uses double the land that would be technically appropriate, while agriculture uses a third of what is suitable for it.

Policy makers in Colombia have been trying since 1961 to correct the concentration problem through a land reform program (last adjusted by Law 160 of 1994). On the whole, the program has failed to redistribute land, has grossly distorted the land markets, and should now be shut down or, at a minimum, overhauled. In its current form, the program provides funding for beneficiaries to buy farming units; 80 percent of the funding is a grant, while the rest is a loan from a state-owned bank (Banco Agrario). This absorbs about one fifth of the central government's budget for agriculture. However, lacking working capital, the prototypical beneficiaries cannot set up business, defaults on its loan (virtually all loans have been defaulted on), and
abandons the land. Moreover, the public institution that administers the program (INCORA) spends two thirds of the program’s budget on its own administrative costs and, predictably, has not been free of political influence and rent-seeking. Closing down the land reform program would free resources that could be better employed in direct social assistance, a faster titling mechanism, the provision of title safekeeping services, or defraying the cost to municipalities of improving the collection of the predial tax. If closure were politically infeasible in the short-term, a series of program modifications, currently being piloted, hold some promise for enhanced effectiveness—decentralization of decisions to local participants, delinking the grant from the purchase of land itself, and permitting the purchase of smaller than full-farm units.

Finally, the diversification of Colombia’s rural economy will be spearheaded by the structural transformation of the coffee industry. This transformation is already underway, and the best policy response is to facilitate it—rather than resist it. In Colombia, the income of one in every five rural households, and one in every four agricultural jobs, depend on coffee. Coffee accounts for just under 5 percent of GDP and 6 percent of exports. The country controls one tenth of the world’s coffee market, and a highly valuable brand name. But formidable external forces are changing the business of coffee—the international prices are at their lowest point in almost 200 years (and are unlikely to recover, given the increase in tree planting worldwide), the concentration of international roasters, traders, and retailers has squeezed the share of earnings going to producers; consumer preferences have shifted toward specialty coffees, and an international regulatory structure has effectively emerged (through the WTO’s phytosanitary standards, global environmental agreements, and so on). Those forces have hit Colombia’s coffee hard. Low earnings are trapping the domestic growers in a vicious circle—low profitability pushes them to cut back on production costs, which reduces quality, leading to lower earnings, and to low profitability. By now, the domestic price stabilization fund has run out of money, forcing the government, for the first time in history, to launch a rescue package in 2001. That package, which is supposed to be a temporary three-year arrangement, is meant to support a certain price level, the renewal of coffee trees, technical assistance, and debt refinancing. It costs some US$100 million per year.

While the rescue package is supposed to end in 2003, political realities will likely prevail and force a continuation. The key will then be to convert further support into direct income transfers to poor households in the coffee-producing areas. This will give them the choice to stay in the industry under the new market conditions (and use the cash to invest accordingly) or diversify away from it. Part of the funds could also be used to provide technical assistance for diversification into specialty coffees, rather than more production of the same type. Most of all, using the leverage of its financial support, the government will want to elicit a fundamental reform of the industry’s institutional framework—of the semipublic, policy-setting National Coffee Committee and of its regulatory arm, the National Federation of Coffee Growers. In the new reality, the Federation will need better governance,
enhanced public accountability, a separation of its role as regulator and market participant, more partnership with new local associations, and an end to its exclusive right to broker coffee exports.

Will this transformation mean the demise of Colombian coffee? It need not. There may well be lower production volume of the traditional single type—but there will be better earnings than at present. The new industry will likely be better serving the domestic market (as Brazil has done); exploiting Geographic Indications of Origin (as Jamaica and Antigua have done), integrating vertically to sell its own brand directly in the retail markets of consumer countries (at least in part); and developing niche coffees (organic, fair-trade, and so forth). Some growers, especially medium-size ones, will phase out and move onto other parts of the rural economy. The transformation, and the government's support for it, will be crucial for Colombia in one other respect—if the authorities signal their commitment to efficiency-enhancing transformation in coffee, the leading and most traditional agricultural product in the country, there will be no doubt about, and less resistance to, its similar intentions in other parts of the rural economy.

v. Exploiting the Synergies Between Growth and Natural Resource Protection

Colombia is the third-most biodiverse country in the world. It has 65 different types of ecosystems and 18 ecoregions. The diversity of its birds, amphibians, and vascular plants is unparalleled on the planet. With close to a thousand permanent rivers, its water supply is the fourth largest; the country is also home to headwaters of large tributaries to the Amazon and Orinoco Basins. Much of this natural wealth is being rapidly destroyed, by three main factors. First, and foremost, the armed conflict protects and fosters illicit crops. These take place in primary forest in fragile areas with no consideration for long-term soil preservation, discharge chemical residues from coca laboratories, and attract chemical fumigation—which pushes them further into new virgin areas to clear. Second, much of Colombia's growth (and badly needed fiscal resources) is increasingly dependent on extractive industries (like oil, gas, and coal). Extractive industries, even if well regulated, can have a substantial negative impact on the surrounding environment where they operate, especially amid the sensitive ecosystems of the western Amazon. Third, as described earlier, perverse incentives in agriculture have caused a major gap between the natural vocation of the land and its actual use. Successive governments have over the last decade tried to address the degradation of the country's natural resources (for example, through Law 99/1993 which established the ministry of the environment; the National Strategy for the Conservation of Biodiversity of 1997; the creation of various protected areas; the ratification of the Kyoto Protocol; the signing of the Stockholm convention; and the membership in the Montreal Protocol). These initial steps have, however, brought little success. This evokes the question: Given the country's war, poverty, and fiscal realities, can growth be made compatible with environmental protection?

This book argues that, in Colombia, growth and environmental protection not only can be compatible but also are mutually reinforcing—that is, they are intrinsi-
cally synergistic. Two types of policies—local and global—can help exploit those synergies. On one hand, the central government should use its (shrinking) environmental budget (about half a percent of the central government’s total expenditures) to support, technically and financially, the municipalities’ effort to conclude their legally mandated Planes de Ordenamento Territorial (Territorial Development Plans), and in particular the environmental components of the plans. These plans will highlight concrete areas where protector-producer reserves are most urgently needed (in effect, the reserves are individual contracts with landowners in environmentally fragile areas whereby the owner agrees to a set of protective local activities in exchange for some form of compensation). At the same time, the central and municipal governments should further foment and recruit local associations to help enforce existing regulations and reserves.

On the other hand, untapped opportunities remain at the global level. First, Colombia is not yet fully profiting from the carbon emission trade. A first, pioneering deal for carbon mitigation was recently completed, but vast amounts of carbon credits are still possible in the “cleaning” of the power sector and industry, and in switching to renewable sources of energy. While still globally less developed, an eventual market in carbon sequestration (both through reforestation and forest conservation) would also carry large potential for Colombia, a country with some 300,000 square kilometers of largely pristine rain forest and, thus, an important carbon “sink.” If well developed, total exports of carbon emission credits could generate an estimated 0.5 percent of GDP per year—that is, about three times the size of the current environment-related expenditure in the national budget. [Channeling part of those resources back to the local communities that host the sequestration and, more generally, the environmental protection efforts would enhance the sustainability of the initiative.] The government, with active private participation, should hence take the lead in organizing this market domestically—strengthening the institutional capacity of the recently established Office for Optimal Use of Clean Development Mechanisms, funding methodologies for project preparation and certification, disseminating information on external opportunities, and assembling a portfolio of carbon trade projects. Most critically, standardized risk-management mechanisms need to be articulated for carbon emission credits of Colombian origin to be globally valuable.

Second, Colombia is not exploiting its enormous potential for biocommerce (oils, medicine plants, ornamental plants and flowers, exotic tropic fruits, natural dyes, and the like). Very small public investments in bringing foreign market information and technological know-how to local communities could help spur this industry. Third,

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8 Under the Kyoto Protocol, an international market for carbon credits was created to assist overall global reductions in carbon emissions. The carbon trade enables parties (including industrial firms) in developed nations to meet their greenhouse gas reduction targets through purchases of carbon credits in developing nations.

9 Carbon “sinks” are areas that can absorb the CO2 that would otherwise feed global warming.
the country has not taken full advantage of nature-for-debt swaps, whereby foreign sovereign debt is written off in exchange for the preservation of natural reserves, indigenous areas, or commitments to set aside areas for future generations.

Finally, much as the environment needs to be protected from growth, growth also needs to be "protected" from the environment. Colombia is a country of prevalent natural disasters. In the last quarter century, it has experienced six major earthquakes, three volcanic eruptions, three landslides, and three avalanches, all at a tremendous cost to the human and physical capital of the country. These disasters have taught important lessons and, through legal, regulatory, and institutional action over the last decade, the country is now better prepared to deal with them. It essentially operates a decentralized system (the Sistema Nacional para la Prevención y Atención de Desastres Naturales) where local commissions are responsible for mitigating risk and dealing with the ex-post consequences of disasters (for which they can access a National Calamity Fund). The system is, however, weak on two critical fronts, both of which call for policy action by the central government. With very few exceptions like the city of Bogotá, local governments lack financial and technical capacity to invest in future risk identification, mitigation, and prevention (as mentioned earlier, most of them have not yet completed their Planes de Ordenamiento Territorial, which are supposed to take into account the probability of natural disasters). And insurance instruments (be they the pooling and reinsurance of risks, the issuance of catastrophe bonds, or other financial tools) that could smooth the fiscal volatility that natural disasters entail have not yet been developed; this is of concern, as the asset value in the balance sheet of the state that is at risk from natural disasters is estimated at around 20 percent of GDP.

b) Sharing the Fruits of Growth

Colombian society is highly unequal. While in the past three decades, sustained growth brought about marked reductions in poverty, inequality continued to increase. This not only affects the distribution of income but also of assets and of access to infrastructure—the two top deciles control 60 percent of income, while the bottom two accrue less than five percent; the measure of land concentration is one of the largest in the world (Gini 0.86); and the coverage of electricity, water, sewerage, and other public services mostly stop at the door of fast-growing informal settlements where most of the urban poor live. Moreover, inequality seems resilient to public policy—it has not been significantly dented by 40 years of land redistribution efforts, low-income housing programs, and schemes for cross-subsidization among users of infrastructure. In fact, many of those policy efforts were not only ineffective in reducing inequality but also hurtful to growth (as the ensuing market distortions damped investment). This is an auspicious position to be in because, in Colombia, inequality has been shown to be an important determinant of violence.

The new government is therefore faced with this question: What can policymakers do to spread the fruits of the growth process without jeopardizing it? This book
suggests two strategic lines of response: break the lock that interest groups have on the public systems of human capital formation (education, health, labor markets), and attend directly to the needs of those for whom markets will not cater (those that need a “safety net” to cope with systemic shocks, the displaced, and those discriminated against on the basis of race or gender).

i. Recovering the Mechanisms for Human Capital Formation

Colombia's public education can show remarkable achievements. Those achievements, however, mask serious inequities. The richest 10 percent of the population have more than double the education of the poorest 10 percent. At the current rates of relative educational attainment, the rural sector is 30 years behind the urban areas. Some two million, primarily poor, school-age children and youth are out of school, a worrisome fact since reaching nine years of education in Colombia has been found to reduce the risk of poverty by one third. The large majority of higher education students come from the upper two quintiles of the income distribution—and 40 percent of those go to free public institutions.

Those inequities are exacerbated by problems with the quality of public education, in turn brought about by outdated teacher training (still mostly based on frontal, teacher-centered models), weak teacher supervision (both technical–pedagogical and administrative), inflexible curriculums (that put emphasis on memorizing information) and, most important, weak accountability mechanisms (standardized tests results are not published and do not cover all departments; parent participation is limited). Interestingly, Colombia has experimented in poor rural areas with a different education model, the so-called Escuela Nueva, which puts emphasis on student-centered learning of critical thinking and communication skills in an accountable, community-based environment. By all standards, the model has produced excellent results; however, it has not spread, least of all to the urban areas.

The sharp inequity and the stagnant quality of the public education system is not due to lack of resources—over the last three decades public education expenditures quadrupled in real terms, while the school-age population grew by less than one third. The problem is rather that the resources are captured by the vested interest of teachers unions which, on one hand, are reluctant to reform the teaching status quo (especially if it means recruiting fewer teachers, or putting them under heightened accountability) and, on the other hand, find it relatively easy to press politically the subnational entities (departamentos and large cities) to which the responsibility for public education was decentralized in the early 1990s. The subnationals themselves, fearing that their future education transfers could be curtailed if they cut costs and reallocate resources away from teachers, have had no incentive to negotiate reforms with the unions (a few progressive mayors—like Bogotá’s—did, with good results). It is thus clear that, in the current setup, additional resources will not improve education coverage or quality; if anything, Colombians are overpaying for the public education they now get. This points to the policy priorities for the new government in regards to education: to link subnational transfers to the number of students
rather than teachers (the failed intention of Law 60/1994 and, when actually applied, the main objective of the recent Law 715/2001), and to elicit public accountability for the results obtained with those transfers (for example, linking part of the transfers to the evolution of published, standardized test results).

A similar problem of capture by special interests affects the performance of the health sector as a tool for human capital formation—and is bringing major parts of it to the brink of financial collapse. In 1993, Colombia implemented a sweeping, pioneering reform of its health system (though Law 100/1993). The new arrangement would ensure efficient, effective, and universal coverage. It was based on separating the funding of health services from the provision—health “promoters” would compete to insure clients who would then use their insurance benefits to contract health services from competing public and private suppliers. People would pay for that insurance according to their means, with the poor being subsidized by the government and by a portion of the premium for the nonpoor. Public funding would thus go to “subsidize the demand” by the poor, rather than the “supply” by public health providers. The initial results of the reform were impressive—total coverage more than doubled, rural coverage increased sevenfold, and coverage among the poorest decile rose tenfold. The World Health Organization now ranks the overall performance of Colombia’s health system as the best in Latin America, and 22nd in the world.

Those achievements, however, are currently jeopardized by two main factors. First, the state-owned Instituto de Seguro Social–Salud (ISS–Health), the largest insurer and provider in the market, has not adapted to the new market rules simply because it has been unable to reduce the bloated cost of its 30,000-strong labor force and, thus, to compete with other providers. This has called for successive financial rescues from the government (some financed by FOSYGA, the fund that is supposed to administer the cross-subsidies for the poor) that, in turn, have perpetuated inefficient management practices, disregard for service quality, and ballooning arrears with other parts of the system. Second, similar labor cost rigidities have prevented public hospitals from competing for business and, as a consequence, have all but stopped the transformation of public funding for “supply” subsidies to “demand” subsidies—only some 60 percent have so far been transformed, putting the whole concept of the reform on hold. In fact, public resources for public hospitals more than doubled in real terms since the reform began, but two thirds of the increase went to pay for a larger wage bill.

What is the appropriate policy response to these problems? As with education, in health there is a need for additional reform, not for additional money. The outgoing government attempted, with partial but positive results, to negotiate the reform of ISS–Health and to restructure 27 of some 170 public hospitals. Both initiatives need to be deepened by the new authorities. In particular, two options should now be considered for ISS–Health (both its insurer and provider arms): a complete closedown, or a closedown and reopening on commercial terms (splitting the insurer and the provider into separate companies, and rehiring workers according to competence and
need). The estimated total net saving to the fiscal accounts from each option would be 1.2 and 2.4 percent of GDP, respectively, compared to the do-nothing-further scenario. On the public hospitals front, all of them should now be put under restructuring; this will call for an up-front cash injection of about US$500 million but, depending on how deep costs can be cut (the initial restructurings achieved only a five percent reduction) that investment can be recovered in four to seven years.

Improving the two main mechanisms for human capital formation—education and health—will mean little in terms of inequality reduction if the poor cannot count on functioning labor markets in which to convert that capital into employment. However, Colombia's formal labor markets are excessively rigid. High and binding minimum wages, a perceived weak link between hefty social security contributions and benefits, and powerful unions that are primarily concerned with maintaining real wages result in a so-called "natural" rate of unemployment that is extremely high (about 11 percent), while actual unemployment is even higher (17 percent in mid-2002). The "wedge" between the cost of labor to the employer and the compensation received by the employee is worth about 50 percent of the wage bill (compared to 39, 31, 19 percent in France, Mexico, and the United States, respectively). Not surprisingly, 60 percent of the workforce operate in the informal sector; in contrast, only one in 10 Colombian workers belongs to a union.

This calls for a major overhaul of the legal and regulatory framework in which the labor markets function. In particular, contributions for which the individual worker sees no direct benefit (parafiscales) should be eliminated and the corresponding programs (like training and family welfare) should be funded out of general tax revenues.10 The minimum wage should be nonbinding and should not apply to apprenticeships, temporary workers, or public workforce programs. Collective bargaining should be done at the firm level, not at the industry level. Legal provisions extending equal benefits to all workers in an "economic entity" (principal firm, subsidiaries, and affiliates); those imparting seniority-based promotions, compensation and training; and those mandating indefinite rollovers of fixed-term contracts, should be abolished.

ii. Helping Those for Whom Markets Will Not Work

While strong human capital and functioning labor markets will be an effective means for many Colombians to share in the fruits of growth, there will be others for whom market-based solutions will simply not work and for whom direct government support will be necessary—those that cannot cope with systemic crisis, those that have been displaced, and those that are discriminated against on the basis of race or gender.

10 The elimination of all parafiscales may not be politically feasible, especially those associated with family welfare. A second-best solution would be to keep those that fund the most sensitive, best-targeted social programs and, for these, to separate financing from provision (opening the provision to competition by public and private suppliers).
Colombia never really had a formal social safety net, something that became painfully clear during the unprecedented macroeconomic crisis of 1999. Existing social programs (like the Servicio Nacional de Aprendizaje, SENA; the Caja de Compensación; and the Instituto Colombiano de Bienestar Familiar, ICBF) are paid out of payroll taxes and only cater to formal workers. The sweeping reforms that accompanied the enactment of the 1991 Constitution brought about neither a strategy for social assistance nor additional funding for it. Thus, in response to that crisis, a temporary five-year Social Support Network (Red de Apoyo Social) was created to fund temporary employment (Empleo en Acción), conditional cash transfers to poor families (Familias en Acción), and firm-based apprenticeship grants for youth (Jovenes en Acción). The network, which took two years to unfold fully, has several loopholes, but one is particularly worrisome—it does not sufficiently protect children and adolescents at risk. About 70 percent of urban children under the age of seven are poor, a proportion that reaches almost 90 percent in rural areas. Roughly half of all children have not been vaccinated against basic communicable diseases. And the armed conflict limits the effective reach of the government’s safety net in certain rural areas, precisely where the youth are being recruited (mostly by force) into combat.

All this is both a challenge and an opportunity for the new administration. Based on the lessons that the completion of the RAS will bring in 2004, it should proceed to establish a permanent and comprehensive Social Risk Management System. This need not mean new budget appropriations; rather, it should absorb the funding currently going to the SENA, the Caja de Compensación, and the ICBF. This should be accompanied by an overhaul of the means-testing mechanisms (the SISBEN), something that could also improve the targeting of subsidies in infrastructure services (discussed earlier). Overall, the incoming government will have to decide whether Colombia, which at the moment spends a low 0.7 percent of GDP on social assistance, will have a standing safety net arrangement and, if so, what would be its products and its countercyclical features.

Even a properly functioning social safety net would, however, need to be adapted to cater to the urgent needs of Colombia’s displaced population. Unofficial estimates put the number of desplazados at some two million people (about five percent of the population). They have been traumatized out of their rural homes by the armed conflict; have lost jobs and assets (and, in most cases, even the titles to their assets); can no longer access formal education or health services; and are lingering in slums at the outskirts of large cities. The majority are women, about half are under 18 years old, and one fifth is either Afro-Colombian or Indigenous. Virtually all are poor. Most disturbingly, they are stigmatized and isolated in the receiving localities, something that, until very recently, made them invisible as a political and policy priority. It is difficult to see how Colombia will attain a functioning level of social cohesion if the plight of the desplazados is not attended to, a plight that will not go away and will get worse if unresolved.

It was not, however, until 1997 that a legal framework (Law 387/1997) was enacted providing for “the integral care” of the displaced, and a single institution
(the Red de Solidaridad Social) was designated to implement it. The RSS, in cooperation with the international community, issued a corresponding action plan in late 1999. So far, some US$50 million have been invested in that plan, and only an estimated 17 percent of the desplazados have been reached. The new government needs to bring the aid program for the desplazados to a much higher plateau. To this end, there are five priorities. First is to give them means of political representation, including mobile voter registration services—this would ensure sustained policy attention. Second, support mechanisms should move from mere humanitarian aid to schemes for return, relocation, or integration, as the case may be, and adequate budget resources should be made available (a strong, well-articulated commitment by the Colombian government is likely to attract substantial donor funding). Third, the operating rules of all existing social assistance programs, including those that are based on means tests through the SISBEN, should be modified to allow for priority consideration of displaced cases. Fourth, local governments should be co-opted to take the lead in preventive action in high-risk regions, for which additional resource transfers from the central government will be needed. Fifth, a uniform methodology to track, classify and, ultimately, understand the displaced populations should be pursued.

Finally, race- and gender-based discrimination still distorts the way many Colombians can profit from the growth process. Colombia is a pluriethnic nation with some 800,000 indigenous peoples (belonging to 82 different groups) and over one million Afro-Colombians. The country has a strong tradition of recognizing ethnic rights (cultural institutions, communal properties, political participation) and enshrined them in the 1991 Constitution. However, several factors have now combined to weaken those populations' ownership of one of their defining assets—their land—and, thus, their capacity for market-based development. Some of those factors are technical in nature and within reach of public policy (like more precise surveying, adequate collective titles, better rules for assessing public services and programs); others are more difficult to address (the colonization process, illicit crops, and, critically, the internal conflict).

Contrary to common observations elsewhere, in Colombia the ascription of gender-based roles is more harmful for men than women. Girls have higher school enrollment levels than boys, women's fertility and maternal mortality have decreased, women's labor market participation rates have increased, and gender gaps in wages have narrowed. Not only do boys perform worse in education, but also males are more affected by HIV/AIDS-, alcohol-, and drug-consumption-related diseases. More critically, males are the disproportional victims of violent death because of both the armed conflict and crime. Available research explains this pattern as low-income, unemployed males seeking to fulfill through violence a socially expected identity as family providers, a role they have failed to play through productive work. School curriculums and learning materials that refrain from gender stereotypes and teach conflict resolution skills; media-based campaigns that provide nonviolent role models; and community-based programs that seek to identify and
prevent local sources of violence (like the government’s Convivencia y Seguridad Ciudadana) are the best ways to address gender-driven social issues for males.

c) Building a Government of Quality

Reaching a path of fast and sustainable growth, and giving people the tools to share in the fruits of that growth, is a difficult policy agenda for any government. In today’s Colombia, it will be a formidable challenge, for the armed conflict, the illegal drug industry, and the capture of policymaking by interest groups have all but paralyzed the effective authority of the state. The new administration will thus need to rebuild early on the government’s management credentials in front of its citizens—in other words, they will have to enhance the quality of the government function. There are, of course, very many ways in which the quality of government can be improved, and prioritization will be crucial. This section argues for five areas of immediate focus—reform of the state’s functions, decentralization, budgetary institutions, corruption, and justice.

Colombian governments have for decades exhibited a dichotomic performance in discharging their functions. On one hand, a technically competent, domestically independent, and internationally accountable set of institutions (among others, the Central Bank, the Ministry of Finance, the Departamento Nacional de Planeación) consistently watched for and delivered solid macroeconomic policy. On the other hand, the array of sector institutions administering microeconomic policies and programs have had less success, and have been regularly perceived as captured by their own bureaucracies and by the surrounding sectoral interest groups. This perception covers a large array of such institutions operating in many fields—from the Casas de Compensación Familiar and the ICBF (operating family welfare programs); to INCORA, INVIA, the SSFD (in land, roads, and residential public services); to labor unions (stifling decentralization efforts in education and health).

This background of macro-competence and micro-capture hints at three basic principles that should guide a meaningful reform of the state in Colombia. First, while some organigramic reorganization will be necessary, and redundant and duplicative agencies will have to be merged or closed (notably in agriculture), the reform should be about fixing critical “functions” within the state, not about reordering reporting lines and shifting personnel among ministries and institutions. Those functions include much-enhanced accountability in decentralization transfers (see below); an initial shift toward results-based investment budgeting in the central budget (also discussed below); a major overhaul of procurement systems (with transparency as the guiding principle); much stronger internal and external auditing of the central government (especially, the Contraloría General de la República, which is the external auditor of the Executive); currently-missing tools for evaluating public expenditure (in terms of their impact and beneficiaries, not just their procedural propriety); more efficient and more independent regulation in infrastructure (especially in roads, water, electricity, and gas), and better mechanisms to detect, report,
and punish abuse of power and rent-seeking (notably, through capacity upgrading at the Procuraduría General).

Second, given the entrenchment of special interests, early reform successes in a few focal functions (and in their related institutions) will be preferable over sweeping, across-the-board undertakings that are likely to run out of political steam very quickly (Colombia has tried time and again to pass and implement comprehensive public sector reforms—most recently in 1992–93 and 1998–99—but was soon derailed by the political resistance of vested interests). Third, some of the functional reforms will, at times, trigger changes in major agencies; support at the highest level of government will then be necessary to proceed and, thus, set important precedents for lesser institutions. For example, better evaluation of public expenditures and better procurement systems may have implications for, respectively, the ISS and ECOPETROL; reform of these would send a clear signal to the rest of the administration.

Focusing on state functions will naturally lead to the second key priority in upgrading the quality of government in Colombia—decentralization. Since the mid-1980s, the country led Latin America in embracing the principle of bringing policymaking closer to its beneficiaries (partly as a tool to address the causes of the armed conflict), enshrined it in the Constitution of 1991, and implemented it almost at once. The results have fallen well short of expectations, and have threatened not only the efficiency of sectoral expenditures but also the fiscal pillar of macroeconomic stability. This presents a strategic question to the new administration: Should Colombia further decentralize, should it re-centralize, or should it proceed with an all-out federalization? It is argued here that decentralization remains the best option, but major adjustments to the process are needed to deal with its main weaknesses—lack of incentives to rely on local taxation, to enhance efficiency in service delivery, and to maintain fiscal discipline. First, while the constitutional amendment Acto Legislativo of 2001 brings all transfers into one single fund and fixes its growth, there is still no mechanism to evaluate, and hold subnationals accountable for, the results they achieve with those transfers. Nor has Law 715/2001, which clearly shifted responsibility for core social services to the subnationals, established delivery standards (this is naturally worrisome, because subnationals now handle almost half of all public sector revenues—about 15 percent of GDP). Further legislative action to that end is necessary, especially in education, to make the very transfer of responsibility conditional on performance.11

Second, the volume of transfers (like those meant to cover teacher payrolls) should not be based on historical supply cost, but rather, on need-and-effort (like cost per student or "capitation"); the above-mentioned Law 715/2001 calls for that. However, for the transformation to be at all possible in practice, teacher salaries (the largest decentralized expenditure) and employment policies can no longer be determined by national negotiations with the unions, but at the subnational level. Third,

11. Law 751/2001 provides enough flexibility to instrument performance agreements (acuerdos de desempeño) with the sub-nationals
subnational governments, especially large municipalities like Bogotá and Medellín, should be allowed to surcharge and fiscalize the income tax and the VAT (the draft law on Taxation Territorial currently in Congress is a good step in that general direction). Fourth, subnational borrowing regulation, currently based on certification by the central government—semiforos—and clauses in past bailout agreements—under Law 617/2000—need to become market based. For this, the current, essentially voluntary banking regulations linking capitalization requirements for loans to subnational borrowers to published credit ratings, must become compulsory. Fifth, while in theory a rearrangement of political divisions and levels of government could bring improvements to Colombia’s decentralization process (that is, a so-called Redimensionamiento Territorial, regrouping current departments into regions or provinces), the country’s political and fiscal reality advises against it at the moment. Finally, central government resources should be invested in developing a common budgeting, accounting, and reporting framework at all levels of the state, as well as common procurement standards.

Both the reform of the state’s functions and the adjustment of the decentralization process will be mutually reinforcing with the third key element in improving the overall quality of government—better budgetary institutions. In recent years, Colombia has made significant progress in this area, notably with the establishment of a single treasury account for its central government (Cuenta Única del Tesoro). This technical improvement has, however, not been matched by better policies in designing and operating the budget itself. Several areas for policy action stand out. The National Development Plan should become a strategic, indicative roadmap, rather than a bloated, legally binding list of wished-for projects the execution of which is then controlled discretionally through cash management. International accounting standards (like the IMF’s Government Finance Statistics Manual) should replace the rather loose definitions currently applied in Colombia’s budget (for example, in regards to investment outlays).

The array of legal entitlements and earmarks accumulated over the years should be reviewed and their costs and benefits put out for public consideration. Congress and the public should be given reading access to the government’s financial information system (Sistema Integrado de Información Financiera) and to the currently-under-construction results assessment system (SINERGIA). The split responsibility for the “operational budget” (current expenditure) under the ministry of finance, and the “investment budget” under the Department of Planning should be unified, and only one of those institutions made responsible for the whole budget, something that will avoid funding investment projects without adequate maintenance allocations in subsequent years. More broadly, public sector budget information should be “regulated” and clear responsibilities assigned; at present, several institutions collect and publish (sometimes inconsistent) data on the same matter, an obviously inefficient and confusing use of resources.

The fourth pillar in raising the quality of government in Colombia is the fight against corruption. As with other aspects of the country’s social life, the 1991 Consti-
tution set out a framework to reduce corrupt practices in public office (by, for example, establishing the office of the Attorney General), but had little impact on the perceived integrity of the government function. Surveys indicate that Colombians see corruption as a rampant problem in their society. The traditional indicators of integrity (in licensing, tax administration, customs, and the like) are, however, much better than the average, certainly the average in Latin America. The reason is that, in Colombia, corruption takes a particular form—"state capture"—that is, high-level government officials affecting, for their own financial, social, or reputational benefit, the rules that govern the relationship between interest groups and the state. This is an especially perverse form of corruption, because it goes well beyond specific transactions and puts a cloud of illegitimacy over the continuum of government dictums. As such, the solution lies not as much in improving administrative processes (although some of these need reform), but in the reforms of the party and electoral systems.

Many of those reforms, like changes to the campaign finance laws, fall outside the purview of this book. But others are a matter of development policy: a professionalized civil service, top-level management appointments that are done on the basis of public competitions run by outsourced human resource agencies, and compensation and job stability that are based on performance; a procurement system that is online and open to public scrutiny; enhanced independence for key regulatory institutions (not surprisingly, the above-mentioned surveys show the constitutionally independent Central Bank to be among the least corrupt and the most competent institutions in the nation); the establishment of a single institution in charge of fighting corruption that reports directly to Congress; and, as discussed below, a much more effective judicial system.

A better-functioning judicial system is, indeed, critical to abate the problem of corruption and, more generally, is a core priority to improve government quality in Colombia. The system was one of the main targets of the 1991 Constitution—a new constitutional control jurisdiction was created in the form of a Constitutional Court (over and above the existing Supreme Court and State Council); a new arrangement for criminal justice was set up, headed by the new office of the Attorney General; a new legal figure (the Tutela) was instituted giving citizens the right to stop and dispute at any judicial level any action that may hurt their constitutional rights (which, in turn, were widely defined, like the "right to life"); the administration of the judicial apparatus was given to a new Superior Council of the Judicature; and a new jurisdiction of community-based justice was opened (the so-called Justices for Peace). The new justice function was then given a major increase in its resources (the judicial sector's budget has tripled in real terms since 1991). The overall objective was to raise the judicial system's performance, especially in terms of congestion, quality, and chronic corruption. The results have been disappointing; if anything, access and resolution rates deteriorated (some 4 million cases, one for every 10 Colombians, await disposition). Why, and what can now be done to fix it?

The new Constitutional Court has pro-actively, and distortingly, intervened in matters of economic policy (like reversing a freeze in public sector wages and cap-
ping interest rates for mortgages); the roles of the Constitutional Court and the Supreme Court are in practice overlapping, causing a great deal of judicial uncertainty, and the *Tutela* has become a much-abused way to dispute contracts (notably, labor contracts) and has clogged the courts. Optimally, such structures should be changed. Political support for reversing some of the mandates of the 1991 Constitution is, however, highly unlikely to materialize. Adapting the old judicial apparatus to the new reality is, therefore, the best reform strategy in the sector. This can be achieved through a combination of six main actions.

First, justice services can no longer be completely free in all branches and for all cases, if not to generate revenue at least to restrain superfluous use of the system. During the last decade, 80 percent of the cases in the civil jurisdiction were related to commercial payments collection; these should pay for all or part of their adjudication, even if it is on a means-tested basis. Second, procedural rules and their associated logistical arrangements should be adapted to deal with *Tutelas* through swift, oral proceedings. Third, the governance of the administrative Superior Council of the Judicature should be made more accountable to the system's users, its board should be dominated by stakeholders outside the judiciary itself. Fourth, additional resources within the overall judicial budget should be reallocated to the criminal justice branch (where the demand for justice services far outstrips the installed capacity) but, in parallel, the Attorney General's Office should be made publicly accountable for an agreed set of socially relevant performance indicators (like serious-crime resolution rates). Fifth, the union-driven rigidities in retraining and reassigning (let alone dismissing) judicial personnel to functions more compatible with the new reality should be overcome (a telling example: there is no need for a lawyer to play the role of court secretary). Finally, a sizable investment in improving the physical infrastructure through a computerized case-management system seems long overdue.

IV. A Path to a New Colombia

The development policy agenda described above calls on the new government to reach a higher and more sustainable growth plateau, to give all Colombians a chance to share in that growth, and to make the state itself an icon of quality. Even in normal circumstances, this would be a formidable challenge. For a country dealing with an armed conflict and pent-up social demands, the agenda is nothing but overwhelming. But it is also feasible. Colombia can still marshal the talent and resilience of its people, the wealth of natural riches on its land, and the deserved support of the international community to create a new economic pillar on which to build peace. The presidential elections of 2002 brought about a clear mandate and a unique opportunity to construct that pillar.

The tasks ahead are many, and the ability of the government to implement reforms is necessarily limited by the capacity of the state's institutions and the political realities of the country. Prioritization will thus be crucial, and a clear imple-
mentation map will be necessary. Table 1 presents an example—and only an example—of such a map. Determining what is possible when remains, however, the sole prerogative of the new authorities. It will be up to them to assess their preferred sequence of policy actions according to their own strategic objectives and the available consensus. Not all policy initiatives will succeed. In some cases, reaching agreement among stakeholders will prove elusive, as is rightly expected in a vibrant democracy like Colombia. In other cases, first-best solutions will simply have to give way to more practical arrangements. Most of all, not everything that needs to be done can be done within a single presidential term.

So, what kind of country would Colombia be, four years from now, if a policy agenda along the lines of Table 1 were implemented? It may not be rid of the internal conflict. It would certainly not be free of all its economic problems. There would be a lot more jobs, but many people would still be jobless. The painful emigration flow and its associated brain drain would have slowed down, but not reversed. Colombia would not even be a “rich” country. But it would be a country on a fast path of construction, where development would give hope and opportunity to all.
Table 1. Colombia: A Possible Prioritization of Policies for the New Presidential Administration

<table>
<thead>
<tr>
<th>From the very beginning...</th>
<th>After the first 100 days...</th>
<th>After the first year...</th>
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<tbody>
<tr>
<td><strong>Protect the macroeconomic framework</strong></td>
<td><strong>Send early, confidence-building signals</strong></td>
<td><strong>Make human capital development an explicit priority</strong></td>
</tr>
<tr>
<td>• Launch a growth-friendly tax reform (with compensatory programs for the poor)</td>
<td>• Pass a comprehensive pension reform</td>
<td>• Commit to quantifiable improvements in the quality of education</td>
</tr>
<tr>
<td>• Announce reform of the state</td>
<td>• Put specific privatization efforts on the agenda (for example, telecommunications)</td>
<td>• Commit to freeing the health system from vested interests</td>
</tr>
<tr>
<td>• Pass a strengthened “Fiscal Responsibility Law”</td>
<td>• Fill senior positions in the civil service through open competition</td>
<td>• Reach out to the Desplazados</td>
</tr>
<tr>
<td><strong>Take first steps toward higher growth</strong></td>
<td><strong>Gather consensus for reforms in human capital formation</strong></td>
<td><strong>Bring governance to the forefront of the agenda</strong></td>
</tr>
<tr>
<td>• Launch the reform of the coffee sector</td>
<td>• Begin publishing the disaggregated results of existing standardized tests</td>
<td>• Announce a detailed plan to combat corruption</td>
</tr>
<tr>
<td>• Press on with the commercial banking sector’s consolidation and reform</td>
<td>• Launch participatory evaluation (cost and beneficiaries) of all social programs</td>
<td>• Put the government’s procurement and financial management systems on-line</td>
</tr>
<tr>
<td>• Enhance regulatory independence in infrastructure</td>
<td>• Eliminate all parafiscales</td>
<td>• Launch reforms in the judicial system</td>
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<td><strong>Focus on enhancing long-term growth</strong></td>
<td><strong>Begin reforms in human capital formation</strong></td>
<td><strong>Begin to exploit the synergies between growth and environmental protection</strong></td>
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<tr>
<td>• Overhaul the SSDS and make all sector regulatory commissions truly independent</td>
<td>• Link all education transfers to cost per student and performance agreements</td>
<td>• Bring Colombia to the international carbon trade market</td>
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<tr>
<td>• Reform cross-subsidization mechanisms in infrastructure</td>
<td>• Close or reengineer ISS</td>
<td>• Fund the completion of all <em>Planes de Ordenamiento Territorial</em></td>
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<td>• Close the land redistribution program, and covert it into cash subsidies for the rural poor</td>
<td>• Put all public hospitals under restructuring plans</td>
<td>• Multiply local producer-protector reserves</td>
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Table 1. (continued)

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<tr>
<th>Consolidate the higher growth plateau</th>
<th>Complete and Consolidate Reforms in Human Capital Formation</th>
<th>Bring government quality to the local level</th>
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<td>• Articulate an exit strategy for all second-</td>
<td>• Convert all health subsidies into “demand” subsidies</td>
<td>• Give municipalities larger taxation powers</td>
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<td>tier state-owned banks</td>
<td>• Launch labor reform</td>
<td>• Link all transfers to open performance</td>
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<td>• Complete privatization in electricity and</td>
<td>• Create a permanent “Social Risk Management System”</td>
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<td>telecommunications</td>
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<td>• Put market-discipline in sub-national</td>
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<td>• Open agriculture to international</td>
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<td>competition (a true aperture)</td>
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And leave behind at the end of the presidential term...

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<tr>
<th>An economy that is growing fast and is sustainable</th>
<th>A stronger human capital</th>
<th>A “greener” Colombia</th>
<th>And a state that is respected for its improved efficiency</th>
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<td>• Real long-term growth is at least five percent per</td>
<td>• The poverty headcount has</td>
<td>• Where deforestation has been</td>
<td>• With institutional capacity at the central, department and</td>
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<td>year, and unemployment is below 10 percent</td>
<td>fallen by at least ten</td>
<td>stabilized</td>
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<td>• The fiscal accounts are in surplus and inflation is</td>
<td>percentage points since</td>
<td>Extractive industries do not</td>
<td>• A judicial system of quality, speed, and access</td>
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<td>comparable to that of the G7 countries</td>
<td>2000, and a permanent</td>
<td>systematically damage the</td>
<td>• And internationally acclaimed transparency</td>
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Part I
Thematic Notes
1

Violence, Sustainable Peace, and Development

This chapter was written by Elsie Garfield and Jairo Arboleda.

I. Introduction

There is a clear consensus among Colombian citizens of all walks of life that the current state of insecurity and violence that prevails in most of the country is unacceptable. It has resulted in a poor quality of life, and has created a poor investment climate, a serious obstacle to economic growth and employment generation, and, many would argue, a threat to the social fabric and very survival of Colombia as a nation. In a poll taken in February 2002 following an upsurge of violent acts related to the end of negotiations with the Fuerzas Armadas Revolucionarias de Colombia (FARC), 92 percent of Colombians ranked violence as the problem with the most perverse effect on them and their families, far above any other social or economic issue. As was the case in 1996–97 when the World Bank was developing with Colombia its Country Assistance Strategy (CAS), there still seems to be widespread agreement that a top priority in Colombia’s development agenda is peace.

II. Violence Trends and Characteristics

Colombia is a country with a long history of violence going back to the war of One Thousand Days in 1899, which left 100,000 dead, to La Violencia in the late 1940s and early 1950s. Since the 1980s, the multidimensional problem of violence has become more widespread and is exacting an increasing economic and social toll

This thematic chapter draws heavily on Alberto Chueca Mora’s research on the subject
Trends in violence have worsened and are some of the highest in the world. Using the homicide rate as a proxy for violence levels, official figures increased from 15 to 92 per 100,000 inhabitants between 1974 and 1995, with levels growing dramatically in the post-1985 period. The homicide rate is one of the highest in the world: three times higher than in particularly violent countries such as Jamaica or Russia, seven times higher than in the United States, and 50 times higher than in a typical European country (see Figure 1). In some cities murder took on almost epidemic proportions in the early 1990s Medellín.

Figure 1. Murder Rate per 100,000 Population, 1993–94

Source: Global Report on Crime and Justice, United Nations
recorded a rate of over 400 per 100,000 population. The rate of homicides attributable to internal armed conflict has also risen in the last 20 years and reached levels experienced during the period of La Violencia (see Figure 2). In terms of duration and loss of life, Colombia’s armed conflict (1948–62 and 1984 to the present) is among the five longest and most intense in the world, comparable only to countries like Afghanistan, Angola, Rwanda, and the Sudan (Echeverry, Salazar, and Navas 2001).

All types of crime—including extortion, kidnapping, car theft, and armed robbery—flourished in the 1980s and continued to rise significantly during the 1990s. Further, the crime boom was geographically concentrated, such that the offenses grew tenfold in some places, while in others it remained almost unchanged. Between 1985 and 1998, the number of reported kidnappings rose from about 9 per million persons to about 80 per million persons, with the majority of victims being civilians (Mejía 2000); this was an important source of revenue for some armed groups. An upsurge in crime in urban areas is linked to the upsurge in drug trafficking, particularly in Cali and Medellín, and to unemployment and poverty, and to precipitators such as availability of arms and consumption of alcohol.

**Insurgent Armed Conflict Is More Entrenched and Widespread Than at Any Point in the Past Three Decades and Areas with an Active State Presence Have Declined.** During the past five decades, the number of actors involved in the armed conflict has expanded from the guerrilla and armed forces to include drug cartels and right-wing armed paramilitary groups. This has been accompanied by increasing density—both spatially and in terms of interdependent reciprocal networks between different actors. The internal armed conflict has become a struggle to control territory with many areas of the country, particularly rural, under active dispute between guerrilla and right-wing armed groups. Municipalities with some type of guerrilla presence increased from 17 percent in 1985 to 58 percent in 1995. If areas experiencing paramilitary, drug, and armed forces activity are added, approximately 75 percent of the country is experiencing some level of armed conflict. The Colombian military and police have been unable to ensure the security of its citizens, and impunity is widespread in the face of increasing human rights violations of all kinds. As a result there has been a loss of sovereignty of municipal administrations and a growing number of displaced persons.

**Violence Escalated with the Upurge in the Drug Industry in the 1980s.** Numerous studies have shown that Colombia’s involvement in the illegal drug trade is a key factor explaining the dramatic increase in violence, particularly homicides, over the last two decades. The drug trade has exacerbated levels of violence related to organized crime around drug production and processing, the militarization of the fight against drugs, and disorganized violence around distribution and consumption. It has also fueled violence by providing a steady source of funding for several of the key illegal armed groups.
Figure 2. Murder Rate, 1946–98

Source: National Police
Violence increasingly affects some groups disproportionately. All Colombians have been terribly affected by violence. However, the rural population in general, youth, and ethnic minorities have been most affected, particularly by the armed conflict. Younger, lower-income, and less educated men are more likely to be both perpetrators and victims of homicide. The homicide rate for men thus multiplied by 13.5 between 1980 and 1995, with shifts throughout this period toward younger men. The number of internally displaced people has increased over the last decade and is still growing. According to a 1995 study, 600,000 people were forced to leave rural areas during the previous decade (Meertens and Segura-Escobar 1996). The Presidential Council for Human Rights estimates that the current number of displaced people has reached 1 million, about 2.5 percent of Colombia's population. Women and their dependent children living in rural areas are the group most affected by displacement due to the armed conflict: 58 percent of the displaced population are female, and 75 percent are under 25 years old (Conferencia... 1994). Indigenous communities have been disproportionately affected by armed conflict throughout the country.

III. Sources of Violence and Conflict

While there is broad agreement that the current state of insecurity and violence is unacceptable, there are significant differences within Colombian society, among academic and other analysts of Colombia, and within the international community about the causes of the situation, and the appropriate strategy for progressing on a path to peace and development. The many excellent studies and analyses of violence in Colombia, particularly of the last two decades of the 20th century, reflect these differences. It is our contention that no single analysis or perspective has sufficient explanatory power, but that taken together they provide important insights that are useful (Moser 2000). This is due to the multidimensional and interrelated nature of the sources of violence in Colombia, the importance of looking at its evolution over time, and the rapidly changing dynamics particularly at the local level. This section discusses the sources of violence and conflict,1 and Section IV discusses the costs as a basis for drawing some preliminary conclusions about a path to sustainable peace and development.

A somewhat stylized, simplistic presentation of the principal explanations of the current situation are that (a) the driving force for the escalation of violence in the 1980s is the illegal drug trade which has fueled criminal activity and financed the armed groups, which are motivated primarily by greed, tending to lead to a conclusion that punitive actions involving force are the solution; and (b) the latest phase

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1 This discussion does not touch on interpersonal and domestic violence, which is a serious problem in Colombia. These are discussed in more depth in Moser (2000) and Moser and McIwanne (2000).
of the armed conflict is rooted in long-standing social conflicts related to an exclusionary political, economic, and social system, and has been aggravated and perpetuated by funding obtained by the armed groups through the drug trade, tending to lead to a conclusion that achieving sustainable peace requires structural changes involving a redistribution of power and assets within Colombian society.

As indicated above, we consider each of these stylized explanations to have validity, particularly if one enriches them by looking at the situation of the last two decades from the perspective of Colombia's long history of violence. We will briefly examine the sources of the complex phenomenon of violence in Colombia by making a distinction among:

- The armed conflict (often referred to by many Colombian analysts as "political" violence) of the more recent period involving the guerrilla forces (FARC, National Liberation Army (ELN), and so forth), peasant self-defense movements, paramilitary groups, and the Colombian military and police
- The long-standing, underlying social conflicts at the local, regional, and national levels, which have also manifest themselves in violent ways and which are claimed by various armed groups as a motive and justification for their actions
- The illegal drug trade and related criminal activities (arms trade, money laundering, kidnapping, and so forth), which have interacted with and contributed to the worsening of both the armed conflict (with the drug cartels becoming an armed actor) and social conflict in complex ways that are difficult to disentangle.

a) Armed Conflict

Colombia has a long history of violence: confrontations between liberals and conservatives in the 19th century, the period of La Violencia in the mid-20th century, and the escalation of armed conflict and crime since the 1980s. In the past decade, the scale and intensity of the internal armed conflict has changed from one confined to certain rural areas to a generalized violence that dominates the daily lives of most citizens. As remote guerrilla activity has turned into a conflict that includes new armed actors including paramilitary groups and drug cartels, and a steady source of funding, the nature of the conflict has been transformed and its negative impact on Colombian life has become enormous.

A distinguished analyst of Colombia's situation over the last two decades describes the current armed conflict as a "war against society" where a generalized state of violence prevails and the majority of citizens are in effect held hostage by the various armed groups. Domination of people and territory appears to be the core military strategy of each of the principal illegal armed groups; the original social justice concerns that motivated the founding of the guerrilla groups seem to be of less importance (Pécaut 2001). Many areas of the country are either dominated by one
group or are under active dispute. The inability of the State, through the military and police, to exercise a monopoly of force and protect people and property has permitted the illegal armed actors to move into these areas and exercise authority. The municipality has become a key arena for the armed struggle, making it nearly impossible in many parts of Colombia for citizens to exercise their rights and for local governments to carry out their responsibilities. The pervasive impact of this situation is discussed further in Section IV.

There have been many peace initiatives in Colombia since 1982, with a small measure of success. The faltering of the peace process initiated by the Pastrana government in August 1998 and the roller-coaster nature of the negotiations process with the principal guerrilla group, FARC, coupled with the many brutal acts committed by each armed group against people and property, have led many Colombians to lose confidence and hope for a negotiated settlement of the armed conflict. Yet, as noted above, it would be too simplistic to reduce the discussion of violence and peace in Colombia to the armed conflict.

b) Social Conflict

A variety of studies indicate that Colombia’s violence and armed conflict stem from a complex interaction of economic, social, historical, and political factors at the local, regional, and national levels (López and García 2000). International evidence also supports the importance of these factors.

Poverty. While Colombia made significant progress in reducing the poverty rate (measured in terms of per capita income) between 1978 and 1988, a serious reversal in the second half of the 1990s brought these rates back to their 1988 levels. Growth has not reduced the large gap between the incomes and well-being of rural and urban residents: the level of extreme poverty in rural areas is three times that of urban areas. Although it may not be possible to establish a direct causal relationship between poverty and the armed conflict, the relationship appears to be dual: poverty favors the appearance of violent conflict, and the conflict itself is a major cause of poverty as evidenced by the large number of persons and families from humble rural origins who have been forced to flee to poor outlying areas of cities leaving behind their land and other possessions which they have little hope of recovering. There is no doubt that the poor are the main victims of violence, whether in rural or urban settings. Both in the regular armed forces and in the illegal armed groups, young men from poor families are on the frontline of the armed conflict. Likewise, lack of access to jobs, good education, and health services, the basic amenities of life, and opportunities offered by the drug trade are undoubtedly linked to an upsurge in crime in urban areas.

Inequality. The increase in violence over the last 20 years has occurred simultaneously with an increase in economic disparities. The growth of the guerrilla move-
ment has run parallel to the deterioration in all income distribution indicators. The number of guerrilla fronts has risen from 14 in 1980 to 102 in the mid-1990s; simultaneously, between 1982 and 1999 the share of the poorest 20 percent of the population in income fell 30 percent (from 4.9 percent to 3.4 percent of total income, according to the National Household Survey). At the same time, the top 10 percent earners have increased their share by 5 percent (up from 37.1 percent to 43.6 percent). In the last 20 years, it is not only the gap between rich and poor that has grown, but also the gap between the cities and rural areas. In 1975, an urban family earned 1.5 times more than a rural family, but 20 years later it earns 4.5 times more. A study comparing municipalities during 1985–96 found that the group of municipalities with an increasing rate of violence had a higher level of inequality measured in terms of the Quality of Life Index, and lower rates of political participation and level of education (Sarmiento 1998). A recent study of 39 countries found a positive relationship between high levels of violence (measured by homicide and robbery rates) and income inequality (Fajnzylber, Lederman, and Loayza 2002).

Colombia shares with other Latin American countries a turbulent and often violent history of land relations. Access to land is a major source of political and social conflict, in addition to being a key determinant of the productivity of the rural economy. Land ownership is highly concentrated, particularly in certain regions. From 1984 to 1997, there was a clear tendency of increasing concentration of land ownership, which is explained in part by drug monies being invested in land; the physical area of large farms showed a marked increase—from 32 percent to 45 percent of the total farming area. Colombian experts have shown that regions with a history of a high concentration of land ownership and conflict over land are those with a high presence of illegal armed groups and purchases of large farms with drug monies resulting in increased inequality in land distribution (Reyes Posada 1998). Many experts and journalists have also discussed the financing of paramilitaries by larger landholders to provide a measure of protection for life and assets.

**Political Exclusion, Poor Governance, and Corruption.** Many analysts point to the concentration of political power in the hands of an elite and the exclusion of new actors—particularly during the power-sharing arrangement between the two traditional parties during the National Front period (1958–74)—as a source of conflict and discontent (López and García 2000). A recent survey about corruption in Colombia revealed that the perception and experience of public servants and business people is that legislation and special privileges are negotiated at the top among business concerns, politicians, and the executive branch. The survey revealed a generalized lack of credibility and legitimacy of public institutions, which are not thought to serve the public interest.

**High Levels of Impunity within the Justice System.** The Colombian State has proved unable to effectively serve as the arbiter of conflict among citizens, though either formal or informal institutions. The perception is that the more powerful pre-
vail, especially by use of influence or force. This, in turn, sends the signal that conflicts need to be resolved by private means because the State is unable to do so, which creates lawlessness and a climate conducive to more use of force by various actors. This situation is examined in more detail in the Chapters on The Judiciary and Corruption.

c) Drug Trade

It is widely agreed that the emergence of drug trafficking has been one of the most important developments in Colombia’s recent history. Cocaine production has grown from less than 100 tons in 1980 to more than 500 million tons in 1999. The 500 percent growth in production and the 700 percent increase in growing areas have made Colombia the world’s largest cocaine supplier. This has had serious negative consequences: a sharp rise in crime and violence, corruption, weakening of institutions, health and social impacts, displacement of legal crops, and environmental degradation. Recent analysis suggests that the long-term sustainability of guerrilla activity since the early 1980s and the rise of the paramilitary are closely associated with increasing involvement with the drug industry. These relationships are shown in Figure 3.

An empirical analysis of the determinants of violence, measured by the homicide rate, found that in the seven main cities the main explanation for the increase in violence in the 1980s was drug trafficking and, to a lesser extent, the collapse of the judicial system. Evidence for 700 municipalities showed that high homicide rates in the 1990s were primarily explained by the presence of armed actors (paramilitary, guerrillas), intensity of drug trafficking, inefficiency of the judicial system, and interaction between armed actors and drug trafficking; socioeconomic variables such

Figure 3. Cocaine Production, Homicide Rate, and Guerrilla Front

![Graph showing trends in cocaine production, guerrilla fronts, and homicide rate over time from 1958 to 2000.](source: Cárdenas (2001))
as poverty and inequality also contributed, but to a much smaller degree (Sánchez and Núñez 2000).

There are two very different views expressed by Colombian analysts concerning the current relationship between the drug trade and the armed conflict: (a) some argue that the existence of the armed conflict and its increasing intensity (that is, need for funds to finance the war) is the reason for the expansion of illegal crops and drug trafficking, implying that finding a settlement to the conflict is key to stopping this process; and (b) others argue that illegal crops and drug trafficking are financing the armed conflict, and have become ends in themselves for the armed actors, and therefore should be directly attacked in order to end the conflict. Irrespective of which view one adopts, it is evident that there are no easy solutions to either of these problems.

As indicated earlier, the drug trade also relates in complex ways with underlying social conflicts. For example, much evidence indicates that money laundering and profits from the drug trade went into extensive land acquisition in rural areas, with negative impacts on employment, equity, and security (Reyes Posada 1998). Another example is the lack of viable economic alternatives to offer small farmers growing coca, who are concerned about the high social costs to them and their families of being involved in this activity. These are just a few examples of the interrelated issues of armed conflict, social conflict, and the drug trade as sources of violence.

IV. Costs of Violence and Conflict

The impact of violence and conflict on the well-being of the Colombian people is enormous, resulting in a pervasive sense of uncertainty and vulnerability. For purposes of this discussion, these will be divided into economic, social, political, and environmental costs, though these are, of course, interrelated. Although much important analysis has been done on this subject, these costs remain difficult to measure in quantitative terms.2

a) Economic Costs of Violence

Discussion of the economic costs of violence and conflict must be seen in the context of the prevailing interpretation that between 1950 and 1980 the armed conflict and violence did not significantly affect Colombia's economic growth and development. Throughout that period, Colombia avoided significant macroeconomic imbalances, maintained a respectable record of economic growth, and made significant improvements in key social indicators, though progress in rural areas continued to lag behind urban areas. This situation began to change in the 1990s; Colom-

2 See Moser (2000) for a more in-depth discussion of these costs, which synthesizes the work of Colombian experts and institutions like the Departamento Nacional de Planeación on this subject. Also see DNP (1998), and Camacho Guizado and Leal Buitrago (2000).
bra's macroeconomic imbalances, particularly fiscal deficits, started to build up, and internal and external debt steadily increased. At the same time, the armed conflict expanded and intensified, and an increasing area of Colombia's territory was under active dispute or controlled by the armed groups. In the second half of the 1990s, as the armed conflict and violence were dramatically increasing, economic growth slowed down, and toward the end of the decade there was a serious recession.

**Economic Costs Measured in Terms of Gross Domestic Product.** While there are various interpretations as to the relationship of these phenomena, it is clear that the economic costs of violence and conflict are high. DNP's comprehensive study on violence, *La paz el desafio para el desarrollo*, brings together and builds on the growing number of studies on the economic costs of violence in Colombia. It concludes that during 1991-96, the cost of violence, that is, the cost to the victims, referred to as "gross cost") was COP17.2 billion (1995), equivalent to 25.3 percent of GDP; or an annual average of 4.2 percent.³ The cost to the economy as a whole (that is, the macroeconomic cost, referred to as the "net cost," which does not include transfers) was estimated to be COP12.5 billion (1995), equivalent to 18.5 percent of GDP, or an annual average of 3.1 percent (Rubio 1998). Loss of life accounted for 43 percent of the amount, "excess" military expenditures 30 percent, other security expenditures 23 percent, terrorist acts such as blowing up the oil pipeline 3 percent, and health costs 1 percent (DNP 1998). Another way of looking at this is the effect on the Human Development Index (HDI)⁴ a broader measure of development that includes, in addition to per capita income, variables such as life expectancy, and educational level. In 1998 it was estimated that the fall in life expectancy in Colombia results in an economic loss equivalent to between 2.7 percent and 3.6 percent of GDP (Sarmiento 1998b).

**Decline in Investment.** Common sense dictates that the current situation in Colombia is unfavorable to investment: risks are high due to insecurity, including targeting of violent acts such as kidnapping, and destruction of costly assets; production costs are high due to security costs, extortion, and disruption of transportation and electricity supply; and legal recourses are limited. The situation is par-

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³ The "gross cost" includes the cost of robbery, extortion, and kidnapping, which are not included in the "net cost," because for the economy as a whole these are transfers. Thus, the distribution of costs looks different for the two measures. In the case of cost to the victims, loss of life accounted for 31 percent of the amount; "excess" military expenditures 22 percent, other security expenditures 17 percent; crimes against patrimony (*delitos patrimoniales*) 15 percent, kidnapping, extortion, and robbery 12 percent, and terrorist acts such as blowing up the oil pipeline, 2 percent.

⁴ HDI is calculated based on life expectancy, individuals' educational level, and income level. This index is a reply to the general criticism made of measuring the development of a country based only on the GDP because it reflects the income distribution.
particularly dramatic in rural areas. A quantitative analysis shows that when indicators for human capital and homicide rates are factored into the traditional equations for calculating inflation and the capital costs of investment, violence had a negative and significant impact on investment in Colombia. One study found that each percentage point of increase in the murder rate reduces the rate of private investment by 0.66 percent (Parra 1998). The decline in the rate of domestic and foreign investment, from 19 percent of GDP in 1995 to 5 percent in 2001, is now attributed by many to the increase in violence:

In Colombia today, in addition to the constant changes in regulations, the main factor discouraging investment is the armed conflict and its consequences in terms of loss of life, forced displacement and indiscriminate attacks on production infrastructure. From this point of view, the armed conflict is undoubtedly the main obstacle to the distribution of the benefits of growth in our society as a whole (Segundo parlamento de paz 2000).

Destruction of Physical Capital and Loss of Productive Assets. Violence has eroded physical capital (also known as man-made or produced capital) by reducing the stock of plant, equipment, infrastructure, and other productive resources owned by individuals, the business sectors, and the government. Costs associated with violent attacks on infrastructure—especially petroleum and electrical installations, roads, and airports—are mounting dramatically in Colombia. The petroleum, coal, and electrical power industry have been particularly hard hit. The costs of protecting and repairing this infrastructure, not to mention the foregone sales and other indirect impacts, are high.

The impact of the armed conflict on rural areas has been dramatic. Many landowners do not have physical access to their land or are unable to make full use of its productive potential. Others, mainly poor, peasant farmers have been forcibly evicted by the competing interests of guerrillas, paramilitaries, and drug traffickers, or have voluntarily fled to escape death threats. According to a recent study in Cali, for instance, 53 percent of the rural displaced had land ownership rights that they relinquished upon migrating, and 83 percent of them were landowners (CODHES 1997; Angarita Canas and Osorio Moreno 1998). Since many peasants do not hold legal title to their land, if they abandon it, they lose their legal rights to ownership. Even those who have legal title to land do not necessarily have recourse to judicial processes to regain their land or claim compensation.

Impact on Growth. Colombia's annual GDP growth fell from an average of 5 percent between 1950 and 1980 to 3 percent between 1980 and 2000. A recent study found that the decline in the growth rate is fully explained by a fall in productivity. It concludes that "the implosion of productivity is related to the four-fold increase in criminality. The existing literature has already shown that the explosion of crime was the result of the rapid expansion of drug-trafficking activities and the intensifi-
cation of the internal armed conflict (fueled by the rents from the drug trade).” The study concludes by indicating that “the period between 1980 and 2000 can be characterized by a vicious circle of high crime, negative productivity gains, low growth, and increasing concentration” of income, reversing the positive pattern of the earlier period (Cardenas 2001). Analysis of the rural sector indicates that the armed conflict and drug monies are associated with the increased concentration of some of Colombia’s highest potential land for crop production and its use for livestock production; this is not economically efficient and represents a significant social and environmental problem. International evidence supports the idea that high crime rates and high concentrations of income are linked, and that countries with those characteristics suffer from low productivity and low growth. Conversely, GDP growth has a significant impact on the reduction of violence when it is accompanied by a distribution of income, which reduces poverty (Fajnzylber, Lederman, and Loayza 2002).

b) Social Costs of Violence

Colombia’s social fabric has been seriously weakened by violence and conflict, basic human rights are not being met, and the quality of life for all has declined in the climate of intimidation and uncertainty that prevails, particularly in rural areas and poor urban neighborhoods. The cost to Indigenous and Afro-Colombian peoples has been particularly high.

Violence has eroded human capital by limiting access to education and health care by both users and providers. For example, death threats and assassinations of rural teachers and health workers by armed groups have led to the abandonment of many rural facilities across the country (Patra 1997). It has also created an added burden for the health care sector, with trauma care consuming an important proportion of health resources. This includes not only physical injuries and disability caused by violence, but also the psychological consequences of victimization or witnessing violence among adults.

The social costs of forced displacement, both in terms of those displaced and the recipient areas, is also high. Those displaced usually flee to the periphery of urban centers where housing and work are difficult to obtain, and often lose access to health and social services. A 1995 study of pre- and post-displacement unemployment rates showed male rates increasing from 6.2 percent (when most worked in rural agriculture) to 34 percent (when they had relocated on the urban periphery). In Medellín, where the situation is particularly acute, the municipal government has struggled to cope: displaced persons have been evicted from the city on the grounds that their presence was a risk to public order and could cause a natural disaster due to their settlements being in geologically unstable areas (Aparita Canas and Osorio Moreno 1998).

Violence has also eroded household relations as an asset by reducing the capacity of many households to function effectively as a unit. In rural conflict zones, where
many men have joined illegal armed groups. Family life is seriously disrupted by high stress levels. In urban communities, many women have identified a direct link between male unemployment, alcohol abuse, and increased domestic violence. In the case of internally displaced populations, research shows that women are more vulnerable than men at the moment of eviction, when they are exposed to unexpected widowhood, threats, clandestine action, flight, and separation from their homes. Men, in contrast, seem better equipped to cope at such times, but the reverse is true when displaced households restructure their lives. Then the impact is greater on men, who become unemployed and experience a loss of status as breadwinners and a rupture of their sense of masculine identity. Gang involvement is an example of the negative social cost: young people, bereft of strong family and community support, form mutually reinforcing groups.

Violence has eroded social capital6 by reducing trust and cooperation within formal and informal social organizations and among their members. The importance of social capital relates to its recognized contribution to sustainable development and the evidence that the size and density of social networks and institutions, and the nature of interpersonal interactions, significantly affect the efficiency and sustainability of development processes (Putnam 1993). A 2001 cross-country study (Fajnzylber, Lederman, and Loayza 2002) provides empirical evidence showing a strong negative relationship between violent crime and social capital. Evidence for Colombia is consistent with this, showing higher levels of participation in community action groups in less violent areas and lower levels in more violent areas (Cuelar de Martinez 1997). This is not surprising as the capacity for community-level organizations to function depends on their cohesiveness and personal safety, and the ability to meet locally. Sustained conflict, arbitrary killings by armed groups of suspected sympathizers of their opponents, and widespread death threats have systematically reduced trust between neighbors and communities across the country.

c) Political Costs of Violence

Important progress was made toward opening up the political system in the late 1980s and early 1990s, most notably with the election of local and regional authorities, and the adoption of the 1991 Constitution, which recognized citizens’ basic rights, provided mechanisms for citizen participation and oversight of public affairs, and recognized Colombia as a multiethnic nation. However, this progress has been seriously eroded by the inability of the Colombian State to guarantee its citizens basic rights such as security, and to prevent the domination of many areas of the country by armed groups. The decentralization process and exercise of democracy under such conditions is precarious.

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6 Social capital is the rules, norms, obligations, reciprocity, and trust embedded in social relations, social structures, and societies’ institutional arrangements, which enable its members to achieve their individual and community objectives.
Violence has severely eroded faith in the relevance and effectiveness of many social institutions as a consequence of both human rights violations and a reported 98 percent impunity rate. The growing concern that judicial, educational, health, media, and security institutions are no longer viable is testing the institution of democracy. The effect of drug trafficking on the judicial system is a primary example of the impact of violent crime on institutions. Furthermore, as Colombia’s police and judicial institutions weaken, the privatization of security is a growing phenomenon in both rural and urban areas: in 1980, Colombia had 2.5 policemen for every private security agent, by 1995, this ratio had dropped to 1 to 1 (Ospina 1997). Systematic threats and attacks against the communications media have been meant to alter media behavior and information content, thus affecting a key channel of information necessary to an informed, democratic civil society. More generally, continued violence has created a climate of fear, anxiety, and mutual distrust, which tends to suppress the “voice” of civil society institutions to participate effectively and peacefully in political decisions at community and national levels (Quintero and Jimeno 1993).

d) Environmental Costs of Violence

Colombia is rich in natural resources and is recognized as being one of the most biodiverse countries in the world, with nearly all the world’s ecosystems represented. Environmental degradation has only recently been recognized as a significant cost of violence, particularly the armed conflict and drug-related activities. One of the most dramatic examples is damage due to oil spills resulting from regular attacks on the pipeline. Environmental degradation in and around urban areas has been exacerbated by the influx of displaced populations, worsening the problems of solid waste disposal and water contamination. In rural areas, land degradation and inappropriate land use have been exacerbated by the armed conflict. The presence of armed groups in and around many of the national parks and other protected areas (many of which overlap with Indigenous reserves and Afro-Colombian community property) has been a major obstacle to effective conservation and protection of these precious ecosystems. Finally, drug-related activities result in contamination of soil and groundwater due to aerial spraying of illicit crops and chemicals used to process coca, and increased deforestation rates and destruction of fragile ecosystems for coca and heroin poppy cultivation.

V. Toward Building Peace and Sustainable and Equitable Development

It is apparent that Colombia is enduring a crisis of terrible proportions, with enormous economic, social, political, and environmental costs. Building conditions for peace and tackling the sources of violence and conflict are goals that will address the basic development problems of the country. International experience in the post-
cold-war era with peace processes that mark the transition from violent conflict to
development, make it clear that building peace requires a process of reinforcing
mutual confidence and financial support to lay the foundation for a more open and
inclusive State (Colleta and others 2000). There is also growing recognition that
development must continue even when all or part of a country is in conflict. Posi-
tive incentives for peace, security, and development must prevail over perverse
incentives for violence, fear, and destruction (World Bank 1999b). The goals of
achieving peace and securing equitable economic and social development comple-
ment and reinforce each other.

In Colombia, an agenda to build peace and tackle the sources of violence in order
to create conditions for equitable development must address simultaneously (a) the
armed conflict, (b) the drug trade, and (c) the underlying factors of social conflict.
The first two aspects need military and political measures and a hemispheric
approach to deal with them; the third one demands an integrated social and eco-
nomic policy based on broad consensus. The key issues to address are (a) land, (b)
access to justice, (c) security of life and property, and (d) fighting corruption. The
best way to deal with these issues is through a region-based approach, for example,
peace and development programs in critical regions; and a population-based
approach, for example, priority on youth. Finally, the formulation and implementa-
tion of policy and programs must follow a partnership approach between govern-
ment, private business, and civil society organizations.

a) Armed Conflict and Drug Trade

The first two elements of the agenda will encounter formidable opponents in the
armed groups (both guerrilla and paramilitary) and in the drug cartels, which fuel
the conflict by financing the armed groups in exchange for the protection of their
business. The reasons for this opposition are based on the following facts. First, these
extralegal armed groups pose a direct challenge to the sovereignty of the State, both
in a territorial sense and in an administrative and legal one. They, in essence, sub-
stitute for the State and provide basic services, including administering justice, edu-
cation, and social services. Lately, they have even forced the exile of legitimate local
authorities. Second, they have an efficient economic base based on drug money and
other illegal and inhumane methods such as extortion, kidnapping, and forced con-
tribution. Third, they have declared a de facto war on the civilian population and
the State through acts of terrorism and the violation of fundamental human rights.

The illegal drug industry and armed groups have created a lawless environment
that threatens not only Colombia, but the neighboring countries. To the extent that
the drug trade, the violation of human rights, and the acts of terrorism are matters
of international concern and consequence, dealing with these elements of the
agenda demands a hemispheric approach. The aim of a plan of action is to regain
control and sovereignty of the State over the entire territory of the nation, and
increase the security of citizens.
b) Underlying Social Conflicts

Even if the armed conflict and the drug trade are handled through a variety of military and political measures, including a negotiation process with the armed groups, several structural elements associated with violence and the violent conflict will remain unresolved, unless there is a plan with the objective of attacking the structural problems of violence and social conflict.

Addressing this element of the agenda should not be dominated by the negotiation themes proposed by the various armed groups, even if there is a new dialogue for peace. This aspect of the agenda needs to be constructed, independently of their willingness to start a peace process, through an integrated economic and social policy which is formulated on the basis of a broad social consensus on content and priority, and carried out in a partnership between civil society, the private sector business community, and government at various levels. Evidence from other countries indicates that while the specific context of violent conflict varies, the exclusion of some groups and the alienation of citizens have always been major factors. Most important, dealing with such structural factors is necessary, regardless of the existence of an armed conflict, because of their implication for the reduction of poverty and inequality in Colombia.

Such integrated economic and social policy must deal with at least the following unresolved issues: access to land and productive assets, reduction of impunity, protection of life and property, and fighting corruption.

i. Land and Productive Assets

Access to land has been a major source of political and social conflict in addition to being a key determinant factor of the productivity of the rural economy. Displacement of population from rural areas has been associated with the conflict over land, and the demand for access to land and other productive assets a permanent cause of peasant movements. Measures toward the removal of land-related conflict factors may include:

- Facilitating the integration of land purchase with productive investments and financial services within a broader context of local development. This will remove impediments for the integration of smallholders into a more equitable development process and thus a source of wealth, employment, and growth. The emphasis of this measure is on gaining access by smallholders to existing mechanisms for public support to the agricultural sector (Incentivo a la Capitalización Rural [ICR], credit, Fondo de Garantías) to improve livelihoods and avoid their capture by the largest producers.
- The availability of working capital is an option that might have considerable positive impact on improved livelihood as well as preventing the involvement of small producers in the production of coca or finding alternative crops for those already involved. In effect, a major element that sets the production
process apart from other crops grown by small farmers is the easy availability of working capital to produce coca. It is common that downstream agents in the coca "value-chain" prefinance working capital needs of small coca producers for the entire season. This contrasts sharply with the widespread lack of access to credit by small farmers in Colombia for the cultivation of other crops. Increased efforts to ensure access to rural credit by small farmers could well be one of the elements of a more active policy to simultaneously provide economic opportunities to the rural poor and combat drug production.

ii. Reduction of Impunity

Security and justice are essential elements for renewed trust in the capacity of the State to protect citizens. However, the Colombian State has proved unable to effectively serve as the arbiter of conflict among citizens, either though formal or informal institutions or to exercise control over criminal behavior. The recent survey on Corrupción, Desempeño Institucional y Gobernanza (March 2002) shows that most of those interviewed think that justice in Colombia is unfair, favors those with power and influence, and that the judicial system is not independent from the executive or from politicians.

Consequently, gradual reduction of impunity and establishing the rule of law on an equal footing for all citizens in all regions of the country must be a priority of the new administration in order to increase the credibility of the State and to increase the security of citizens. The State must regain the monopoly of justice and its coercive capacity on individuals. In particular, the judicial system must increase its capacity to apprehend those involved in serious criminal activity. In the past, the reform efforts were geared toward governance issues within the judiciary, the change of codes, or the increase in penalties.

The challenge now is to break the cycle of impunity, which reinforces the idea that crime pays because the probability of being apprehended is small. This cycle, some argue, may also generate a demonstration effect particularly among youth who will give social value to the attitudes and possessions of delinquents. Toward the reduction of impunity, the criminal system must become highly selective and strategic to be socially relevant in the middle of an acute structural imbalance between criminal activity and investigative resources. This would imply that the criminal system should aim at dealing effectively with those criminal problems that are most disturbing to Colombian society, such as a drastic reduction in the number of homicides by organized crime.

iii. Security of Life and Property

Colombia's social fabric has been seriously weakened by violence and conflict, basic human rights are not being respected, and the quality of life for all has declined in the climate of intimidation and uncertainty that prevails particularly in rural areas and poor urban neighborhoods. The cost to indigenous and Afro-Colombian peoples has been particularly high.
In this context, the protection of the lives and property of citizens becomes a priority for the government, State agencies, and all other social actors. This is bolstered by international experience that indicates that the degree of security enjoyed by citizens affects the amount of time peace will last. Measures toward this end may include (a) increasing the presence of the State, particularly in the territories with low or no presence, (b) promoting a culture of respect for human rights, and (c) securing the rights of land and assets.

- The increased presence of the State should have three dimensions: (a) the provision of basic services and the special protection of vulnerable groups, (b) the presence of institutions to intermediate or serve as arbiter to resolve conflicts among citizens; and (c) the presence of an agent that can exercise the monopoly of force as representative of the State.
- Bolster the voices of ordinary citizens that have decided to stand up before the armed actors to claim their fundamental human rights. In particular, reinforce with economic and security resources the organized Indigenous communities and small municipalities of the emerging movement of civilian resistance to counterbalance the domination exercised through terror by armed actors, both guerrilla and paramilitary. Recognizing the weakness of the State, promote among private business, civil society organizations, and the international community their contribution to the local effort from the strength of their own specialty. This action is very likely to be successful because there is a growing number of citizens from all walks of life tired of being actual or potential victims of the same violations of their human rights and willing to make an effective contribution.

The burgeoning culture of respect for human rights and citizenship and a growing conviction of the urgent need for political solutions—reached through a negotiated settlement, rather than military solutions—means that today a social movement around peace is developing.

- Securing rights to land and assets in rural and urban settings, as a factor of production, as a source of livelihood, and as asset endowment for the market. A massive land titling and securing of assets program would be of particular importance for rural populations at high risk of displacement (as a preventive measure) and for urban dwellers that could secure their property and acquire a market value.

iv. Fighting Corruption

The capture of the State—understood as the capacity of interest groups to influence through corrupt practices the high levels of decision making of the State—appears to be one of the most predominant forms of corruption in Colombia. About 70 percent of respondents among business people and civil servants indicate that this is a significant pattern in the high levels of the business environment in Colombia.
This high level of agreement around the incidence of the capture of the State poses a significant challenge regarding the framework of governance in Colombia. Based on the analysis of the results of this large survey, the following measures to reduce this level of corruption are proposed:

- Increase political competitiveness by reforming the financing rules of political campaigns
- Reduce clientelistic practices inside public administration, particularly between the executive branch and Congress
- Introduce meritocracy in public institutions to discourage corrupt practices in government and state agencies
- Establish social accountability mechanisms to oversee budget and investments of public resources at all levels of public administration, and municipal, departmental, and national agencies.

c) Critical Elements of Strategic Approach

i. Community-Based Regional Development

Given that roots of unresolved social conflicts are within regions and local contexts, the main issues of access to land and productive assets, reduction of impunity, security of life and property, and fighting corruption must be addressed at those levels. This emphasis, however, should be complemented with outside political and economic support by parties not entangled in the conflict themselves.

Therefore, the intervention of civil society groups, the private sector, communities, and producer organizations should be emphasized so that they can better participate in local planning, definition of local priorities, and implementation. The local and regional development approach will integrate rural-urban populations in terms of on-farm and off-farm opportunities. This approach promotes better integration of communities and rural producers, integration with the supply chain, development of labor and financial markets, provision of basic infrastructure and services, and sustainable management of natural resources. The regional space becomes the main scenario where social cohesion can be rebuilt and participation in the decisionmaking process becomes the basis for consensus building and ownership of the local development process. The Program for Development and Peace in the Magdalena Medio region shows the enormous potential of this approach.

Community-driven development will increase the stake of the population in peace and their willingness to resist the pressure from armed actors. The economic and social opportunities will facilitate the productive occupation of the territory. This occupation supported by the State and government agencies will also contribute to regaining the control and sovereignty of a more legitimate State that supports and receives the support of its citizens.
ii. Targeting Regions and Youth

Poverty, inequality, and conflict vary greatly throughout Colombia. This is not surprising given Colombia’s incredible physical, cultural, social, and economic diversity, history of strong regional identities, and important rural–urban differences. These differences need to be kept in mind in the formulation of policies and programs to deal with the underlying factors of violence and conflict. Being poor or discriminated against in the Pacific region or in the southern departments of Colombia is quite different from being poor or discriminated against in Bogotá or the Central region. The Pacific region, for example, has social indicators similar to those that Colombia as a whole had 20 years ago.

To make matters worse, much of the Pacific region, along with much of Colombia outside of Bogotá, are territories under active dispute among contending armed parties for the control of resources and people. As a result, the poor—the majority of people in such territories—are subject to the devastating, combined effects of unemployment, lack of basic services, poor infrastructure, and the threat of forced displacement. Forced displacement, mainly as a result of the social and armed conflict, is the most serious humanitarian and social problem in Colombia today. It causes uprooting of people and disruption of family life; loss of human, social, and physical capital; generalized impoverishment, and high costs for the families and for the State.

Therefore, a special effort must be made to identify the critical regions most affected by poverty, inequality, and social and armed conflict, and target them for government programs of the kind described above. In these regions, access to safety nets, education and health services, infrastructure, and new economic opportunities are essential, as are measures to reduce or mitigate the armed conflict, the main cause of displacement.

Youth, on the other hand, is the population group most affected by violence, unemployment, and lack of educational opportunities. They are also subject to voluntary or forced recruitment by armed groups or drug lords and to the contamination effect of illegal and criminal activities that go unpunished. Young men and women should receive priority attention in the design of local or regional peace and development programs, and special opportunities in urban programs in intermediate and large cities.

Particularly important are opportunities for postprimary education, job training, and employment. In countries affected by conflict, job creation is a central instrument to provide alternatives to youth and adults, and thus to prevent armed fighting. This is an area where the involvement of the private sector and specialized nongovernmental organizations is promising. In effect, the use of special trust funds to finance job training, offer microcredit, and increase livelihood chances have proved effective. The creation of new jobs is good not only for economic development but also for security.

VI. Conclusion

Colombia is a country with an enormous base of human and natural resources, a good geographic location for international trade and foreign investment, and a
valuable democratic and cultural tradition. The Colombian people have demonstrated enormous courage and creativity in coping with and trying to address the long-standing issues that are a threat to their well-being and that of their nation. There are an enormous number of positive experiences and achievements throughout Colombia to build on, from the National Rehabilitation Program, to the Programa Desarrollo, Salud y Paz (DESEPAZ Program) in Cali, to the pioneering Program for Development and Peace in the Magdalena Medio region. While the obstacles are enormous and sacrifices will need to be made by all, there is great hope that Colombia's many assets and strengths, particularly the courage and determination of its people, will be sufficient to build a sustainable peace and achieve equitable development.

References


Enabling Sustainable Growth

This Chapter was written by Krishna Challa.

I. Introduction

Despite the major problems Colombia is facing in the areas of security and violence, it continues to have considerable growth potential. The most important reason for this is the country's impressive human capital, which has kept the country on a growth path for all but one year over the past five decades. Through a tradition of prudent macroeconomic management, Colombia has so far managed to avoid the major cycles of macroeconomic instability that have plagued a majority of countries in the Latin America region in recent decades. There is a good probability that Colombia will foster a sustainable growth path in the coming years, provided that the security situation does not worsen significantly, prudent macroeconomic management continues, and that certain enabling conditions are maintained for a good business environment and responsible management of natural resources.

Overall, the economic record of Colombia in the last three or four decades is one of quite impressive progress, and can be characterized as very good performance under duress and against significant odds. However, there remains a substantial unfinished agenda. Requirements for a sustainable growth path in Colombia, apart from a security situation that does not worsen significantly and development of well-qualified human capital via improved human development policies (areas addressed in the other accompanying notes), include:

- Prudent macroeconomic management, including sustainable fiscal policies and management.
- A well-functioning financial system that can provide adequate services to all segments of the productive sector and the population at large, including a healthy and sustainable banking, housing finance, pension, and insurance systems.
• A business environment that would release the potential of the private sector, including adequate regulatory and competition frameworks, and administrative procedures governing the establishment and operation of firms that are not excessively cumbersome.

• Efficient, effective, and well-managed infrastructure sectors that facilitate competitiveness of the Colombian productive sector vis-à-vis international markets (for example, through reductions in transport, communications, and logistics costs of firms and workers) and adequate access to good-quality basic infrastructure services for all parts of the society.

• Responsible management of natural resources and the physical environment (land, water and wastewater, forest and agricultural resources, urban air quality, waste and hazardous waste management) to ensure their sustainability and positive contribution towards the long term economic growth objectives.

II. Providing a Sustainable Macroeconomic and Fiscal Framework

a) Background

Colombia’s recent path could lead to an unsustainable increase in deficits and debt, along with poor prospects for GDP growth and high unemployment. The rapid expansion of the public sector over the previous decade, from spending one-fourth of GDP in 1990 to over one third of GDP by the end of the decade, combined with growing liabilities, particularly on the pensions front, have led to significant and persistent structural deficits. The private sector, on the other hand, languishes: while government consumption grew by two-thirds between 1994 and 2001, that of household remained basically unchanged, and private investment fell by over 37 percent. The weakness of the private sector is at the center of Colombia’s current economic woes. Private GDP has grown little since the mid-1990s, and private investment has deteriorated from its peak of near 12 percent of GDP in 1994 to under eight percent today. Total investment now stands at about 15 percent of GDP, incompatible with the resumption of significant growth. Public sector consumption has in effect displaced the private sector as the major contributor to domestic demand.

As public spending rapidly outstripped the sector’s revenue generating capacity, much of the fiscal deficit, particularly since the mid-1990s, has been financed with debt, both domestic and external. Today, net public sector debt in Colombia stands at about 46 percent of GDP. In 1997, prior to the onset of the recession and to the rapidly deteriorating fiscal balances of 1998 and 1999, public debt stood at 27 percent of GDP. Spending on interest payments to service public debt now stands at near five percent of GDP, constituting approximately a quarter of the central government’s expenditures and more than twice its investment budget.

Colombia now faces the combined challenges of reducing its debt levels to ensure sustainability and achieving growth rates that are sufficient to reduce poverty levels
and increase employment. Continued fiscal adjustment is unavoidable if debt sustainability is to be attained; just as important, the quality of the adjustment is key for a return to growth rates in the four to five percent range.

b) Fiscal and Debt Sustainability

To avert an explosion of the debt-to-GDP ratio, the combined public sector has to generate a permanent primary surplus of about four percent of GDP.\(^1\) This calculation incorporates the present value of all net public sector liabilities, including public pension payments (of the implicit liabilities) under a no-reform scenario, the scenario also assumes long-term GDP growth rates of 3.5 percent. In 2001, the public sector primary balance stood at 1.4 percent of GDP. In other words, to achieve fiscal sustainability, the Colombian public sector will have to generate 2.6 percentage points of GDP in additional savings on a permanent basis. If the pension system were fully reformed along the lines recommended in this report, the required primary surplus would be reduced to 1.5 percent by 2010, a much more feasible target. This estimate does not take into account the incoming administration's program from significantly increasing military and social expenditures over the coming years.

Even under the scenario of maintaining a primary surplus of four percent of GDP for the coming decade, it is estimated that the total net debt of the public sector would nevertheless continue increasing, reaching about 57 percent of GDP by 2010. To further illustrate the vulnerability of Colombia's fiscal path in the absence of comprehensive reforms, one can project the path of public sector debt under the assumption that the primary balance is kept constant at its 2001 ratio with respect to GDP (1.4 percent). Under this scenario, debt would rise from about 46 percent of GDP in 2001 to about 80 percent in 2010 (assuming an annual real GDP growth rate of 3.5 percent). On the other hand, to maintain the debt-to-GDP ratio at today's level of 46 percent of GDP, primary surpluses between five and six percent of GDP would have to be maintained over the next decade.

The magnitude of the required adjustment means that significant measures on both the expenditure and revenue fronts are needed. Before addressing the options for fiscal adjustment, however, a brief review of debt management is presented below.

c) Debt Management

Colombia's public debt management is hampered by the absence of a comprehensive and coherent conceptual and legal framework for debt management, and the existence of overlapping responsibilities among various institutions. Colombia also needs to strengthen its debt management capacity to increase the efficiency and effectiveness of managing a vulnerable and complex portfolio. To date, debt policy has been largely driven by the need to finance the fiscal deficit. Consequently, debt

\(^{1}\) See the Public Debt Sustainability and Management Chapter for details.
decisions have been taken with limited systematic analysis of risks, and without a strategic framework for debt management. The rapid growth of the debt stock over recent years has also led to a deterioration in the structure of the portfolio, whose management has been constrained due to shallow and incomplete domestic markets, limited access to international markets, and weak debt management capacity. Moreover, Colombia's debt portfolio is vulnerable to unexpected changes in both real interest and exchange rates.

Strengthening the framework for debt management would involve attention to a number of areas. First is the creation of a legal and governance framework for debt management operations, consolidating all legal and regulatory instruments of debt management. Specifically, the new framework should provide for a separation of policy formulation, implementation, and evaluation functions, the clear definition of responsibilities and accountabilities of the various government entities, as well as clear objectives including risk tradeoff issues as a central dimension of debt management. Second, specific steps can be taken to improve debt management strategy and portfolio structure. This should include improved monitoring of the government's contingent liabilities, the systematic use of active operations (such as swaps, exchanges, buybacks, etc.) to modify existing debt stocks, as well as the integration of long-run fiscal and debt sustainability analysis into portfolio and funding strategies. Third, capacity may be strengthened by centralizing operations in a single debt office with the necessary resources and skills, and sufficient administrative flexibility to respond to changes and opportunities in financial markets. Finally, public debt management would be facilitated by deeper domestic debt markets. In this regard, important steps would include the simplification of the benchmarks for the minimum rate of return of pension funds, the identification and removal of main constraints to increasing the efficiency of collective investment vehicles and mutual funds, and an assessment of the suitability of the Interest Rate Index (DTF) as a market reference rate for secondary market activities.

d) Fiscal Adjustment Options

The magnitude of the primary surplus required to avoid unsustainable debt expansion means that continued fiscal adjustment is unavoidable, and that it will need to include measure to both reduce spending and increase revenues. Nevertheless, international evidence has shown that adjustments based on expenditure reduction are more favorable to growth than those based largely on increased tax revenues. As such, expenditure reduction and substitution will need to play a central role in government policy.

i. Rationalization of Expenditures

Expenditure adjustment has often been inefficient and inequitable, as it has relied on short-term measures with relatively low political costs, such as de facto investment cuts, payroll freezes, and wage increases below inflation. This approach is unsustainable in the longer term, and creates an illusory fiscal adjustment as assets
of the state deteriorate, undermining future growth. Implementing significant spending cuts is a difficult challenge in Colombia, given large, inflexible expenditures such as debt service payments, territorial transfers, pensions and public sector salaries. Together these categories constituted nearly 75 percent of the central government’s expenditures, and 112 percent of its tax revenues in 2001. This points to the importance of carrying out the necessary reform in order to inject greater flexibility into public sector spending.

A number of policy options have been under consideration in Colombia to address these challenges. Primary among these is addressing pension transfers through a cut in the transition period between regimes. It is difficult to expect rationalizing public sector employment and salaries without a review of expenditures, and their efficiency and effectiveness, in the justice and defense sectors, which currently account for fully 70 percent of the central government’s personnel and goods and services outlays. Territorial transfers constitute the other main area of expenditure inflexibility for the central government, while at the same time forming the bulk of the country’s spending on social sectors. The recently approved constitutional amendment on territorial transfers guarantees that unless growth performance improves substantially, territorial transfers will continue to pose a burden on expenditures. In effect the amendment created a contingent liability in the event that real growth of the economy falls short of 2–2.5 percent by guaranteeing a lower threshold below which transfers will not decline even if growth, and revenues, fall short.

Given recent evidence regarding the ineffectiveness of continued increases in expenditures on health and education as a means of delivering improved coverage and quality, the question arises of the appropriateness of real increases on the order of 2–2.5 percent in the level of territorial transfers during a period of fiscal austerity and low growth. A temporary transfer freeze, in real terms, would generate substantial fiscal savings. If local governments are simultaneously empowered to manage central transfers and to raise own revenues, this should not result in any weakening of Colombia’s drive towards decentralization. Currently, local governments have little incentive to responsibly manage resources whose assignation and management in effect remain under the control of the central government. The enhancement of service delivery, one of the main justifications for decentralization, is not merely a function of more resources, but of their appropriate assignment and distribution.

ii. Raising Revenues

New ways to increase revenues should focus on comprehensive reforms that make the tax structure less complex and more efficient. However, the margin for increasing revenues significantly in the short term, without affecting growth prospects, is likely to be small. Moreover, passage of a tax bill that relies mostly on rate increases but does not correct the deficiencies of the current regime will only necessitate, as it has in the past, further rate increase within a year or two as “tax fatigue” sets in following a temporary rise in revenues.
Changes introduced over the last decade in the tax structure have boosted collection, but they also introduced distortions into the system. Five major tax reforms were approved in the 1990s. The later reforms in particular were largely aimed at collecting more revenues in order to close widening fiscal gaps, rather than improving the architecture of the system. The incremental approach has resulted in an excessively complex tax structure characterized by comparatively high rates and narrow base.

Tax reform should be based on the principle of enhancing the quality of adjustment and incentives for growth. For example, caution should be exercised in considering increased levies on the use of capital, since they will raise the cost of undertaking private investment projects and thereby reduce investment. Emphasis in tax reform must be placed on expanding the tax base and removing exemptions and exceptional regimes (which tend to promote evasion and inequalities), rather than increasing tax rates per se beyond a threshold.

Specifically, the two most important taxes in Colombia, the VAT and the income tax, both suffer from significant distortions: their bases have been successively eroded by the reforms of the 1990s, and evasion rates are high, estimated at 20 percent for the income tax and 28 percent for the VAT. Regarding the income tax, major issues are the distortions of the corporate income tax and exemptions granted for personal income tax. For the corporate income tax, the categories of exempted firms and exempted sources of income largely explain the difference between actual and potential collection. It is therefore recommended that exemptions, such as those for firms operating in the Paiz river area, for publishing firms, lotteries, cooperatives, and loscorreos, be eliminated. The tax base should be widened to include currently exempted public services enterprises, livestock funds, and funds established by financial institutions. Moreover, the corporate income tax creates a number of distorting incentives. In this regard, the adjustment for inflation, particularly with respect to inventories, should be reintroduced, as should the presumptive tax on gross assets. A presumptive tax on net wealth creates a bias in favor of contracting large debts, a problem which should be addressed when reintroducing the tax.

For the personal income tax, the large number of potential taxpayers who fall outside the scope of the tax is an important constraint to expanding collection: more than 90 percent of wage earners are exempt from paying income taxes. Individuals with an income below three times the average per capita income are currently exempt; other wage earners enjoy an exemption of 30 percent, paying income tax on only 70 percent of their income. Suggested changes include the reduction of the general exemption for individuals to twice the per capita income, elimination of the 30 percent exemption for wage earners, and the introduction of new rates of 15, 25, and 35 percent (versus current rates of 20, 29, and 35 percent.)

Similar problems have caused a low yield from VAT, with the ratio of collection to GDP below a third of the VAT rate. Exemptions are high, numerous rates make the tax complex, and further intractability results from the implicit VAT (aimed at protecting domestic activities) and complex procedure for VAT on capital goods. A reform with the objective of widening the base and eliminating preferential rates in
the VAT should include a unification of rates, increasing the preferential 10 percent rate to the general rate of 16 percent; a widening of the base to include paper products and printing, beer and tobacco, personal services, transportation and construction; an elimination of the implicit VAT; and an introduction of a VAT on capital goods as a credit against the VAT.

Multiple exemptions have also created difficulties for VAT administration, and the VAT on capital goods has added further complexities. In recent years, the Colombian tax administration (DIAN) has undertaken a number of programs to improve compliance and reduce evasion. DIAN’s strategy incorporates measures to improve performance in the areas of collection, control, cashing, and efficiency. Clear indicators for tax administration, such as the recovery of overdue taxes, deadlines for administrative actions and efficiency ratios, should be established and monitored. There is also scope to enhance controls on tax returns and for improvements in cross-checking of VAT-related data.

III. Ensuring a Healthy Financial System

Colombia managed to prevent the severe economic downturn in 1999–2000 from triggering a systemic financial sector crisis. The unprecedented economic contraction of this period came on top of a combination of many other major challenges affecting the health of the financial system. Among the most prominent ones are: (a) the steadily deteriorating security conditions in the country; (b) the adverse effects of the large drug-related financial transactions on the financial system, such as money laundering and large financial transactions taking place outside the formal financial system in the shadow economy, which nevertheless had important effects on the real economy; (c) the resulting major political uncertainties and weak political leadership; (d) a prior history of sustained high real interest rates, which together with the recession had substantially weakened the finances of the corporate sector and consequently the portfolios of banking institutions; (e) the important setbacks suffered by housing finance institutions as a result of unexpected Constitutional Court rulings declaring null and void certain features of the Constant Purchasing Power Unit (UPAC) indexing system for housing finance and requiring the establishment of a new indexing system (which had both a direct and indirect negative effect on the quality of loan portfolios of most housing institutions, with a perverse effect on the willingness to pay of even borrowers with good payment records); (f) the social problems associated with the failure of the nonbank financial institutions in the cooperatives sector and homeowners who no longer had the economic capacity to service their loans; (g) the need to restructure, close and/or privatize several major public or “officialized” banks

2 “Officialized” banks are those that were originally private institutions, but were intervened and taken over by the government
facing financial problems; and (h) the negative effects of all these developments on the overall fiscal situation of the economy.

During various stages of the crisis, the percentage of non-performing loans (NPL) in the overall banking system reached 12–15 percent, with certain acutely affected segments such as the public and officialized banks, housing finance institutions and cooperatives showing much worse ratios of NPL. The situation was also aggravated by a non-payment culture in some parts of the system (stemming from the uncertainties created by the Constitutional Court rulings regarding the legality of some of the prevailing rules), expectations of debt relief, and absence of clear supervisory and enforcement rules in some areas.

By putting in place a balanced set of carefully chosen corrective actions, the government managed to avert the onset of a financial sector crisis of major proportions. Over the last three years, the government has had to delicately balance the need to provide relief to some of the most severely affected borrowers in the system (for example, low-income homeowners, depositors into the failed cooperatives system), the legal requirement to abide by the Constitutional Court rulings, and the need to put in place a resolution process for failed financial institutions. It was important that the financial sector resolution process minimize the perverse incentives and negative consequences that could stem from debt or debt service relief to borrowers and/or financial institutions facing problems.

To respond to the crisis, the government secured passage of major financial sector reform legislation (in 1999) and a series of associated regulatory and administrative measures. Among the most notable measures were to: (a) increase the minimum capital rules for financial institutions, strengthen loan classification, provisioning policy, and procedures for prompt correction actions by the Superintendency of Banks when problems arise, and strengthening the powers and financial capacity of the Fondo de Garantía de las Instituciones Financieras (Financial Institutions Guarantee Fund, FOCAFON, the deposit insurance and bank resolution agency) to expedite mergers and other financial restructuring solutions as needed; (b) close, restructure, and/or sell the private sector several publicly owned financial institutions; and (c) overhauling the housing finance sector in terms satisfactory to the Constitutional Court, involving the establishment of a new housing finance indexing system (Unidad de Valor Real, Constant Value Unit, UVR) that corrects past problems while avoiding excessive interest capitalization in housing loans, and including a carefully circumscribed debt or debt service relief for housing loan recipients acting in good faith but with the least capacity to pay.

Additional actions included: (a) substantially revamping bank supervisory authority and putting in place clear, streamlined rules to deal with loan classification to address different categories of risks facing Colombian financial institutions and control illicit financial transactions; (b) providing long-term loans, subject to strict guidelines and limits via special recapitalization programs of FOCAFON, to banks and housing finance institutions that have clearly evidenced their commitment to a full recapitalization of their entities using sufficient quantities of their own funds and risk
capital; (c) strengthening guidelines to control money laundering; (d) overhauling the financial cooperatives segment, accompanied by a newly established supervisory and deposit insurance system; and (e) upgrading the Superintendency’s comprehensive risk-management system. Overall, the government spent more than US$4 billion during 1999–2001 on financial sector emergency measures and to close, downsize, restructure, or otherwise resolve problems associated with financial institutions.

Due to a number of financial sector reforms, the institutional landscape for public and private financial institutions operating in Colombia’s rural sector has shifted dramatically in recent years. With the closure of Caja Agraria in 1999, the government has taken significant steps toward eliminating distortions in rural financial markets and rationalizing government support to agricultural and other rural enterprises. In addition, changes in the legal and regulatory framework have led to the massive restructuring of bank and nonbank financial intermediaries in Colombia, with mergers and liquidations drastically reducing the number of banks, cooperatives, and other financing companies operating in the country. Banco Agrario, Fondo Emprender, and several guarantee and titling programs administered mostly through the Fondo para el Financiamiento del Sector Agropecuario (FINAGRO), are still operating in the rural sector.

While the actions noted above did help avert a systemic crisis, a substantial further agenda of actions remains if a healthy financial system providing the requisite services to the population and productive sector is to be assured. The agenda of further actions to put the financial system on a sound footing for the future should include:

- Wind up, restructuring, and/or privatizing the public and officialized financial institutions (most important, BANCAFE and Granahorrar) as early as possible to avoid further fiscal drain and erosion of the value of these entities.
- Review and overhaul policies, procedures, and action plans being followed by CISA, the subsidiary of FOGAFIN responsible for the management and disposition of assets transferred from the bad loan portfolios as part of the process of the resolution of problem banks, in order to achieve more rapid and efficient disposition of the corresponding assets.
- Review the operations of the various second-tier financial institutions currently under state control (Instituto de Fomento Industrial, State Industrial Development Bank, IFI; Financiera de Desarrollo Territorial, FINDER; Financiera Energética Nacional, FEN; FINAGRO, and BANCOLDEX), with a view to rationalizing and consolidating their operations and thereby increasing the efficiency and effectiveness of second-tier banking, ideally via the operation of only one or two second-tier agencies with clear rules that would be applied consistently across different sectors.
- Reform the pension and social security system (see the Pension Reform Chapter). The main elements of a reformed system should include (a) establishing a fully capitalized, actuarially sound, defined contribution pension system at
the national level for public and private employees with parameters related to eligibility rules, benefit accumulation rates, retirement age, and maximum benefit rules, adjusted to ensure its long-term financial viability; and (b) harmonizing the system across the different employee populations by moving *Instituto de Seguro Social* (Institute of Social Security, ISS) and the various special and "excepted" public employee pension regimes toward such a system as early as possible and by clearly specifying a transition phase to the extent that an immediate switch to such a new system is not politically or legally feasible; and (c) reforming the various sub-national level public employee pension schemes by implementing essentially the same principles for pension reform at the decentralized levels of government.

- Review and reform judicial system procedures as they affect credit and financial system operations. Most important, reduce the extremely long delays imposed in exercising guarantees and foreclosure of properties provided as collateral for credit transactions, which places a major burden on creditors and imposes, in effect, a high risk premium in all credit transactions in the economy. Specific attention should be given to continued strengthening of effective commercial arbitration and extrajudicial methods to reduce the economic burden of these legal and judicial processes.

- Develop a comprehensive strategy to foster capital markets development. This strategy should include completion of the work started under the proposed new capital markets and securities legislation that established clear disclosure and transparency rules and strengthened the legal framework supervisory guidelines for entities and instruments to facilitate housing mortgage securitization. Streamline regulations for efficient securities issuance procedures, to increase the capacity of the Superintendency of Securities (for example, to detect and investigate cases of market fraud, manipulation, and insider trading), and to deepen the primary and secondary markets for fixed-income securities issued by the Treasury. By establishing the appropriate anchor for interest rates and a yield curve in the market, a government securities market could provide the necessary platform to further develop capital markets operations in other segments. The new securities legislation should be passed without delay.

- Overhaul the insurance sector and the regulatory framework guiding it, given the relatively weak information systems and database in this area and an underdeveloped regulatory system that could threaten the heath of the sector, as important products such as those covering natural disaster insurance and crop- and weather-related insurance are developed in the future (see section on Disaster Management and Disaster Insurance Mechanisms).

- Review problems of access to finance reportedly experienced by medium-size, small, and microenterprises throughout the economy, and rural enterprises. The progressive withdrawal of public banks and the consolidation of private sector institutions may have set the stage for the growth of more competitive and stable financial intermediaries. However, their impact on the availability
and terms of services for different strata of rural households has not yet been compensated by a growth in credit flows from the financial system to small/micro enterprises and the rural sector. In the case of agriculture sector, the current agricultural credit scheme, which is anchored in the Banco Agrario and FINAGRO, needs to be reviewed with the objective of shifting the role of the state from retail lending to an institutional development role with more participation of private sector and nonbank intermediaries. Incentives and technical assistance for intermediary capacity building should be provided to promote expanded services in rural areas by sustainable bank and nonblank institutions. Instruments adapted to cater to the special needs of the rural producer in terms of savings mobilization, insurance schemes, contract farming, investment funds, and facilitation for the use of collaterals will therefore need to be developed. Innovations that reduce transaction costs and spread risks more effectively, such as index-based insurance and commodity price hedging, also ought to be considered for wider adoption.

IV. Creating a Business Environment to Foster Private Sector Development

Although Colombia has produced notable private initiatives and penetration of new markets (for example, development of export markets for flowers and educational material; and private participation in water, electricity, and road concessions), the overall trends in small and medium-size enterprise development, export growth, investment rates, direct foreign investment, and overall factor productivity have not been promising. A recent reform of the corporate governance and bankruptcy legislation has brought some essential reforms to prevent creditors from pushing troubled companies into liquidation prematurely. However, it may need some further adjustments to streamline and modernize the rules for extrajudicial debt restructuring agreements (Acuerdos de Reestructuración under Law 550) and to ensure efficient closing or bankruptcy procedures where needed. Regulatory and competition frameworks have been improved in several infrastructure areas (see below).

The performance of small and medium-size businesses and microenterprises, a segment critical to employment generation in the economy, has been poor. Colombia has had a strong historical tradition of innovative private sector and philanthropy-based schemes to support small business and micro-enterprise development, and this needs to be revived, with government support, if necessary, in the areas of technical assistance, business advisory and information technology services, and catalytic financial assistance where appropriate.

A major obstacle to fluid private sector operation is the large administrative burden (trámiteología) imposed on enterprises by federal, departmental, and municipal government authorities in the form of a myriad of administrative and license requirements, slow processing of required authorizations, and special fees or mone-
tary compensation that officials may demand. The impact of the administrative burdens imposed by these procedures, fees, and required authorizations is disproportionately high on the smaller businesses and microenterprises because they represent fixed costs applied to a very small scale of business, and because in many cases the entrepreneur, head of the enterprise, or the senior-most official often have to devote substantial amounts of their own time to these chores, which is time away from managing the firm's productive operations, looking for new areas of business, and developing a customer base. The government should commission a special study of the current requirements and their adverse impact on productive operations of different sizes and in different sectors, and develop an agenda of reforms to ensure more streamlined and less costly procedures.

Effort to develop nontraditional exports should be given high priority. With the spread of free trade arrangements and the gradual coming into force of World Trade Organization provisions, export development becomes an important ingredient of Colombia's economic growth strategy. A combination of assistance to budding exporters in the areas of market identification, product development, information and business advisory services, improved access to financing, and other technical assistance sources would help accelerate the development of export potential by Colombian entrepreneurs.

Given the critical importance of private sector led growth and employment generation, developing a consensus view across the different areas of the government (e.g., planning, finance and trade ministries, and departmental/municipal authorities) on a specific integrated set of actions that should be taken in these areas is a matter of urgent priority. This is best done via a quick comprehensive review that would help develop more detailed options and actionable recommendations in each of these areas for early consideration by the Consejo Nacional de Políticas Económicas y Sociales (National Council on Economic and Social Policies, COMPES) and the President.

V. Improvement in Infrastructure and Public Services to Foster Competitiveness

Adequate physical infrastructure can play a major role in enabling economic growth and competitiveness. Econometric studies using data from a large number of developing and developed countries show that as much as one third of economic growth can be directly linked to the availability of adequate infrastructure, and Colombia is no exception. Poor logistics alone have been estimated in some economies to lead to a 15 to 20 percent increase in the total cost of production in some sectors. Indeed the role of infrastructure in enabling growth may actually be even greater now in Colombia, given the significant erosion of physical infrastructure facilities that took place in recent years as a result of both inadequate maintenance budgets, and violence that includes periodic sabotage of highways, bridges, power transfer stations, distribution towers, and other facilities.
Despite very challenging circumstances, Colombia has made major efforts over the last decade to improve the organization and efficiency of infrastructure services, and has implemented several thoughtful initiatives. Although the nature of the efforts and their relative success varied greatly across different infrastructure sectors, there has been progress in most sectors. In general, these efforts paid off in terms of service improvement and greater amounts of foreign and domestic investment in many of the infrastructure sectors, even while hindered in specific sectors by the problems created directly or indirectly by the security situation (such as problems in road transport concession projects and privatization proposals in electricity generation and distribution companies). In the last three years, foreign and domestic investment rates have turned downward sharply, reflecting the difficult macroeconomic and security conditions, the need for fiscal austerity, and the volatility and uncertainty that has characterized the financial markets and Colombia's credit rating in international markets. Given the limited public resources available for investment in these sectors, unless private sector investment picks up substantially, Colombia will fall short of the minimum infrastructure investments needed to ensure adequate maintenance, replacement, and expansion of the services to keep up with the demands of the growing population and to fuel the requisite economic growth.

a) Energy Sector

Over the last decade Colombia has been a pioneer in implementing far-reaching structural and regulatory reforms in the electricity sector. The current structure provides for an unbundled electricity sector structure (between generation, transmission, distribution, and marketing) that is conducive to competition and private sector participation in electricity generation and distribution. A well-functioning wholesale electricity market has been established and has already demonstrated significant gains in overall efficiency, cost reduction, and quality of service (number of service interruptions, loss and access indicators) and maintenance of relatively stable electricity prices to consumers since the inception of the wholesale market. The state-owned generation and transmission company (Interconexión Eléctrica S.A., ISA) continues to be one of the most efficiently run public sector companies in Colombia, and has even shown an institutional capacity to cope with the traumatic events related to guerilla violence without major systemic breakdowns.

Guerrilla-related violence and threats have, however, caused major damage to power and oil transmission and distribution facilities, typically causing major interruptions in service through the blowing up of towers and other facilities. The contemplated privatization of ISA (which was to be unbundled and sold) had to be significantly delayed as a result, but a proceeding more gradually via public share offerings in the market. Privatization of ISAGEN and several regional distribution companies was also delayed as a result of an anti-trust dispute (ISAGEN) and certain financial and governance issues (distribution companies). Efforts are under way to complete the process with some innovative shareholder structures to offset the
uncertainties posed by guerrilla activities, including the very successful offering of a significant block of ISA shares to the public at large via the stock market. The sector regulatory agency, the Comisión de Regulación de Electricidad (CRE), developed good institutional capacity and had been instrumental in the healthy development of the electricity wholesale market. However, over the last two years, some important questions have been raised by private sector participants as to whether CRE's interpretation of the regulations in imposing certain price restraints in the operation of the wholesale market was sound and whether CREG is becoming excessively short term oriented. Key concerns relate to the way the recovery of capacity charge is dealt with under the rules of operation of the wholesale market. There may well be some legal challenges to the jurisdictional authority of CRE or the manner in which it is being implemented. If not resolved in a manner amicable to all parties, doubts about such interpretations may have a negative effect on the attraction of further private sector investment into the sector.

Colombia is a country with major coal reserves. The government has been largely successful in privatizing the coal industry and thereby developing an export-oriented, private-sector-led industry. The logistics of the transport of coal and arrangements for sharing transport and railway facilities among firms under clear rules are important issues in this sector. The government has generally been successful in arranging for reasonable sharing, although this may need some additional work.

The government, through the Empresa Colombiana de Petróleos (ECOPETROL), has been fairly successful in maintaining the interest of oil companies in exploration, primarily by adjusting the parameters of the association contracts and pricing to be in line with the evolving international scenario and the local reservoir characteristics. Oil exploration and production are conducted mainly under "association contracts" between ECOPETROL and private companies. Work is also under way to strengthen the regulatory structure governing natural gas transmission and distribution throughout Colombia. The strategy is to strengthen the sector institutions in implementing the regulations, and to promote more effective use of natural gas through an expansion of the gas pipeline network and distribution stations throughout the country. In part to make up for the adverse developments in the investments stemming from the deteriorating security situation, the terms of the standard joint venture contract among ECOPETROL and oil and gas companies were modified during 1994–2000. The 1999 and 2000 reforms included royalty relief and a reduction in ECOPETROL’s participation requirement from 50 percent to 30 percent. There are, however, potential opportunities to improve incentives and move towards further deregulation in the natural gas and oil sectors.

A special effort is needed to improve access to electricity and other energy sources in the rural and isolated areas. A focus in developing off-grid electricity supply based on renewable energy sources such as wind, geothermal energy or mini-hydro plants would seem a promising avenue to correct the deficiencies in access. In this connection, Colombia should aim to take advantage of the incentives for renewable energy production offered under the Kyoto Protocol and the Prototype Carbon Fund.
ENERGY/ENVIRONMENT ISSUES. Oil exports have decreased in recent years, from 810,000 bbl/d in 1999 to 630,000 bbl/d in 2001. This decline is partially due to more than 180 bombings of the Cano Limon-Covenas, Transandino, and Ocensa pipelines in 2000 and 2001. Oil spills due to these bombings have had a significant negative environmental impact. Given the regulatory uncertainty caused by the current environmental licensing system, has led to regulatory uncertainty. There is an urgent need to reform the regulations on environmental licensing for oil and gas projects (Decree 1753/1994). The government has strengthened the capacity to monitor the environmental impact of energy-related policies and projects e.g., to monitor the environmental impact of the use of fossil fuels in the transport sector. Work is also under way to strengthen both the regulatory structure governing natural gas transmission and distribution throughout Colombia and the sector institutions implementing the regulations, and to promote more effective use of natural gas through an expansion of the gas pipeline network and distribution stations throughout the country.

Among the key strategic issues to be addressed by the new Administration in the energy sector are:

- Adequacy of the incentives for petroleum exploration and development (including tax policies, royalties, sharing agreements, etc.) in light of the current security situation and how these may need to be adapted as security conditions in Colombia improve or deteriorate.
- Appropriate division of roles between the public and private sector; including in particular ECOPETROL's dual role as a producer and as the entity with which all other producing companies have to enter into association contracts.
- Possible further deregulation of the natural gas, in respect of well head prices, downstream operations and prevailing restrictions and exports.
- Best strategies and options for proceeding with the privatization of ISA, ISAGEN and the distribution companies which are still in public sector hands.
- A full review of the performance of CREG, required institutional improvements in CREG, and improving the clarity of the nature of its regulatory role and scope of functions, while preserving its autonomy from the line ministries.
- Improving the capacity, operations and performance of SSPD.
- Putting in place a holistic strategy to improve access to electricity/energy to rural and isolated areas via public-private solutions to energy services.
- Taking advantage of opportunities offered by the Kyoto Protocol and the Prototype Carbon Fund (PCF) to finance off-grid solutions (e.g., wind, small hydro plant).
- Reexamining the efficacy of the cross-subsidization scheme on electricity prices currently based on classification of customer by income strata. Consideration of options that may be available to make the system simpler and easier to operate—for example one in which the basic minimum level of services is offered at a subsidized price for all customers, with higher (and possibly escalating) prices for additional blocks of service.
• Further enhancement of institutional capacities to monitor and minimize adverse environmental impact of energy operations.

b) Telecommunications

Over the last five to 10 years Colombia has taken steps to open up the cellular telephone market, conduct spectrum auctions and, more recently, redesign the ongoing Personal Communication Service (PCS) concessions to make them viable. The fixed-wire telephone services are, however, lagging behind in terms of reforms, and are still dominated by government-owned local and long-distance telephone capacity (the Bogotá telephone company and TELECOM, respectively).

The telecommunications sector in Colombia faces several issues:

• **Low Private Sector Participation.** Only 3.4 percent of Colombia's telephone lines are in the hands of private companies today, compared to 85 percent for Latin America as a whole. In general, telecommunications is considered to be a private sector business throughout the region, with the exception of Colombia and only a few other countries.

• **Fragmentation of Regulatory Institutions.** Colombia's regulatory institutions are fragmented: (a) the Commission for Television Services oversees the television subsector; (b) the Ministry of Communications manages the Radio Frequency Spectrum, assigns frequencies for different use, and controls the radio subsector; (c) the Telecommunications Regulatory Commission dictates the fundamental technical plans and manages other scarce resources for the telecommunication operators; (d) the Superintendency of Industry and Commerce regulates the operators' anticompetitive behavior; and (e) the Superintendency of Public Domiciliary Services supervises the relations between customers and operators.

• **Subsidies and Tariffs.** Compared with other countries and the rest of Latin America, Colombian tariffs are below the average, and in some cases, below the cost of providing the service, causing financial problems for electricity companies and contributing to government fiscal imbalance.

• **Low Internet Penetration.** Colombia had only 0.54 Internet hosts per 1,000 inhabitants, well below countries of similar GDP per capita, and below Argentina, Brazil, and Mexico.

• **Reduced Role of Colombia in the Information Society and the Global Economy.** Even though the Pastrana administration's "Connectivity Agenda" has made an impressive contribution to bring Colombia into the Information Society, much remains to be done. There are still too few computers in Colombia, fewer connections to the Internet than in other Latin American countries, and lower use of information and communication technologies (ICTs) for development.

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In addressing these issues, the government should give serious attention to the following specific actions:

- **Increased Private Sector Participation** The current scenario of public sector controlled companies playing a dominant role in providing telecommunication services should yield way to significantly increased private sector participation via a proactive restructuring and privatization program. To facilitate that, several other measures listed below need to be taken simultaneously to guarantee a vibrant and competitive sector.

- **Tariff Reform** Local telephone tariffs need to be liberalized within the framework of a price cap-based regulatory system to stimulate investments in local service. Such a system would allow companies freedom to set their own tariffs as long as they comply with the price cap, which would be set at a level high enough to guarantee a reasonable rate of return to companies that invest in networks to provide new telephone lines. An international benchmarking system could be used to set and periodically adjust the price cap. To ensure access to minimum basic service to the poorest and least privileged segments of the population, a “lifeline service” operated via public phones or a prepaid access cards system should be considered. This would replace the current system of stratification of subscribers for tariff purposes which has not been effective or economically efficient. In order to harmonize better with international rates and avoid adverse incentives for companies and consumers, the government should also consider replacing the taxes imposed on long-distance calls with a general tax on telecommunications company profits and setting the new proposed levy for universal service at a more moderate level.4

- **Consolidation of Regulatory Institutions.** The current system requires telecommunications enterprises to submit information and a multitude of reports to satisfy the requirements of diverse regulatory institutions. Moreover, given the overlapping jurisdictions, it is difficult to have clarity on with regulatory entity should have the ultimate say on a specific issue. The creation of a single regulatory entity for the telecom sector covering tariffs, service licensing as well as spectrum control would be desirable. The government, through the Ministry of Communications, should in any case retain the responsibility for formulating and implementing overall sector strategy and policies.

- **Incentives for Local Telephone Companies to Compete Against Each Other and the Flexibility to Merge** To provide incentives for the private sector to invest in local telephone companies, they should be allowed to also offer mobile services (cellular and PCS services) which is the segment of the industry that has higher growth potential for the future and needs large investments in line with the

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4 In Latin America the fee is usually one percent of gross revenues
oncoming third generation of mobile services. In addition to the 1900 MHz band (the North American Standard) already open, the government should also make available the 1800 MHz band (the European Standard) to operators. Telecommunication assets, concessions and frequency bands for mobile services should be auctioned via open public offerings to facilitate structured competition in the sector, efficiency enhancing mergers where appropriate.

- **Colombia and the Information Society.** The government should increase efforts to insert Colombia into the new Information Society. A key measure would be to assign consolidated responsibility for developing and implementing an integrated information and communication technology (ICT) strategy. Working closely other ministries, it would help develop and implement new ICT applications to improve the efficiency and effectiveness in these other economic and social areas, and insert Colombia firmly into the rapidly evolving world knowledge economy. The government should also consider all or part of the revenues mobilized from the telecommunications companies to fund ICT applications for development purposes, outsourcing the actual provision of ICT-based services to the private sector as much as possible.

c) **Transport**

Colombia had been a pioneer in the private sector-driven development of ports, which handle 98 percent of exports flowing out of Colombia, with a large portion of it through specialized private terminals (coffee, bananas, and oil). The opening up of these sectors for private sector participation has on the whole been very successful and has yielded positive results in terms of increases in productivity and efficiency of port operations, reduction in total costs and shipping times, and corresponding reduction in rates. In the civil aviation sector, three hub airports and the second Bogotá airport terminal have been given under concession contracts, and the independent regulatory authority (*Aerocivil*) established earlier continues to function satisfactorily. In railroads, two networks (*Pacifico and Atlántico*) and the rolling stock were recently devolved to the private sector under two concessions. Although these initiatives are also expected to yield productivity, efficiency, and quality-of-service gains, the ultimate effects cannot yet be assessed.

In the area of highway development, Colombia had been innovative as well, laying out a strategy that explicitly considered ways to maximize private sector participation via different types and "generations" of toll road concessions, together with methodologies for prioritizing budget allocations among federal and departmentally funded highways and secondary and tertiary roads. The *Instituto Nacional de Vías* (National Highway Institute, INVIAS), the government agency responsible for managing the national highway program, was actively pursuing innovative methods.

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5 The third generation usually refers to mobile telephone systems that provide fast Internet access for data, voice, and video
to achieve this objective, such as providing certain types of assurances regarding traffic demand, and "negative concessions" where concessionaires bid for the minimum present value of the toll road revenue they will retain. Colombia has a long experience of contracting maintenance through microenterprises, achieving substantial improvement in the condition of the road network by the end of the 1990s. The government also took action to reduce accidents and hijackings, and introduced monitoring of vehicles in transit via Global Positioning Systems (GPS).

Recently, however, all parts of implementation of the highways program have experienced severe setbacks. Security concerns have made it extremely difficult to reach agreements with the private sector on new concession arrangements, especially where the size of the transaction or technical capacity requires the participation of foreign investors and concessionaires. Severely constrained budget resources combined with an increasing incidence of sabotage have limited new work on even nationally or departmentally sponsored roads. Local communities that depend on access roads for education and health facilities and trade links to the rest of the Colombian economy have suffered severely. Management of road concessions has also suffered from weaknesses in the institutional capacity to follow up, control, and supervise the concession contracts, and from the lack of an overarching framework linking the concessions program to the functioning of the transportation system as a whole. Given that the availability of good quality roads is typically a key factor in the ability of the population (especially the poorest families) to access basic education and health service facilities and to participate in economic activity and the productive labor force, it is critical to quickly correct these deficiencies. One bright spot has been the development of the urban transport system in Bogotá, with a clear and consistent policy anchored in the development of the highly successful Transmilenio and improved attention to road safety, service improvement, and reduction in adverse environmental effects of vehicular emissions (for example, through the introduction of the 'pais y plaza' system which requires all cars to be off the roads one day a week).

Given the uncertainties and lack of a sector strategy that can be effectively implemented, INVIAS and the Ministry of Transport have also suffered the loss of key staff and decreased motivation among those who remain in the agencies. The consequent erosion of institutional capacity in these agencies is an important problem that needs to be addressed. It is also critical to establish and build the capacity of a transport regulatory agency to provide clear guidelines for sector activities, and to build the capacity of agencies responsible for road building and maintenance at the departmental and local levels.

Looking ahead, it is critical to:

- Rebuild and strengthen the institutional capacity of (a) the Ministry of Transport, to enable it to better perform its role as policymaker and ensure the development of a good master plan for transport; (b) INVIAS in its role as the entity with responsibility for detailed road planning and design and execution of road concessions; and (c) a well-functioning transport regulatory commission.
• Clarify the division of responsibilities between the federal and decentralized levels of the government, and build appropriate institutional capacities at the decentralized (department and municipal) levels of government.

• Overhaul the highway concessions program to adapt it to the reality of the Colombian security situation, if necessary incorporating appropriate transition and contingency management strategies, ensure longer-term financial and environmental sustainability of the system. Should the security conditions improve, be prepared to revert to a viable longer-term strategy.

• Develop innovative methods for building and maintaining rural and regional roads that fully incorporate the participation of the local communities and promote a concept of integrated regional development; features could include contributions (in kind or in cash) of the local communities in road construction and/or maintenance, links to tertiary roads and nonmotorized transport methods where appropriate, and promoting participation of local microenterprises in the work and in housing and community facilities development.

d) Urban Development and Low-Income Housing

In Colombia, 31 million people reside in urban areas, compared to about 12 million in rural areas. Indications are that there will be an even greater shift of population toward urban areas in the future. Among the problems faced by Colombia’s growing urban population are (a) lack of systematic urban land management; (b) poorly developed land-titling systems and land markets; (c) congestion and transportation bottlenecks in the large urban centers; (d) large slum areas surrounding major cities that suffer from lack of access to basic infrastructure services such as piped water, electricity, community roads, and telephones; and (e) inadequate access roads to link the poorer neighborhoods to the main city centers. The problems tend to accumulate and worsen over time because of inadequate institutional capacity of the municipalities and departments to develop strategies to correct these problems. Given the limitation of three-year, nonrenewable terms for mayors of municipalities, there is also typically very little incentive for city administrations to take corrective actions that are strategically thought through. Also, notwithstanding specific provisions under Law 134 of 1994 to strengthen citizen participation in local decision-making, there is often less-than-sufficient consultation with and participation of local communities in designing and implementing urban development solutions.

Despite some overall improvement in aggregate urban poverty indicators, there are large localities in metropolitan areas that are clearly suffering from acute poverty, overcrowding, unhealthy environmental and social conditions, lack of basic services such as water supply and sanitation, and extremely poor-quality housing with hazardous conditions. The history of inadequate shelter options and the lack of an effective targeted subsidy system for the lowest-income stratum has led to disorderly growth of slum areas. These areas are characterized by informal settlements typically initiated through illegal but organized "invasions" of public lands and accelerated by
pirate developers. Since the settlers in these areas almost never receive legal property titles to the land they are occupying, there are few incentives for them to improve the land and the services thereof unless the government takes specific action to facilitate an orderly transformation of these areas.

To address these problems Colombia must focus on:

- Progressive upgrading via community-based development, together with practical solutions for problems of land tenure and property titling, and efficient mechanisms to help the poor help themselves.
- Other effective measures to expand the shelter supply to the poor that, among other things, could stem the tide of informal settlements and “invasions” of public lands.
- More effective ways of addressing the problems of access to basic services such as water, sanitation, electricity, community roads, and other amenities, within the framework of actions advocated in the individual sectors as described in the preceding sections.
- Improved functioning and capacity of the environmental management agencies (EMAs) or the equivalent units operating through the autonomous regional agencies to ensure environmentally responsible development of these areas, removing the current overlapping responsibilities among the local, regional, and central level agencies.

Also of high priority are measures to improve the operation of the land markets by removing or relaxing the excessively cumbersome rules and regulations that govern land acquisition, titling, and transfer. Programs to upgrade land, roads, and housing in slum areas surrounding the main cities of Colombia and to improve access of basic services to those areas could go far in improving the quality of life in urban slums. The experience of other countries in Latin America and elsewhere (Brazil, Thailand, Venezuela) indicates that a systematic approach to upgrading slums will help integrate them into the cities and ensure access to basic services for the population living in those areas, and will instill in them a greater sense of community, ownership, and social capital. A well-designed subsidy system, with clear targeting of the subsidies to the lowest-income segments of the population and with incentives built in for development of “progressive housing” (that is, gradual improvements in the housing units making use of household savings) could play an important role in improving the lot of these less-privileged communities and integrating them into the main urban areas. It would be important to combine and closely link these measures to initiatives to increase the supply of shelter, specifically to accommodate the needs of the poorest of the poor.

e) Superintendency of Domestic Public Services

The Colombian institutional structure includes a unique mechanism for ensuring that public services provided to households by municipal or other public or private
service providers abide by certain basic rules and regulations. These supervision functions are performed by the Superintendency of Domestic Public Services (SSPD). The SSPD complements the functions performed by the individual sectoral regulatory agencies such as the CRE, the Comisión Reguladora de Agua Potable y Saneamiento Básico (Water Regulatory Commission, CRA), and others. Among its important functions are to ensure that the entities providing public services to citizens are being run effectively and in a financially responsible and sustainable way, that service quality is being respected, and in the case of specific concessions, that the rules agreed upon under the concession agreement are being respected. The SSPD has the authority to take over the management and control of a public utility under its jurisdiction if it finds that the utility is in violation of the rules and that its operation is deemed unsustainable financially or otherwise. In general, this means that if the SSPD intervenes in the operation of a utility, it will have to take over the operation of that utility and maintain satisfactory service provision during an interim period, until an appropriate restructuring and transfer of the utility to a new ownership and/or management can be achieved.

While this rather unique structure offers the advantage of a clear separation between the roles of sector policy and tariff regulation and the supervision and control of the operations of the specific entities providing services, in practice, this statute has given rise to a number of problems. Most important, it has been difficult for the SSPD to acquire the requisite institutional skills to interpret and enforce the regulations applying to the broad array of domestic services over which it has jurisdiction (water, sanitation, solid waste disposal, electricity and natural gas distribution, telecommunications, and so forth). There have also been gray areas as to its jurisdiction vis-à-vis the individual sector regulatory bodies (CRA, CRE, and so forth). Finally, while the SSPD is entrusted with the authority to intervene in the operation of a utility that is performing less than satisfactorily and poses the risk of defaulting financially or in the discharge of its responsibilities, it generally lacks the technical, administrative, or other capacity (or the incentives structure) to operate these public utilities effectively even during an interim period, let alone to shepherd a rational restructuring of the entity. The functions of intervention, restructuring, and spinning off the operations of public utilities require very advanced technical, administrative, and financial engineering skills that the SSPD lacks. This has become quite clear from the way the SSPD tried to manage the interventions of a number of electricity distribution companies and water supply and sanitation companies over the past two years. For the SSPD to be able to discharge its responsibilities effectively will require, at a minimum, highly focused efforts to precisely define the rules of operation governing SSPD interventions, the scope of authority and responsibilities of the SSPD during the period of intervention, and creation within the SSPD of the requisite advanced level of institutional capacity and sophistication. If this is considered untenable in the long term, the government may need to search for other more appropriate institutional mechanisms, including a possible reordering of the entire supervisory apparatus for basic public services.
VI. Management of Natural Resources and Physical Environment

In pursuing growth, productivity, and employment objectives, it is crucial that the government preserves and protects the rich natural resource endowment of Colombia. Clearly, growth achieved at the expense of damage to physical environment or poor management of natural resources will not be sustainable and cannot assure long term improvement of the quality of life for Colombians. Worldwide experience has shown that correcting environmental degradation will almost always prove to be much more expensive than prevention through prudent natural resource management policies based on appropriate incentives. The following sections examine five critical areas related to natural resources management and environmental protection: (a) agriculture and land resources management; (b) water resources protection and management; (c) potable water supply, sanitation and wastewater treatment; (d) solid waste management; and (e) management of natural disasters.

a) Rural and Agricultural Development

Skewed incentives and lack of appropriate technologies, compounded by the expansion of illicit crops, are taking a toll on Colombia’s natural resources, and its remarkable environmental capital is being rapidly degraded. Colombia has amongst the richest biodiversity resources but also faces major soil degradation and water pollution problems which are having a detrimental effect on many watersheds and on the contamination of the hydrological systems. In the Orinoco and Amazonia regions, the impact comes from recent colonization, but it is already showing in the Guainía, Guaviare, Putumayo, Caquetá, and Meta departments, where more than half of the area has already been deforested. The gap between the natural vocation of the land and its actual use points to a distorted incentive structure and inappropriate use of resources. It is estimated that the agriculture/livestock frontier advances at a rate of 200,000 hectares per year.\(^7\)

Agriculture The agriculture sector is of major importance in the Colombian economy accounting for 14 percent of GDP, 23 percent of the labor force, and 28 percent of total exports. In the aggregate, it shows relatively high labor productivity and a remarkable development potential thanks to the extraordinarily rich natural resource endowment and the quality of its human capital. However, recent production trends suggest that the natural resource base is not being used efficiently. There has been a sharp decrease in the area sown with annual crops during the nineties,

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6 The volume of sediment transported by the Magdalena River to the sea (130 million tons) is equivalent to 40 percent of the total sediment carried by the entire fluvial network of the country (IDEAM 1998, “El Medio Ambiente en Colombia”)

resulting in an estimated decrease of one million hectares to a level of 1.6 million hectares. This decrease in annual crops has been only partially offset by an increase in permanent crops. Most of the land taken out of crops has been converted into extensive livestock farming of low productivity. Almost all of the livestock farming is based on the latifundios with about 38 percent of the production based in 3.5 percent of the farms and much of the expansion in permanent crops is also in the large-holder sector.

The gap between the natural vocation of the soil and its productive use suggests an inefficient allocation of resources stemming from biased incentives in agriculture, land, rural finance, etc. This is evident even in the irrigation sector where the absence of rigorous cost recovery in public irrigation schemes and skewed incentives helps explain why most of the land is under low-margin crops and pasture. Moreover, the insecurity generated by violence reduces the incentive to invest in agriculture and biases the pattern of investment toward non-intensive farm activities. At the prevailing low coffee prices, marginal coffee producing areas (especially small-holder farms), which have so far managed to remain relatively insulated, are now likely to be tempted to move towards illicit crops.

Given the critical role of the coffee sector in the rural agricultural areas, avoiding a rural poverty crisis will require strong action to help improve productivity in the coffee sector. One strategy should be to help Colombian coffee producers move toward the country's comparative advantage, e.g. niche markets for high quality coffee. This requires targeted promotion and marketing effort and strengthening of public and private institutions to help implement such a strategy.

A diversification strategy will be key to increasing productivity. Effective diversification will require improvements in rural infrastructure, contract farming, marketing alliances, access to land and credit, and innovation strategies for small farmers. Some coffee producing farms and areas may have to get out of coffee. This will have large social implications and the issue of social safety nets and social compensation will have to be confronted while taking into account the fiscal costs of such strategies. The government, which has played a minor role in the coffee industry in Colombia up to now, should probably become more proactive in helping to implement a multi-pronged approach along the above lines.

Forest Land Management. Growing crops to produce illicit drugs contributes to deforestation. At the same time, spraying drug crops to destroy them contributes to environmental contamination and to the deterioration of natural resources, and is also affecting the health of the population living in these areas. In addition, coca cultivation is extremely destructive to forests in fragile areas. The recent expansion of the fumigation of coca fields has accelerated the itinerant characteristic of illicit crop growers in the search for new land to be cleared. In addition, chemical residues from coca laboratories are contaminating water flows and aquifers. The conflict will continue to pose a serious limitation on any attempt to manage natural resources in a sustainable way because violence is particularly acute in the richly endowed areas.
Haphazard Infrastructure Development. Rural infrastructure work, especially building roads, has also accelerated the natural ecosystem transformation process. Despite progress on the regulatory and institutional front, there has been little implementation of the Planes de Ordenamiento Territorial (Territorial Land Use Plans, POTs) contemplated in Law 388 of 1997, nor diligent application of environmental assessments to infrastructure development.

Enhancing Community Participation. Efforts to restore natural resource management practices need to be built from the local level up. Communities need to reestablish a certain level of social cohesion to enable them to make appropriate trade-offs among agriculture, livestock, and the sustainable use of natural resources at the local level. Unfortunately, the indigenous reserves and the communal land rights granted to Afro-Colombians have also been affected by decreasing social cohesion, as well as the disorder caused by the armed conflict.

b) Water Resources Management

Water Quality Protection. The ambiguities in the regulatory framework regarding pollution standards, environmental licensing, and pollution charges related to water resource management pose potential risks to the protection and conservation of this crucial resource as well as potential for private sector investment in this area. The case of pollution charges illustrates the instability of the regulatory environment. In 1993 Colombia became a regional leader in the development and implementation of economic instruments to mitigate and control environmental pollution. Under Law 99/93, Congress established pollution charges (tasas retributivas), and Decree 901 of 1997 established the actual implementation mechanism for wastewater charges. However, the ambiguity and other weaknesses of the system have allowed only few regional environmental authorities (Corporaciones Autónomas Regionales) to fully implement the wastewater pollution charges. Even in those cases, the rules of the game are not completely clear. The regional environmental authorities determine the locally appropriate level of organic load and suspended solids in the water and set the pollution charges in a discretionary way. The wastewater charges could increase several times, in short periods of time, until the water quality goal is achieved. In light of this and certain technical issues of water and sanitation regulation, it has become apparent that the system's regulatory methodology needs improvement. For example, it would be necessary to: (a) move away from the organic and total suspended solids loads for which the dischargers have to pay now, toward the actual water quality parameters that have a more significant effect on human health, such as heavy metals and toxic organic compounds; and (b) revise the actual charges such that they are less discretionary and more consistent across the country, ensuring clear "rules of the game" for industry and also for PSP in water utilities.
Decentralized Water Basin Management. The system of Corporaciones Autónomas Regionales (Autonomous Regional Corporations, CARs) has a mandate to oversee allocation of from individual water basins, act as regional environmental regulatory agencies, and to develop large infrastructure projects, water resources projects, basic sanitation, and other public works. There is a conflict of interest in the responsibilities of these authorities, since they act as regulators and at the same time implement irrigation, drainage, water reservoirs, wastewater treatment plans, landfills, forestry, and other projects. The mandates of these authorities to implement large infrastructure development projects also overlaps with the mandates of national agencies, departments, and municipalities. A reform of these 34 CARs that exist in Colombia is necessary to strengthen the environmental regulatory responsibilities and to overcome the conflict of interest and the overlapping of responsibilities mentioned above.

c) Potable Water Supply, Sanitation, and Wastewater Treatment

Given that water supply, sanitation, and wastewater treatment responsibilities fall mostly under local jurisdiction, the role of the central government is primarily to guide the overall policies and set the regulatory and tariff principles. As part of the provisions of the general law governing the economic management of all public services (Law 142 of 1994), water supply and sewerage charges levied on consumers (like most other public services) are required to be set at levels that ensure at least full recovery of operation and maintenance costs and the long-term financial sustainability of the utilities concerned. The law allows a scheme of cross-subsidization under which the commercial and industrial sectors and the two highest strata of residents could be required to pay up to 20 percent more than the value of their consumption to help finance the basic consumption of lower strata. Working within this framework, local governments can set the detailed tariff structures and decide on any explicit subsidies or cross-subsidies they are willing to provide from their own budget resources for the poorer segments of the population. This system of checks and balances is beginning to function, although there is still much to be learned as full implementation of the system proceeds.

Most water and sewerage systems providing service to the major urban centers of Colombia are operated directly by the respective municipalities or enterprises fully owned by the municipal government. Although the major urban centers of Colombia have had operating water and sewerage systems for a long time, most of them suffer from problems of low operational efficiency, high water wastage, poorly maintained pipelines, limited (if any) access of piped water to the poorer neighborhoods, and water and sewerage charges that are inadequate to allow a financially sustainable operation by the utility. Wastewater discharges into bodies of water are also required to fully abide by the applicable environmental regulations and charges. However, in reality, few municipalities in Colombia (including major cities) have satisfactory wastewater treatment facilities to treat the water prior to discharging it into bodies of water. Thus few of them manage to comply with the applicable environmental
regulations on such discharges. This is a problem that needs urgent attention and appropriate corrective measures, because some of the major bodies of water in Colombia are already severely contaminated and pose significant health and environmental risks.

The government recently launched a nationwide program to help small and medium-size water supply and sewerage systems improve the efficiency and quality of their services and ensure adequate water access to the poorer neighborhoods. The local communities themselves would have a major role in developing the available options to improve the quality and access of water service and choosing one that best fits their needs. It is anticipated that a majority of the communities will choose a private sector concessionaire, manager, or operator to run the services. The government initiative aims to attract the largest possible amount of private investment resources into the sector and to catalyze improved efficiency, reduced wastage, and good cost recovery. The program is aimed at learning from the initial experience with water supply concessions and management and operating agreements, and then applying what is learned to the operation of a large number of water and sewerage systems throughout Colombia. This program of gradually extending private sector participation and adapting the specific mode of private participation to the characteristics and size of the local water and sanitation system is highly commendable.

To tackle the major issues facing the sector, Colombia must:

- Focus on improving water supply and sanitation services in small and medium-size municipalities while improving the efficiency of operation, quality of service, and access provided by them through the progressive application of economic efficiency principles and innovative methods to increase engagement of private sector participation in investments and operations.
- Improve the operation, efficiency, quality, and access to water and sanitation systems in the large metropolitan areas, where there are even greater opportunities to move toward and increase the private sector role in all aspects of investment and operations. Pilot schemes to test alternative solutions should be tried in the near term in this area.
- Develop and implement a policy for increasing the coverage and level of service in the rural sector, which has steadily deteriorated over the last 15 years.
- Improve management and disposal of municipal wastewater throughout Colombia by (a) harmonizing environmental legislation and guidelines related to water and sanitation to ensure public health and to prevent further environmental deterioration, in general, and of the quality of drinking water sources, in particular; and (b) identifying municipalities of high priority in terms of the need for wastewater treatment to prevent public health risks and degradation of water resources.
- Implement a simple but effective water sector regulatory framework under the authority of the Water Regulatory Commission (CRA) to address the problems identified above.
• Develop innovative options to finance the above activities by creating frameworks to attract increasing investment and financial resources from the private sector.
• Reform the CARs to strengthen their institutional capacity to discharge their responsibilities and overcome the conflict of interest and overlapping responsibilities mentioned above.

d) Solid Waste Management

More than 21,000 tons per day of municipal solid waste are improperly disposed of in urban centers in Colombia. There is an urgent need to address this problem. The national government has developed policies and a methodology for the management of solid waste in the country. However, the implementation of these policies falls almost entirely in the hands of the municipal governments, and their record is very mixed. Although a number of municipalities have well organized collection systems, and with support from the Fondo de Regalías, have been investing in building landfills for the adequate final disposal of municipal waste, much remains to be done in this sector. For example, the regulatory framework needs to be revised, the technical assistance to municipal governments must be strengthened, and additional resources for investments for solid waste management would have to be made available.

e) Disaster Management and Disaster Insurance Mechanisms

Colombia also confronts a variety of challenges related to natural disasters such as floods, droughts, and earthquakes. A separate section that follows identifies the key issues that bear consideration in achieving rational management of the impact of the potential natural disasters. Specific attention is paid to strategies to prevent or minimize the disaster related damages and methods to anticipate the contingencies and financial costs and plan for them in a way that does not disrupt Colombia's long term economic development. Among other things, rational use of disaster insurance mechanisms and other contingent financial instruments should help mitigate and smooth the fiscal and financial costs of natural disasters.

Colombia has historically been affected by a variety of natural disasters including earthquakes, hurricanes, floods, and droughts. Shifts in weather patterns make agricultural crop production particularly vulnerable. A systematic approach to anticipating and putting in place appropriate safeguards could go a long way in reducing the human and economic costs of natural disasters. Specification and enforcement of better building codes at the national and local levels (tailored to the natural phenomena that characterize a particular geographical area), promotion of earthquake-proof construction methods, strengthening of information systems, a systematic approach to risk and vulnerability assessments, closer coordination amongst the different institutions involved, and putting in place tighter standards for public infra-
structure in disaster-prone areas could play an important role in minimizing damage and losses caused by natural disasters.

*Good contingency planning and innovative disaster insurance techniques* should be used to help smooth the costs over time of coping with disasters, and minimize the trauma caused to the society by major catastrophes. Statistical and actuarial models have been applied successfully in other countries to derive probabilistic estimates of the types and frequency of the occurrence of disasters in a particular region. This information can in turn be used to design insurance schemes that achieve risk diversification across regions and risk smoothing over time. This will require development of appropriate statistical models, cost estimates, and design of progressive risk coverage, with different layers of risk being covered by different sources of funding. However, a government insurance scheme for public infrastructure could benefit from a substantial portfolio size to achieve pricing efficiencies and negotiating leverage in terms of external reinsurance funding.

Sources of funding to cover the risks could also include, progressively or in parallel, insurance premiums and deductibles paid by the property owners, internationally available insurance or reinsurance schemes, issuance of catastrophe insurance bonds to institutional investors or reinsurers, public funding of certain basic minimum costs in cases of the poorest segments of affected population and, possibly, contingency public funds that are especially set aside to cover catastrophic losses exceeding certain limits. The government has made a welcome initiative in strengthening contingency planning in order to increase its state of readiness to deal with disasters physically, logistically, and financially (for example, through the creation of a pooled contingency fund). Much more work is needed, however, to build a fully developed contingency planning and appropriate disaster management and insurance framework. The additional effort is well worth supporting in the coming years.

*Parametric weather insurance instruments* can also be very effective in helping farmers hedge against the risks of crop losses because of adverse shifts in climate. Other countries have initiated interesting pilot programs in this area that could be very relevant to Colombia, given its diverse agricultural climatic variations. Although commodity price-hedging markets already exist to manage world price fluctuations, even in stable pricing environments, unexpected weather developments can spell losses for sectors impacted by flood, drought, or freezes. The compilation of the historical record of such contracts and the development of financial hedging instruments (for example, options) to provide compensation against such events can be viable, particularly when counter parties might be available to take the “other side” of the risk, such as energy companies that actually benefit from weather extremes by providing more heating during colder weather. The benefit of using weather-based contracts, however, rests with the mechanism for contract triggering, that is, the use of degree measurements as the contract driver, without the need for on-site assessment of crop damage by area, which would otherwise significantly raise the costs and moral hazard risks of such contracts.
VII. Conclusions

Sustainable growth is obviously key to the realization of the dreams of any society of achieving better standards of living and quality of life for all segments of the population. A thoughtful and responsible approach towards achieving sustainable growth will be one that provides a platform not only for achieving positive economic results in the short and medium term, but for a long term growth trajectory that avoids undue economic and financial volatility and its associated social and economic development disruptions, and unleashes the dynamism, energy, and innovation of the country’s private sector. Moreover, it does this while fomenting the talents of Colombia’s human resources and allowing the nation’s considerable natural resources to be conserved and if possible bettered. A well conceived sustainable growth strategy should in the process also help bring down the high incidence of poverty and unemployment currently witnessed in Colombia. Achieving true financial, fiscal, environmental, and social sustainability is a complex challenge that can be dealt with successfully only if the policy and institutional frameworks in the various areas discussed above are designed to be mutually reinforcing, and the government is able to apply a strong determination to pursue and sustain the needed reforms, and good judgement in striking a balance between competing considerations where needed.
Shared Growth, Poverty, and Inequality

This Chapter was written by Carlos Eduardo Vélez, Laura Rawlings, Vic Pagueo and Juanita Riaño.

I. Introduction

The equitable distribution of the fruits of economic growth is the most powerful tool available for fostering economic development. Until 1996, Colombia enjoyed high, sustained, and very stable growth that allowed for substantial achievements in poverty reduction and social progress. Between 1978 and 1995 the share of Colombians living in extreme poverty fell from 45 percent to 21 percent, while impressive gains were achieved in primary and secondary school completion, health insurance coverage, access to basic infrastructure, child labor, infant mortality, and life expectancy.

In the second half of the 1990s, the most severe economic crisis to hit Colombia since the 1930s erased over a decade of progress in poverty reduction, and undermined Colombia’s ambitious social agenda. Macroeconomic performance deteriorated significantly, growth rates plummeted, and unemployment escalated to almost 20 percent. Simultaneously, risk indicators worsened, mostly due to increasing economic volatility and financial sector fragility, and persistently high levels of crime and violence. Moreover, de facto authoritarian regimes enforced by paramilitaries and local guerrilla warlords took hold in some isolated rural areas, fueled by profits from the drug trade.

Today, Colombia faces the triple challenge of securing peace, restoring robust economic growth, and ensuring that the benefits of growth are shared within Colombian society. Under present circumstances, economic growth of 4 percent over the next decade is required in order to reduce poverty to its 1995 prerecession level. Yet greater gains can and should be achieved by focusing on enhancing equity, efficiency, and security to ensure that the poor, in particular, are able to benefit from restored growth. This Thematic Chapter focuses on how to improve equity and effi-
ciency in the use of resources and application of public policy to ensure that the benefits of restored growth are optimally applied to reduce poverty and inequality.

This Chapter has two objectives. First, it provides a brief diagnosis of the challenges of poverty and inequality facing Colombia. After summarizing Colombia’s historical progress and recent shocks, the Note considers three areas critical to improving the welfare of poor: (a) enhancing their levels of income and consumption, (b) ensuring their equitable access to basic social services, and (c) reducing their exposure to risk. In each of these areas, the Note identifies key issues and policy options that should be addressed in order to establish an equitable and efficient foundation for shared growth.

Second, this Chapter synthesizes the key themes presented in the eight papers on education, the social safety net, health, labor, pensions, housing, the internally displaced population, gender, and Indigenous peoples and Afro-Colombians. Those Chapters provide an in-depth diagnosis and explicit policy recommendations in each of those areas. This Chapter concludes by summarizing a short-term and long-term agenda for reform, drawing on the ample agenda for reform in each of these areas, recognizing that priorities must be established in the face of a constrained budget. The Appendix at the end of this Chapter provides a summary in table form.

II. Colombia’s Tradition of Economic and Social Progress

During the 1980s and early 1990s, when much of Latin America was suffering for its “lost decade” of growth, Colombia’s strong economic performance allowed it to achieve remarkable success in poverty reduction and social progress.

a) Economic Growth Was Instrumental to Poverty Reduction

From 1978 to 1995, a period of rapid poverty reduction and social progress in Colombia, economic growth rates averaged over 4 percent, mean income per capita almost doubled, and unemployment remained below 10 percent. From 1978 to 1995, the percentage of Colombians living below the poverty line fell by 20 percentage points, from 80 percent to 60 percent. Extreme poverty declined even more rapidly, falling by more than half, from 45 percent to 21 percent. Although rural poverty is much worse than urban poverty, rural and urban areas made similar substantial progress in reducing poverty from 1978 to 1988. However, between 1988 and 1995 rural rates saw a decline of only 1 percentage point in poverty, while poverty in urban areas dropped by almost 4 percentage points (see Table 1). Stable economic growth was instrumental to poverty reduction during the 1980s and early 1990s. Recent economic analysis conducted for the “Colombian Poverty Report” indicates that that economic growth explained, almost totally, the 22-percentage-

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1 Unemployment rates exceeded 10 percent briefly from 1983 to 1985
Table 1. Poverty and Inequality Indicators, Colombia 1978-99

<table>
<thead>
<tr>
<th>Poverty indicators</th>
<th>National</th>
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<tbody>
<tr>
<td>Poverty rate¹</td>
<td>80%</td>
<td>65%</td>
<td>60%</td>
<td>64%</td>
</tr>
<tr>
<td>Poverty Gap²</td>
<td>46%</td>
<td>32%</td>
<td>29%</td>
<td>34%</td>
</tr>
<tr>
<td>Extreme poverty rate</td>
<td>45%</td>
<td>29%</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Mean income per capita³</td>
<td>112</td>
<td>183</td>
<td>216</td>
<td>210</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>70%</td>
<td>55%</td>
<td>48%</td>
<td>55%</td>
</tr>
<tr>
<td>Extreme poverty rate</td>
<td>27%</td>
<td>17%</td>
<td>10%</td>
<td>14%</td>
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<table>
<thead>
<tr>
<th>Urban</th>
</tr>
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<tbody>
<tr>
<td>Poverty rate</td>
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<tr>
<td>Extreme poverty rate</td>
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<table>
<thead>
<tr>
<th>Inequality indicators</th>
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<th></th>
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<tbody>
<tr>
<td>Gini Coefficient</td>
<td>0.53</td>
<td>0.54</td>
<td>0.56</td>
<td>0.57</td>
</tr>
<tr>
<td>Quintiles (Top/Bottom)</td>
<td>17.2</td>
<td>17.6</td>
<td>17.2</td>
<td>20.2</td>
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<table>
<thead>
<tr>
<th>Inequality Urban-Rural Decomposition (Theil)</th>
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<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Within</td>
</tr>
<tr>
<td>Between</td>
</tr>
</tbody>
</table>

1 Poverty rate Percentage of population under poverty line
2 The poverty gap describes the average distance to the poverty line
3 Thousand 1999 pesos per month
4 See other definitions in the appendix

point reduction in urban poverty during this time frame (Velez and others 2002). Much of this progress was made possible through the steady accumulation of human and physical capital, resulting in high productivity and employment. Moreover, thanks to this solid foundation of economic growth, today Colombia has a great deal more resources to tackle poverty.

b) Persistent Social Progress

Colombia has also achieved clear social development gains during the last two decades. Table 2 shows that in education, completion rates for primary and secondary schooling showed substantial improvement, reaching 90 percent and 59 percent, respectively. However, school enrollment rates progressed somewhat slowly and suffered a small reversal during the recent economic downturn. Illiteracy rates had a similar evolution. In health, life expectancy increased 20 years during the last four decades, with more than proportional gains for females. Equally important, child
## Table 2. Social Indicators, Urban Colombia1 1978–99

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Average education &gt; 18 years</td>
<td>6.2</td>
<td>7.7</td>
<td>8.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Illiteracy rate2</td>
<td>5.3%</td>
<td>3.3%</td>
<td>2.8%</td>
<td>2.6%</td>
</tr>
<tr>
<td>School enrollment</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ages 7 to 11</td>
<td>91.8%</td>
<td>94.8%</td>
<td>96.5%</td>
<td>95.3%</td>
</tr>
<tr>
<td>Ages 12 to 17</td>
<td>76.9%</td>
<td>80.5%</td>
<td>84.4%</td>
<td>82.2%</td>
</tr>
<tr>
<td>Ages 18 to 22</td>
<td>31.2%</td>
<td>35.8%</td>
<td>41.0%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Complete primary school (ages 12 to 17)</td>
<td>67.0%</td>
<td>78.7%</td>
<td>77.7%</td>
<td>89.8%</td>
</tr>
<tr>
<td>Complete high school (ages 18 to 22)</td>
<td>21.6%</td>
<td>35.3%</td>
<td>48.7%</td>
<td>59.2%</td>
</tr>
<tr>
<td>Child labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ages 12 to 16</td>
<td>12.0%</td>
<td>11.5%</td>
<td>9.9%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Ages 12 to 14</td>
<td>5.8%</td>
<td>5.0%</td>
<td>5.2%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Child Malnutrition3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunting, low height for age</td>
<td>16.8%</td>
<td>10.1%</td>
<td>8.4%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Wasting, low weight for height</td>
<td>22.4%</td>
<td>16.6%</td>
<td>15.0%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Low weight for age</td>
<td>4.9%</td>
<td>2.9%</td>
<td>1.4%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Crime4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicides (Per 100,000 pop.)</td>
<td>26</td>
<td>62</td>
<td>65</td>
<td>59*</td>
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<tr>
<td>Access to public utilities</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Electricity</td>
<td>NA</td>
<td>99.3%</td>
<td>99.6%</td>
<td>99.4%</td>
</tr>
<tr>
<td>Water</td>
<td>NA</td>
<td>97.4%</td>
<td>97.7%</td>
<td>99.0%</td>
</tr>
<tr>
<td>Telephone</td>
<td>NA</td>
<td>62.2%</td>
<td>71.0%</td>
<td>84.2%</td>
</tr>
<tr>
<td>Sewerage</td>
<td>NA</td>
<td>94.8%</td>
<td>96.0%</td>
<td>97.3%</td>
</tr>
</tbody>
</table>

1 Urban Colombia represents 67 percent of Colombia urban area Barranquilla, Bucaramanga, Bogota, Cali, Manizales, Medellin and Pasto.
2 For population 12 years old & older.
* 1998 figure.

Sources: Authors' calculations based on Encuesta Nacional de Hogares; Profamilia, and Encuesta Nacional de Demografia y Salud.

malnutrition and infant mortality were significantly reduced. Despite being procyclical—as in other Latin American countries—child labor has had a decreasing trend. Finally, basic infrastructure showed progressive gains. Most of the growth in coverage of water, sewerage, electricity, and telephone results from catch up by cities least covered in 1978 and the progressive extension of coverage to the poorer deciles. Sewerage and telephone connections still lag behind. The missing percentages mask thousands of individuals, concentrated in regional pockets of poverty, where these basic needs are not yet met.

c) Generally Propoor Expansion of Social Expenditures in the 1990s

Much of the social progress achieved in Colombia can be attributed to progressive social policies applied during the last three decades. Colombia’s strong economic
performance allowed for a dramatic expansion of social expenditures during the 1990s, many of which were of substantial benefit to the poor. Driven by mandates in the 1991 Constitution and a series of related legislation, the level of public social expenditure (defined as expenditure on health, education, housing, public services, and social security) doubled in Colombia between 1992 and 1997, raising its share of gross domestic product (GDP) from 8 percent to 15 percent, and its share of overall public expenditure from 30 percent to 35 percent. The new Constitution and accompanying laws also translated into major changes in the composition and administration the health, education, and public service sectors, notably because of the decentralization of power to departmental and municipal levels of government.

The result of this expansion of expenditure and introduction of decentralization reforms was a rapid expansion of social service coverage, particularly among the poor. With the exception of childcare and primary education, all services showed much faster rates of expansion among the lower income quintiles (see Table 3). This is particularly striking in the case of health insurance and treatment, and public utilities. Owing to increases in the underlying target population, the growth in coverage rates understates the true expansion of services in all cases. A better indication can be obtained by looking at the growth in the total number of people served. While health insurance succeeded in doubling the number of beneficiaries during the five-year period, in the utility sectors, the modest growth in coverage entailed a substantial increase of around 35 percent in the number of household connections. Finally, in the case of childcare, we can appreciate that the drop in the coverage rate was larger than the drop in the number of beneficiaries.

Against this generally positive scenario, pension obligations raise a note of concern. Social security accounts for the largest share of public social expenditures (40 percent), with negligible benefits for the poor. Due to the generosity of its design, the pension system is technically insolvent and government pension subsidies end up being clearly regressive—highly paid individuals receive larger subsidies. Public

Table 3. Change in Social Service Coverage Rates, 1992–97

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Education</th>
<th>Childcare</th>
<th>Health Insurance Treatment</th>
<th>Utilities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Secondary</td>
<td>Tertiary</td>
<td>Electr.</td>
<td></td>
</tr>
<tr>
<td>Quintile 1</td>
<td>9</td>
<td>13</td>
<td>-3</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>9</td>
<td>14</td>
<td>5</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>5</td>
<td>12</td>
<td>6</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>12</td>
<td>13</td>
<td>17</td>
<td>15</td>
<td>-3</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>27</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth rate of the number of beneficiaries (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>99</td>
</tr>
<tr>
<td>-4</td>
</tr>
<tr>
<td>116</td>
</tr>
<tr>
<td>19</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>36</td>
</tr>
<tr>
<td>38</td>
</tr>
</tbody>
</table>
pension payments have been growing at an explosive annual rate of 7 percent during the last decade. According to government estimates, the present value of the operational deficit of pension payments is worth two times the GDP (Acosta 2000). This rate of growth raises serious concerns about the fiscal sustainability of these obligations, placing pension reform as a key policy issue on the agenda for reform. These concerns are compounded by the distributional characteristics of the pension regime for public workers: in addition to subsidizing the nonpoor with taxpayer funds—violating vertical equity principle—the multiple pension regimes for government workers discriminate among Colombians—violating horizontal equity principle.2

In addition to these problems of vertical and horizontal inequity, the payments under the current pension system impose a high opportunity cost on the use of public funds, a high efficiency cost on taxation, and labor market inefficiencies. In terms of the opportunity cost, the public funds demanded for pensions could be used for alternative public investment in human assets with higher economic return, notably education. The taxation and labor market problems are related in that the additional taxes being levied to finance the pension bill raise even further the tax burden on the Colombian economy, and induce labor market distortions.

III. Recent Setbacks

During the last decade Colombia has faced simultaneous setbacks in three areas: a severe economic recession that erased the poverty gains of the previous decade, rising macroeconomic instability that raised the exposure of households and businesses to economic risk, and increasing violence. The impact of these shocks was exacerbated by two structural issues: increasing economic inequality and inefficiency in public social expenditures.

a) Economic Recession

Since 1997, after two decades of positive and sustained growth, economic activity in Colombia plummeted to the point of reaching negative figures in 1999. Until the early 1990s, prudent management of the Colombian economy allowed for low government debt levels that, together with low inflation rates by Latin American standards, led to steady—although moderate—growth rates. However, public spending rose from 24 to 36 percent of GDP between 1990 and 1998. Fiscal imbalances helped push Colombia toward a slowdown after 1996, and into recession in 1998–99. The fiscal position continued to deteriorate as the economic slowdown adversely affected tax revenues.

2 According to Gomez-Buenia (2002), teacher pensions cost 1.7 times the average cost for an ISS affiliate, police pensions cost 1.9 times, Caja Agraria 2.3 times, ISS employees 3.9 times, and for members of Congress and court magistrates 22 times.
The recession of the late 1990s reversed the long-term poverty trend previously enjoyed by the Colombian economy, and raised the national poverty rate to 64 percent in 1999, a return to its 1988 level, reversing a decade of progress. However, the impact on extreme poverty was less severe, with rates rising to 23 percent, still well below 1988 levels.

On the social front, the historical rate of unemployment doubled, and the recession contributed to the deterioration of several key human development indicators that has left some groups in a highly vulnerable situation, notably young children, adolescents, and the internally displaced population.

Finally, the recession placed severe fiscal constraints on the government’s ability to address those vulnerabilities, and on households’ ability to successfully manage the economic impact of the recession.

b) Increasing Macroeconomic Instability and Judicial Uncertainty

After being considered one of the most stable economies in the region, recent performance has shown greater volatility. The Colombian business cycle has suffered dramatic change. Cycle duration is now much shorter and much more volatile. Before 1996 the Colombian economy experienced relatively long business cycles of six to eight years in duration. However, the last cycle’s duration was less than five years; not only the duration changed, but the amplitude of the last cycle was 50 percent larger than the amplitude of cycles experienced between the late 1970s and early 1990s.

Moreover, according to Partow (2002), volatility of the Colombian economy during the 1990s increased relative to the two previous decades. Volatility nearly doubled for a number of macroeconomic and fiscal variables, with the exception of the terms of trade (Table 4). This went against the Latin American trend. A number of authors—among them Gavin and others (1996), Herrera, Perry, and Quintero (1999), and IDB (1997)—have pointed out that domestic volatility in many countries of the region declined during the 1990s.

Judicial uncertainty is leading to unpredictability in key policy areas, thus reinforcing market uncertainty. A number of recent Constitutional Court rulings created increasing uncertainty about the “rules of the game” in several key economic markets, such as labor, mortgage credit, and the private provision of education. In

3. Rodrik (1999) estimates the probabilities of entering episodes of high volatility for various countries, and shows that Colombia faced a probability very close to zero for the last 30 years

4. See Echeverry, Santamaría, and Escobar (2002) According to this article the main cause behind the change suffered by the Colombian business cycle is the Central Bank reform of the early 1990s. Countries with monetary policy set by an independent body are supposed to experience greater volatility but lower resulting inflation, which is supposed to bring greater economic growth.
Table 4. Colombia’s Volatility

<table>
<thead>
<tr>
<th></th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>1990s: 1980s*</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Volatility</td>
<td>1.8</td>
<td>1.5</td>
<td>2.7</td>
<td>81%</td>
</tr>
<tr>
<td>Fiscal Volatility</td>
<td>1.3</td>
<td>1.4</td>
<td>2.7</td>
<td>91%</td>
</tr>
<tr>
<td>Exchange Rate Volatility</td>
<td>1.1</td>
<td>1.5</td>
<td>2.4</td>
<td>57%</td>
</tr>
<tr>
<td>Monetary Volatility</td>
<td>6.8</td>
<td>3.5</td>
<td>3.7</td>
<td>56%</td>
</tr>
<tr>
<td>Terms of Trade Volatility</td>
<td>13.0</td>
<td>10.4</td>
<td>5.8</td>
<td>-44%</td>
</tr>
</tbody>
</table>

*1990s:1980s indicates the change in volatility in the 1990s relative to the 1980s.

Note: Data represent the standard deviation, in percentage terms, of changes in GDP, in the fiscal balance/GDP, in the real exchange rate index, in M1 growth, and in the terms of trade index.

Source: Partow (2002).

In addition, constitutional rulings on pensions rights have cast doubts about the contingent liabilities of the public sector. As a result, the ability of political mechanisms to solve the fiscal crisis has been weakened. For example, it is uncertain whether the pension reforms eventually passed by the elected legislative branch will become a public mandate, since the reforms may be overturned by the Constitutional Court.

These combined factors led to the recent downgrading of the risk-based ratings given to the Colombian economy, increasing the cost of external borrowing. Financial sector performance has deteriorated and has become more fragile, with significant bailout costs (Partow 2002; Acosta 2000).

c) The Growing Burden of Violence and Crime

Whereas most of the social indicators in education, health, and infrastructure show substantial and persistent long-term improvements over the last two decades, the simultaneous escalation of violence over this period has caused a deterioration in living conditions, imposed a considerable economic burden on the State and households, undermined investor confidence, and presented itself as one of the preeminent challenges facing the incoming presidential administration. Empirical evidence indicates that the drug trade and the presence of illegal armed groups linked to this trade are the main factors fueling this rise in violence and crime.

Colombia has the highest homicide rate in the world and, except for El Salvador, the highest crime rate in Latin America. Homicide rates almost tripled between the early 1970s and late 1980s, reaching their peak in 1991 when close 1 in every 1,000 Colombians was murdered. Although homicide rates fell in the 1990s, the incidence of extortion, car theft, armed robbery, and other crimes grew dramatically during this period, bringing the rate of victimization to more than 35 percent of households in 1997.

5. See, for example, “Colombia Poverty Report” (2002), Box 4, about mortgage credit.
The poor are more likely to be victims of homicide, and the nonpoor are more likely to be victims of property crime, extortion, and kidnapping (Gaviria and Vélez 2001). Domestic violence is also concentrated among the poor, with uneducated women and spouses of uneducated men bearing a disproportionate share of domestic violence. In Colombia, young men face an extremely high risk of being murdered. According to Vélez and others (2002), men age 15 to 35 are 15 times more likely to be homicide victims than women the same age, and twice as likely as men over age 45. Due to this phenomenon, gender differences in life expectancy have nearly doubled during the last five decades.\(^6\) This situation imposes a psychological and economic burden on victims and their relatives, and increases victims' chances of suffering from enduring pathological and dysfunctional behavior. The concentration of these problems among children and youngsters ultimately erodes socioeconomic mobility and contributes to the perpetuation of poverty.

Due to the escalating civil war an increasing proportion of Colombians have been forced to leave their homes. This internally displaced population (IDP) constitutes one of the most serious social problems in Colombia. The growing numbers of IDP and the limited absorptive capacity of the urban sector, especially in the context of the recession, are placing a growing number of vulnerable groups at increasing risks. The IDP faces major economic losses, tremendous psychological hardship, family disintegration, a loss of assets, and barriers to access to social services. These combined vulnerabilities put them at risk of falling into a vicious circle of extreme poverty. The well-being of children of IDP households, present and future, is particularly jeopardized by the problem IDP households have with food security, and by shrinking opportunities for school enrollment in the overburdened receptor municipalities.

Colombia’s judicial system is stretched to its limits, and in remote areas the rule of law is tenuous at best. Almost every type of crime and violence—political, drug related, domestic, and normal street crime—remains rampant.\(^7\) The widespread practice of extortion and kidnapping, which pervades all strata of society, is increasingly weakening property rights over physical assets and thereby undermining the market economy. Moreover, de facto paramilitary or guerrilla authoritarian regimes enforced by local warlords effectively rule some rural areas and are making incursions into urban areas, as well.

d) Rising Income Inequality: Induced by Higher Wage Skill Premia and Eroding Potential Welfare Gains

Colombia's high levels of inequality need to be addressed to ensure that the benefits of restored growth are shared equitably. Colombia's income inequality is extreme in the

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\(^6\) The gender gap in life expectancy reached 8.3 years in 1995 and tends to be larger in more prosperous regions of the country (see "Colombia Poverty Report" 2002, p. 32).

\(^7\) Homicide rates are roughly 59 per 100,000.
international context but relatively moderate in Latin America, a region of relatively high income inequality, where it ranks just above the median. Rising inequality reduced welfare gains made during Colombia’s period of strong economic growth up to 1995, and exacerbated the impact of the recent recession on the poor. Average income increased by 88 percent between 1978 and 1995, then leveled off and decreased during the second half of the 1990s. But the Gini Coefficient jumped 7 percentage points between 1978 and 1999, reaching 0.57 in 1999. Had inequality remained constant during the last two decades, the poor would have benefited more from growth. The Sen welfare index estimates income correcting for inequalities by randomly selecting two individuals and assessing the expected welfare of the worse off of the two individuals. Had inequality remained constant, the income of the “second best” Colombian would have been 18 percent higher in 1995, and 23 percent higher in 1999.

The two main factors behind changes in income inequality—skill-wage differentials and differences in educational attainment—operate in opposite directions. While growing skill-wage differentials between wealthier and poorer Colombians raised income inequality in the 1990s, the increasing equalization of schooling had the opposite effect. Between 1978 and 1999, skill-wage differentials explain nearly 150 percent of the 6.8-percentage-point increase in the urban Gini Coefficient. This negative effect of rising skill-wage differentials dominates the progressive impact of education endowment equalization that accounted for a 6.6-percentage-point reduction in the Gini Coefficient.9

Colombia’s high wage-skill premia are illustrated in Figure 1 which shows that, on average, the labor earning of individuals with postsecondary education are 4.3 times those of individuals with incomplete primary education. The Colombian differential is nearly twice the differential in the United States (2.5), and well above Mexico (3.3) and Brazil (3.7).10

Why are wage skill premia high in Colombia, and contributing factors to income inequality? Is it because the supply of education is insufficient or regressive, or is it because the demand for high-skilled workers has grown above available supply? Educational attainment shows a growing, progressive trend in the last 25 years: Colombian school-age cohorts have persistently reached higher educational attainment with less inequity.11 But this trend has been present mainly in basic education, and

8. Out of 17 countries listed in the World Bank data for 1999, Colombia ranks seventh after Nicaragua, Brazil, Honduras, Bolivia, Paraguay, and Chile (see “Colombia Poverty Report” 2002).
9. See Table A.4 in the Appendix.
10. Those differences are even higher when compared to high school graduates. In this case, Colombia leads with 2.4, followed by Brazil (2.0), Mexico (1.9), and the United States (1.6).
11. On average, the number of years of education that the 1975 cohort attained by 1995 was approximately 10 years, 4 years greater than achieved by the cohort born 40 years earlier. Furthermore, the inequality of education within each cohort (measured by the coefficient of variation) fell by more than half during the same period, from 0.75 to 0.33.
empirical research has found that the increasing skill premium in Colombia can be partially attributed to the sluggish supply of high-skilled workers with postsecondary education.

The public policy problem underlying income inequality in Colombia’s bottleneck in postsecondary education. Colombian data show that, despite significant improvements in equity and efficiency in finishing all levels of basic education—particularly in finishing secondary school—there is still a bottleneck at the entrance to postsecondary education, with increasing frustration for the lower-middle class and the poor. Similarly, while improvements in equity are substantial for high school graduates, they are nonexistent for students beginning their postsecondary education.

From this perspective, the substantial improvements in equity and efficiency in basic and secondary education in the 1990s are a mixed blessing: on one hand they have provided an abundant pool of candidates for the potential expansion of postsecondary education, but on the other, these high school graduates face an inequitable bottleneck in accessing postsecondary education. Those same high school graduates could move readily into postsecondary education if they were offered credit or some demand subsidy.

In sum, despite propoor gains in secondary school attainment, access to postsecondary education has become a bottleneck and a source of inequality. Public policy should search for the most cost-efficient way of increasing the supply of postsec-
ondary education graduates in order to reduce the excessive level of skill wage differentials. This could be addressed through the provision of education credits for the poor, and demand subsidies for the middle class. Unless this trend is reversed, one would expect an increasing deterioration of inequality in the medium term.

During the current period of internal conflict, another emerging important inequality is the socioeconomic bias of the military draft. Estimates from Velez and Riaño (2002) show that Colombian boys and girls do not enjoy equality of opportunities with respect to military service. In Colombia, eligibility for full military service—including combat participation—is reserved for the Colombian young men—not women—without a high school degree. As a result, young men belonging to the poorest 20 percent of the population face 11 times more chances of being eligible for the military draft than those belonging to the richest 20 percent.

IV. Resulting Vulnerability

The combined result of the economic recession, increased macroeconomic instability, the rise in violence, and growing inequality has seen a marked rise in vulnerability. Those most vulnerable to poverty today include children; young, low- and mid-skilled household heads; recent migrants; and non-homeowners. These groups are clearly worse off than pensioners, the college educated, the elderly, and non-recent migrants.

As illustrated in Table 5:

- Children under age 18 consistently present higher poverty rates than the general population, with an increasing proportion of infants and preschoolers in poverty.
- Homeownership clearly provides protection against poverty.
- Migrants used to fare better or similar to the overall population until 1995, but recent migrants are more likely to fall into poverty in the recession years. This must be partially associated with a shift from voluntary to forced migration, and underscores the high vulnerability of the internally displaced population due to the armed conflict.
- The disabled have remained consistently poorer than the rest of the urban population since 1988, although incidence rates are decreasing for this group.
- Contrary to what could be expected, pensioners and the elderly do far better than the rest of the population, and their relative standing seems to be improving over time.

Today, as throughout the 1990s, the likelihood of escaping poverty is increasingly dependent upon having fewer children, more working-age family members with postsecondary education, and access to employment for members other than the household head.
Table 5: Poverty Count for Different Subgroups of the Population, Urban Colombia 1978–99 (percent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Colombia</td>
<td>70</td>
<td>55</td>
<td>48</td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td>Children under 2 yrs</td>
<td>80</td>
<td>71</td>
<td>63</td>
<td>72</td>
<td>3.8</td>
</tr>
<tr>
<td>From 2 to 6 yrs</td>
<td>81</td>
<td>70</td>
<td>63</td>
<td>69</td>
<td>10.0</td>
</tr>
<tr>
<td>From 7 to 13 yrs</td>
<td>80</td>
<td>70</td>
<td>62</td>
<td>69</td>
<td>13.3</td>
</tr>
<tr>
<td>From 14 to 17 yrs</td>
<td>73</td>
<td>61</td>
<td>55</td>
<td>64</td>
<td>7.7</td>
</tr>
<tr>
<td>Migrants/just moved¹</td>
<td>NA</td>
<td>50</td>
<td>50</td>
<td>64</td>
<td>1.1</td>
</tr>
<tr>
<td>Non home owners</td>
<td>77</td>
<td>64</td>
<td>57</td>
<td>63</td>
<td>51.0</td>
</tr>
<tr>
<td>Disabled</td>
<td>69</td>
<td>68</td>
<td>60</td>
<td>60</td>
<td>0.6</td>
</tr>
<tr>
<td>Migrants &lt; 5²</td>
<td>NA</td>
<td>51</td>
<td>46</td>
<td>60</td>
<td>1.2</td>
</tr>
<tr>
<td>Women</td>
<td>69</td>
<td>55</td>
<td>48</td>
<td>55</td>
<td>53.4</td>
</tr>
<tr>
<td>Migrants &lt; 10³</td>
<td>NA</td>
<td>49</td>
<td>43</td>
<td>54</td>
<td>1.7</td>
</tr>
<tr>
<td>Home owners</td>
<td>62</td>
<td>46</td>
<td>40</td>
<td>47</td>
<td>49.0</td>
</tr>
<tr>
<td>Migrants &lt; 25⁴</td>
<td>NA</td>
<td>50</td>
<td>42</td>
<td>44</td>
<td>3.8</td>
</tr>
<tr>
<td>Over 65 years old</td>
<td>52</td>
<td>42</td>
<td>35</td>
<td>37</td>
<td>4.7</td>
</tr>
<tr>
<td>Pensioners</td>
<td>37</td>
<td>32</td>
<td>20</td>
<td>24</td>
<td>1.9</td>
</tr>
</tbody>
</table>

¹ Migrants/just moved refers to people who have lived less than 1 percent of their lives at the current city.
² Migrants < 5 percent refers to people who have lived less than 5 percent of their lives at the current city.
³ Migrants < 10 percent refers to people who have lived less than 10 percent of their lives at the current city.
⁴ Migrants < 25 percent refers to people who have lived less than 25 percent of their lives at the current city.


Three specific groups call for special attention in the crafting of public social policy because of their high levels of vulnerability: children, adolescents, and the internally displaced population.

- First, since children are the demographic group most exposed to poverty, programs are needed to prevent irreversible losses of human capital investments that carry with them perverse effects on social mobility. Increasing the coverage of nutrition, childcare, and preschool education will benefit not only the children at risk but will give many poor families the opportunity to increase the labor force participation of female spouses and improve the odds of escaping poverty. The dramatic decline in vaccination coverage rates among children must also be addressed.
- Second, the vulnerability of adolescents needs attention. Young high school graduates face a disproportionate share of unemployment. Labor skill devel-
opment through technical training and special exemptions from payroll taxation could help improve the employment opportunities and improve their odds of escaping poverty. Moreover, the enormous exposure of young males to homicide, with documented post-traumatic effects on the survivors and witnesses, justifies specific preventive action for this population through the application of both judiciary and family welfare policies. Finally, the increasing risk of unwanted pregnancy among poor, young females, with negative effects on social mobility, justifies the expansion of reproductive health and counseling programs to this demographic group.

- Third, the internally displaced population, a result of Colombia's internal conflict, constitutes another critically vulnerable group. The drug-related economic and military strength of the guerrillas and paramilitaries has led to a dramatic increase in violence, deaths, kidnappings, extortion, and displacement, especially among the rural civilian population. This population has been evicted from areas where they have been engaged in productive economic activities and relocated in urban slums where employment prospects are limited, access to social services is constrained, and violence and crime are rampant. Available data suggest that most of the displaced are women (56 percent) and children (55 percent are under 18), with limited skills and education. In their migration from rural to urban areas, they have abandoned their main asset—their land—and face barriers to accessing jobs and social services. Their concentrations in a few cities in Colombia has placed an added strain on limited municipal budgets, a situation compounded by a severe lack of financing for Colombia’s main national strategy for the internally displaced population during the height of the recession.

Finally, looking beyond the vulnerabilities of specific groups to focus on households underscores the critical role of the labor market in determining vulnerability. Those households experiencing the largest increase in poverty during the recent recession were those with only self-employed workers or only nonlabor income, whereas households composed entirely of wage earners experienced the smallest increase in poverty. Of particular note, unemployment of the household head is catastrophic for poverty risks; in urban areas poverty is 25 percentage points higher if the head used to work and is presently unemployed (Velez and others 2002). Paralleling the findings from the survey data, participants in both rural and urban areas in focus groups conducted for the recently completed social safety net study ranked economic insecurity as their principal source of risk, followed closely by violence (Rawlings and others 2002).

V. Addressing the Emerging Challenges: Employment, the Efficient and Equitable Provision of Public Services, and Security

To achieve the benefits of shared growth and address present vulnerabilities, Colombian public policy should focus on three dimensions of welfare improvement for the
poor: enhancing their levels of income and consumption, ensuring equitable access and efficient provision of basic social services, and reducing their exposure to risk.

Public policy instruments can tackle poverty by attacking its source, by attacking its most detrimental consequences, or both: that is, attacking the lack of income opportunities or attacking the lack of access to basic social services and social protection.

First, sound macroeconomic management is critical to raising the income of the poor, since short-term income opportunities for the poor are strongly correlated with business cycles and unemployment levels. This makes the welfare of the poor quite sensitive to macroeconomic challenges, including management of the fiscal balance, interest rates, exchange rates, and inflation, through their impact on both the level and the variability of aggregate economic activity.

Second, barriers to access to basic social services must be removed for the poor. These barriers usually bring irreversible human capital losses to vulnerable cohorts, especially children. Since children are among the most vulnerable to poverty in Colombia, subsidizing human capital accumulation helps to break the vicious cycle of poverty by putting assets in the hands of the children of the poor, thereby improving social mobility and reducing inequality in the long term. At the same time, human capital investment constitutes a strategic component of long-term growth, reinforcing long-term poverty reduction.

Finally, since economic insecurity has shown an increasing trend during the last decade, effective social risk management is a critical component of addressing vulnerability. Safety assistance in the form of direct transfers in cash, kind, or physical assets are becoming more relevant remedies for transitory lack of income among the poor. In addition, social insurance mechanisms that rely on the pooling of risk, such as health insurance and pensions, can play an important role in risk management.

These three challenges of enhancing the levels of income of the poor through employment, improving equity and efficiency in the provision of public social services, and reducing exposure of Colombians to risk are discussed below.

a) Restore Economic Growth to Accelerate Job Creation and Reverse the Rise in Poverty

Recovering high economic growth is a necessary condition for returning to the poverty-reduction path that Colombia followed until the recession of the late 1990s. In order to reduce poverty to its prerecession level of 1995, average annual GDP growth would have to be at least 4 percent during the first decade of this century. Figure 2 shows how from 1978 to 1995 poverty fell at an equal rate, with positive income per capita growth, and reached 48 percent in 1995. It also shows how the recession of the late 1990s brought negative income per capita growth and increased poverty to 55 percent. If the Colombian economy grows at 2 percent—barely above population growth—income per capita growth will be positive but negligible and,
consequently, poverty will fall by less than 1 percent during the next decade. However, if economic growth jumps to 4 percent, income per capita will grow at nearly 2.5 percent and, after 10 years, poverty will fall back to its 1995 level. In addition, the expected impact on extreme poverty will be even larger, considering that in the past it has been more sensitive to growth than the "normal" poverty rate.

Recovering propoor growth will require addressing both macroeconomic and microeconomic reforms. Poverty-reducing growth will depend crucially on macroeconomic reforms to stimulate the recovery of the private sector, the job provider for Colombia’s poor households. Achieving this outcome will require fiscal reform to ensure sustainable public expenditures and to recover a favorable investment climate, along with labor market reforms to ensure propoor access to employment. On the fiscal front, pension reform is critical to generating substantial public resources in the medium term without hurting the poor. In addition, real rates of interest must be set at efficient levels. On the labor market front, the elasticity of employment to economic growth must be recovered, especially for low-skilled workers, via recovery of the building sector. This recovery will depend not only on reestablishing a vigorous flow of mortgage credit, but also on labor market policies that avoid inefficient payroll taxation and an excessive minimum wage.

Attention also needs to be paid to the long-term micro determinants of income per capita growth and poverty reduction, particularly education and fertility.

12 Under the assumption that inequality remains constant
because these have important effects on labor force participation and productivity. The rise in education levels of the labor force and the reduction in the dependency ratios via smaller family size explain most of income per capita growth during the last two decades. Moreover, in Colombia, more educated spouses tend to have fewer children, and in turn those two factors raise their chances of being employed and getting their household out of poverty. Income per capita gains among households with low-skilled heads are also explained by higher real wages.\textsuperscript{13}

\textit{b) Improve the Equity and Efficiency of Public Social Services}

Section II discussed the growth in public social expenditures in the 1990s and the accompanying reforms in pensions, health insurance, and decentralization. The evidence presented below suggests that Colombia devotes enough resources to public social expenditure relative to the magnitude of the poverty problem, but that these resources are allocated neither efficiently nor equitably. Public policy must address the main problems in the area of social expenditure: (a) pension reform to restore vertical and horizontal inequities and fiscal sustainability, (b) improvement in the cost inefficiencies in the provision of social services, and (c) attention to the equitable coverage of social public services.

\textit{i. Colombia's Ability to Tackle Poverty}

Available evidence demonstrates that thanks to its robust economic performance until 1995, Colombia is a great deal more capable of tackling poverty. Eliminating the extreme poverty gap in Colombia would require less than 3 percent of total household income in 1999 (Figure 3). Moreover, closing the poverty gap—that is, getting 55 percent of Colombians out of poverty—would require 25 percent of total household income.\textsuperscript{14}

Comparing the resources required to close the poverty and extreme poverty gap to the amount of resources devoted to public social policy leads to the unequivocal conclusion that today the Colombian public sector has more than enough resources to tackle the poverty problem, without abandoning other core mandates. In 1999

\textsuperscript{13} In fact, for the representative urban household, three quarters of the predicted rise in income between 1978 and 1999 is explained by growth of school endowments—32 percent—and one quarter by reductions in the adult-to-family-size ratio—9.3 percent. However, until 1995—before the recession—positive changes in employment ratios and wages helped to increase income per capita and made a contribution to poverty reduction, as well (see "Colombia Poverty Report" 2002, chapter III).

\textsuperscript{14} From 1978 until 1995, both economic growth and the reduction of the poverty gap—from 46 percent to 29 percent—reduced the share of total household income necessary to close the poverty gap from 58 percent to 20 percent, just a quarter of its original value. Similarly, the share of household income necessary to close the extreme poverty gap followed a similar trend.
public social expenditure was 15 percent of GDP, while total public expenditure was approximately three times larger. In summary, this evidence shows that the reallocation of 10 percent of public expenditure—a moderate amount—would have a major impact on the welfare of the poor.

ii. Addressing Inefficiency in the Provision of Public Social Services

Gains in the coverage of public social services achieved in the 1990s were not commensurate with the increase in expenditures. Table 6 shows changes in public expenditures, coverage rates, the total number of beneficiaries, and the public sector share of coverage. By subtracting the growth rate in the numbers of people served from the growth rate in real expenditure, it is possible to make some indirect inferences about the growth in unit costs. This calculation reveals that in most cases the unit cost of services broadly doubled during 1992–97. The most severe problem seems to be in the area of health insurance and treatment, for which funding increased by over 300 percent, but individuals insured or treated increased in much smaller proportions. Unless quality improvement was colossal, this seems to imply that despite the gains in the number of individuals treated (19 percent), much of the growth of expenditures registered over this period was absorbed by cost-inefficiency.
### Table 6. Coverage and Expenditure for Social Services, Colombia 1992–97 (growth)

<table>
<thead>
<tr>
<th></th>
<th>Numbers served</th>
<th>Real expenditure</th>
<th>Coverage rate</th>
<th>Public sector share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare</td>
<td>−4%</td>
<td>—</td>
<td>−7%</td>
<td>2%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>4%</td>
<td>114%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Secondary</td>
<td>15%</td>
<td>108%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>95%</td>
<td>164%</td>
<td>6%</td>
<td>−8%</td>
</tr>
<tr>
<td>Healthcare</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>110%</td>
<td>326%*</td>
<td>27%</td>
<td>−25%</td>
</tr>
<tr>
<td>Treatment</td>
<td>19%</td>
<td>—</td>
<td>6%</td>
<td>—</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>35%</td>
<td>—</td>
<td>2%</td>
<td>—</td>
</tr>
<tr>
<td>Water</td>
<td>36%</td>
<td>194%</td>
<td>3%</td>
<td>—</td>
</tr>
<tr>
<td>Sewerage</td>
<td>38%</td>
<td>194%</td>
<td>3%</td>
<td>—</td>
</tr>
</tbody>
</table>

*Note: Real expenditure in healthcare calculations are based on data from the National Department of Planning that do not provide information about how total healthcare expenditure is allocated between insurance and treatment.

### Table 7. Coverage Shortfalls and Targeting in Selected Social Programs

<table>
<thead>
<tr>
<th></th>
<th>Education</th>
<th>Healthcare*</th>
<th>Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Secondary</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Users (mill)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential users</td>
<td>6.2</td>
<td>4.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Covered</td>
<td>5.3</td>
<td>3.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Not covered</td>
<td>0.9</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Concentration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential users</td>
<td>−0.19</td>
<td>−0.05</td>
<td>0.28</td>
</tr>
<tr>
<td>Covered</td>
<td>−0.16</td>
<td>−0.04</td>
<td>0.45</td>
</tr>
<tr>
<td>Not covered</td>
<td>−0.34</td>
<td>−0.07</td>
<td>0.14</td>
</tr>
</tbody>
</table>

*Note: A more negative concentration coefficient means more that more than proportional benefits go to the poor.

* Figures for 1997

iii. Addressing Equity in the Provision of Public Social Services
There are still substantial shortfalls in the coverage of social programs concentrated among the poor (Table 7). Overall, 66 percent of the corresponding age group lacks access to institutional childcare and 15 percent to primary school. Of those who complete primary school, 25 percent do not go on to secondary education, while of those completing secondary school, 57 percent do not go on to university. Furthermore, 41 percent of the population is still not covered by health insurance, and 57 percent lacks connection to the sewerage network. The absolute size of the underserved population varies substantially across programs. Those who are not covered by health insurance represent the largest underserved group, amounting to 16.3 million people. The next-largest group is composed of those living in households without a sewerage connection, which accounts for 12.8 million people, while 6.4 million people live in households without access to water.

It is no surprise to find that the population without access to public services is disproportionately concentrated among the lower-income deciles. For example, in the case of primary education, 19 percent of the underserved population fall into the first decile. An interesting exception is found in tertiary education, where the largest shortfalls in coverage are in the middle classes. Consequently, the most negative concentration coefficients correspond to primary education, public utilities, and childcare.

Today, the highest priorities for social service expansion among the poor are childcare, sewerage, and healthcare and health insurance. Among all basic social services, those four sectors have the largest relative access gaps between the poor and the better off.15

iv. Instituting Pension Reform to Restore Equity and Fiscal Sustainability
The public pension system is insolvent and pension subsidies (payments beyond contributions) disproportionately benefit the nonpoor. Reform is urgently needed to recover fiscal sustainability and reverse the offensive inequities imbedded in the system. In relation to equity, the main principles of this reform should be to (a) unify the pension regimes to establish horizontal equity—any two Colombians with the same productivity and age should receive equal treatment; (b) homogenize the conditions of accumulation of future benefits, accelerating the transition periods; (c) adopt measures to limit the subsidy of retirement account of lower-income workers; and (d) impose contributions to persistent extraordinary benefits.

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15 Relative to households in the sixth income decile (that is, for the poorest 50 percent of households), the gaps in coverage for childcare, sewerage, and healthcare and health insurance are 20, 19, 17, and 10 percent, respectively. Those rankings are relatively robust. Two sectors show similar ranking independent of the comparator income group used to calculate the coverage gap of the poor. Childcare is almost always the highest priority service for expansion, while sewerage ranks as the second or third priority for expansion.
c) Establish a Functional Social Safety Net

A third major challenge facing Colombia is the establishment of a functional social safety net allowing Colombians to better manage their exposure to risk. This social safety net should take the form of a social risk-management system functioning in both normal and crisis periods, calling on both social assistance and social insurance components.

This reformed safety net should aim to provide benefits to the chronic poor in extreme poverty, special vulnerable groups such as the internally displaced population, and those affected by idiosyncratic shocks such as poor health, unemployment, or disability. The safety net should also contemplate a countercyclical mechanism to ensure that assistance is available to those harmed by large covariate shocks (shocks that affect many people simultaneously) such as economic crises and natural disasters. A focus on an effective countercyclical mechanism that could be activated during times of economic crisis is critical to reversing historically procyclical patterns of social assistance spending.16

i. Colombia’s Social Safety Net

Historically, economic growth and the parallel expansion of basic social services served as a substitute for implementing a social safety net. Notably, social assistance was not included in the dramatic social sector reforms of the 1990s that resulted in increased spending and decentralization for health and education. Consequently, social assistance programs remain not only ill-suited to respond to large covariate shocks, but also underfunded, centralized, and lacking a strategic focus. In regard to the financing of social assistance, for example, whereas funding for health and education rose dramatically during 1991–96, central-government-budgeted expenditures on social assistance fluctuated around 1 percent of GDP during the first part of the 1990s, and fell to less than 0.7 percent by 2000.17 This is a very low level of social assistance spending compared to countries at a similar stage of development,18

16. A retrospective public social expenditure review reveals that for each peso of reduced GDP, social assistance spending fell by nine pesos, making social assistance the most procyclical component of social sector spending (CRECE 2001).

17. Social assistance is defined as spending on the three main social assistance programs reported in aggregated budgetary data—the Colombian Institute for Family Welfare (ICBF), the Social Solidarity Network (RSS), and the National Institute of Social Interest, Housing, and Urban Reform (INURBE). The expenditure estimate does not include spending on the new temporary Red de Apoyo Social (RAS) conditional cash transfer, workfare, and youth training programs, nor does it take into account the substantial subnational spending on social assistance, including utilities subsidies and the Cajas de Compensación programs.

18. Each of the nine Latin America and Caribbean region countries included in a recent social protection expenditure review devotes a higher share of GDP to social assistance, including Argentina (0.9 percent), Mexico (1.1 percent), Peru (1.4 percent), Uruguay (3.4 percent), and Venezuela (1 percent) (Dulitsky, Gragnolati, and Lindert 2001).
and compared to the needs of specific vulnerable groups that lack access to key social assistance programs. In sum, although substantial progress was made in health insurance for the poor, Colombia remains without a strategic social risk-management system, and social assistance programs remain fragmented, diffuse, and largely outside of the reach of those in the informal sector.

ii. Priorities for Reform

As in the other sectors, the program for strengthening social protection must address the issue of efficiency because of the country's tight financial constraints. But it is imperative for the government to find additional funding for social assistance because of its serious underfunding and because of the special attention required today by these vulnerable groups: children, adolescents, internally displaced people, and poor workers facing protracted unemployment. Drawing from the Social Safety Net and Pension Policy Chapters, the following measures should be considered in establishing a strongly propoor and efficient social safety net in Colombia:

- **Establish a countercyclical element of the safety net** with clear saving and spending rules that would allow Colombia to provide assistance to those most affected by the next large shock. Part of this process involves evaluating the new Red de Apoyo Social programs and integrating them into a coherent, reformed social safety net. If these programs are not assessed as part of a broader social safety net reform, they risk becoming another institutional layer within the diffuse collection of social assistance programs and a drain on financing for public social expenditures.

- **Expand the budget for social assistance to at least 1 percent of GDP** through the redirection of funds to well-targeted social assistance programs and the increased use of poverty targeting.

- **Focus on streamlining the existing safety net system, not creating additional programs, perhaps drawing on principles of social insurance.** At the very least, reforms should focus on working within the existing system to improve poverty targeting, eliminate excessive program overlap and fragmentation, and restructure existing programs to improve coverage and quality. A more radical approach would develop a wholesale alternative to the existing system by replacing existing programs with a new system drawing on social insurance principles, as was done in the health system. What should clearly be avoided is the creation of new programs as add-ons to the existing system.

- **Address the needs of the Internally Displaced Population (IDP).** Colombia needs to establish a strategy that would effectively address the IDP needs, starting with the dismantling of barriers to access preventing the IDP from benefiting from critical social assistance, health, and education programs. Such a strategy should also address security and stigmatization concerns regarding the use of an IDP registry.
VI. Conclusion

This Chapter has shown that for almost two decades Colombia made remarkable progress in reducing poverty and advancing the living standards of millions of citizens. It also underscored the serious setbacks experienced during the past decade—the recession of the late 1990s reversed a decade of progress in poverty reduction, increased levels of violence affected the poor and nonpoor alike, and growing insecurity left Colombians exposed to new types of risk. In addition, increasing income inequality in the 1990s exacerbated the negative impact of recession on poverty, and inefficiency and inequity in the provision of basic social services diminished the potential impact of these investments, particularly on the poor. These shocks and structural deficiencies ushered in new problems and exacerbated older ones, with the combined impact still apparent in the rise in unemployment, the protracted increase in poverty, the erosion of the social fabric, and the rise in vulnerability.

To address these emerging challenges, public policy must concentrate on improving three dimensions of welfare of the poor: raising their levels of income, ensuring equitable and efficient provision of basic social services, and reducing their exposure to risk.

a) Raising the Income of the Poor

Poverty—the lack of income opportunities—is derived from lack of assets and/or the inability to find markets for those assets. Hence, there are two types of poverty-reducing policies: policies that try to attack the source of the problem—lack of income—and policies that try to eliminate the most undesirable and intractable consequences of poverty—lack of access to basic social services and lack of social protection. Developing a strategy to attack those three dimensions of welfare for the poor involves selecting a range of policy options, with attendant tradeoffs for generating benefits at different points in time.

In the short term, the easiest way to raise income of the poor is by achieving higher rates of economic growth and lower unemployment, which in turn increase the market demand for their human assets. Recovering higher sustainable rates of growth requires consistent macroeconomic policy and restoring security. An alternative way of raising income in the short term is through direct cash transfers or subsidized access to nonhuman assets, such as housing. Increasing the wages and the demand for less-skilled workers can also be achieved though stimulating growth in low-skilled, labor-intensive sectors such as construction.

Over the medium term, poverty can be reduced by raising the labor force participation of working-age adults in poor households, typically by incorporating female spouses into the workforce. This can be accomplished through different policy mechanisms, including increasing access to childcare and preschool services and lowering fertility rates through access to reproductive services. A more roundabout way to raise the income of the poor is by lowering the dependency ratio (that is, raising...
ing the adult-to-family-size ratio), which is typically achieved through better female education and easier access to reproductive health.

Finally, the most effective long-term strategy for reducing poverty is to raise human capital endowments. This is generally achieved through providing education, which generates positive intergenerational effects of higher social mobility.

b) Ensuring the Equitable and Efficient Provision of Basic Social Services

Equitable access to basic social services is a crucial step in breaking the vicious cycle of poverty, and putting assets into the hands of the children of the poor. Improving the efficiency and equity of social public expenditures is critical to elevating the human capital accumulation for the poor. Therefore, the public provision of social services and subsidization of human capital accumulation can lead to improvements in social mobility and reductions in inequality and poverty in the long term.

c) Reducing Exposure to Risk

The persistent features of vulnerability provide an opportunity to target both social sector and social assistance programs to specific demographic groups. The “faces” of the poor are children of all ages, young low-to-middle-skilled household heads, recent migrants, and non-homeowners. These groups are clearly worse off than pensioners, the college educated, the elderly, and non-recent migrants related to displaced population. Moreover, certain low-frequency events may throw households into poverty, such as the presence of a disabled family member in the household, the loss of employment for the head, or being part of the internally displaced population. These phenomena require special attention through the mobilization of social insurance mechanisms that rely on the pooling of risk, or through programs to address groups like the internally displaced that encounter particular vulnerabilities.

The presence of these vulnerabilities reflects Colombia’s need for a functional social safety net to allow for better management of the increasing levels of risk. This social safety net should incorporate three components: (a) social assistance for the chronic poor and the internally displaced population, (b) a countercyclical component to alleviate covariate risk, and (c) social insurance to attend idiosyncratic risk. Priorities for action include expanding the budget for social assistance to the extent possible given the tight financial constraints; reforming the pension system to make it sustainable, and reducing the subsidization of well-off workers; and streamlining the existing safety net, and existing social assistance programs, perhaps drawing on principles of social insurance, while avoiding the creation of add-on programs.

In summary, these pro-poor public policy options call for finding markets for assets of the poor and providing social assistance to the most vulnerable in the short term, and putting assets in the hands of the poor while permanently protecting those assets through social protection in the long term.
Appendix

Table A.1. Summary of Issues, Objectives, and Recommendations by Sectors

<table>
<thead>
<tr>
<th>Education</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- About 12 percent of children age six to 11 are still out of school, with nearly all of these excluded children belonging to the lowest income groups</td>
<td>- Eliminate the education inequities in the long term</td>
<td>1. Establish a stronger linkage between achievement of desired outputs and financing through:</td>
</tr>
<tr>
<td></td>
<td>- The education gap between the richest income decile and the poorest decile is roughly 7 years, and increases over the years</td>
<td>- Good basic education of all young children, in particular the achievement of universal completion of primary education in the next 4 years.</td>
</tr>
<tr>
<td></td>
<td>- The gap against the poor is wider at the secondary and tertiary levels.</td>
<td>- Continuous improvements in the learning achievement of these children in basic education, including enhancement of their ability to learn actively.</td>
</tr>
<tr>
<td></td>
<td>- The education gap is exacerbated by differences in the learning achievement of poor and better-off children in school.</td>
<td>- Selective expansion of pre-and postbasic education, focusing on the enrollment of poor children in effective schools.</td>
</tr>
</tbody>
</table>

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### Table A.1. (continued)

<table>
<thead>
<tr>
<th><strong>Education</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Issues</strong></td>
<td><strong>Policy Objectives</strong></td>
</tr>
<tr>
<td>* Establishment of an independent body that would implement the Report Card system, consisting of eminent people from the business, teaching, and research communities, and NGOs the work of which is focused on poverty and human development*</td>
<td></td>
</tr>
<tr>
<td>* Mobilization of poor parents to enable their effective participation in the development and implementation of a pro-poor educational agenda and enlist the support of civil society and teachers sympathetic to the cause of poverty reduction and educational equity*</td>
<td></td>
</tr>
<tr>
<td>4. Strengthen the Ministry of Education’s capacity to support the territorial entities to acquire the technical capacity and information needed to increase their ability to reach the out-of-school children and improve the learning achievement of poor and disadvantaged children through strategies such as Telesecundaria, Escuela Nueva, Aceleración de Aprendizaje, and SAT (Tutorial Learning System).</td>
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<table>
<thead>
<tr>
<th><strong>Health</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Issues</strong></td>
<td><strong>Policy Objectives</strong></td>
</tr>
<tr>
<td>* Passage of Law 100 in December 1993 made the system more equitable and accessible to the poor and vulnerable, compared to the beginning of the 1990s.</td>
<td>Improve the health status of the poor and reduce their financial risks from illness through:</td>
</tr>
<tr>
<td></td>
<td>* Achievement of universal health insurance coverage</td>
</tr>
</tbody>
</table>
Table A.1. (continued)

<table>
<thead>
<tr>
<th>Health</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• However, implementation of the reform remains incomplete, (about 32 percent of the poor are not covered by the health insurance system) For various reasons including inadequate financing and lack of clarity in the assignment of responsibility for immunization, control of communicable diseases has deteriorated with decentralization and health reform</td>
<td>• Strengthening of the control of communicable diseases</td>
<td>• Reduction in the evasion and underpayment of health insurance contributions.</td>
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<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The social sector policy reforms introduced in the 1990s by the 1991 Constitution, Law 60, and Law 100 did not include social assistance.</td>
<td>• Establishment of a reformed Social Risk Management System to (a) improve the state of readiness of Colombia to assist the vulnerable poor during times of crisis; and (b) strengthen social assistance and insurance to chronically vulnerable poor during normal times;</td>
<td>• Expand the Budget for Social Assistance to at least 1 percent of GDP</td>
</tr>
<tr>
<td>• The public pension system is technically insolvent (net value of pensions in 2000 amounted 200 percent of GDP) and constitutes a major risk to fiscal sustainability over the medium and long term.</td>
<td>• Improvement of the quality and coverage of early childhood development services, and</td>
<td>• Reform the pension system to make it sustainable and to reduce public subsidy of well-off workers</td>
</tr>
<tr>
<td>• Causes of insolvency: generous pension benefit guarantees, perverse incentives for reserve management, and recent Constitutional Court rulings expanding pension benefits.</td>
<td>• More effective assistance to the internally displaced population (IDP).</td>
<td>• Address the needs of the IDP.</td>
</tr>
<tr>
<td>• Colombia’s pension system constitutes a serious drag on the ability of the government to finance pro-poor social assistance and other programs.</td>
<td>• Special attention to the following groups needs to be given: children, adolescents, the elderly, the IDP, and the poor workers who have been unemployed due to lack of employment opportunities</td>
<td></td>
</tr>
</tbody>
</table>
Table A.1. (continued)

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The labor market in Colombia is characterized by being rigid: real</td>
<td>• Labor market reform to stimulate employment growth, provide a more favorable</td>
<td>• Rationalization of payroll taxes (substituting some of them with more</td>
</tr>
<tr>
<td>wage rigidities (minimum wages and unions) The impact of these</td>
<td>environment for accelerating investments in human capital, facilitate movement</td>
<td>efficient taxes)</td>
</tr>
<tr>
<td>rigidities is disproportionately negative on the poor, the young,</td>
<td>of workers from low to high productivity activities, and promote equity</td>
<td>• Reduction of transaction costs for “being formal.”</td>
</tr>
<tr>
<td>and women</td>
<td>• Labor reform should have in mind that payroll taxes (a) finance major social</td>
<td>• Elimination of the rigidities imposed by the minimum wage including, among</td>
</tr>
<tr>
<td>• High unemployment rates. average annual unemployment rate during the</td>
<td>assistance programs that benefit the poor (e.g., ICBF and social health insurance),</td>
<td>others, allowing emergency public workfare programs for the poor to pay</td>
</tr>
<tr>
<td>last 10 years has been about 14 percent</td>
<td>(b) that they are a source of funding for workers’ training, and (c) that job</td>
<td>less-than-minimum-wage salary and exempting them from payment of obligatory fringe</td>
</tr>
<tr>
<td>• The labor market in Colombia is highly segmented—informality close</td>
<td>security regulations protect (although, at high cost) currently employed workers</td>
<td>benefits (prestaciones) so that they can become self-targeting and reach more</td>
</tr>
<tr>
<td>to 60% of the workforce.</td>
<td>against unemployment and the consequent loss of income.</td>
<td>poor, unemployed workers.</td>
</tr>
<tr>
<td>• The labor market presents low degree of turnover between the formal</td>
<td>• Acceleration of investment in the human capital of poor workers, including a</td>
<td>• Development of self-financing workers’ income insurance scheme to protect</td>
</tr>
<tr>
<td>and informal sector There are low opportunity costs of self-employment</td>
<td>reform of the Servicio Nacional de Aprendizaje (SENA), separating the finance and</td>
<td>workers against spells of unemployment to replace costly job security regulations</td>
</tr>
<tr>
<td>because of the low productivity of the formal sector.</td>
<td>provision of training programs based on workers’ choice and competition involving</td>
<td>• Improving the efficiency of programs (e.g., ICBF, SENA, and Social Health</td>
</tr>
<tr>
<td></td>
<td>both public and private providers (recent data indicate that the impact on</td>
<td>Insurance) funded by payroll taxes so that the actual value of the benefits from</td>
</tr>
<tr>
<td></td>
<td>workers’ salaries is considerably greater for private than public training)</td>
<td>those programs is commensurate with the cost of the obligatory contributions</td>
</tr>
<tr>
<td></td>
<td>• Improving the efficiency of programs (e.g., ICBF, SENA, and Social Health</td>
<td></td>
</tr>
</tbody>
</table>

(continues on next page)
Table A.1. (continued)

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Since 1990, commercial banks were allowed to compete in the construction and mortgage markets, which were dominated by Corporaciones de Ahorro y Vivienda (CAV). The liberalization increased the cost of CAV funds because UPAC-savings became less attractive. The UPAC formula has changed several times to reflect that reality, introducing instability into the housing market.</td>
<td>Restore mortgage portfolio, expand mortgage stock as well as new productive loans mainly through increasing housing demand.</td>
<td>The government should urgently take measures to protect mortgage holders against predatory lending behaviors and restore a sounder balance among judges, lenders, and borrowers. Actions to be considered include the following: 1. Revise the system of a capped interest rate for mortgage loans. The revision should be consistent with the Constitutional provisions set up to avoid predatory practices. 2. Limit debt restructuring to cases of an unpredictable loss of borrower income followed by some credit solvency. 3. Fully inform mortgage consumers about new regulations regarding their rights and duties. 4. Adjust the Unidad de Valor Real (UVR) to reduce its role as a source of volatility. 5. Improve the overall structure of housing credits: • Housing appraisal rules could be better adjusted to comparative market trends • The credit reporting system should not be limited to current records • Reduce delays in property registration. 6. FOGAFIN should consider strengthening the collateral requirements under the recapitalization line by requiring collateral with lower-risk assets. 7. The Superintendency of Securities needs to expand its staffing and training by oversight inspections, detailing its regulations, and implementing prompt corrective actions.</td>
</tr>
</tbody>
</table>
Table A.1. (continued)

<table>
<thead>
<tr>
<th>Indigenous Peoples and Afro-Colombian Communities</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Afro-Colombian population has faced historical deficit of public services such as health, education, and support services for production</td>
<td>• Increase public investment for indigenous peoples.</td>
<td>• Provision of adequate basic services, particularly health, education, and services related to production</td>
</tr>
<tr>
<td>• The African-Colombian population is showing an acceleration of the migration process explained by the internal conflict (Uraba, low and medium Arrato) and the violent process associated with the expansion of illegal crops</td>
<td>• Improve healthcare services for these communities</td>
<td>• Consolidation and demarcation of indigenous homelands and the communal lands of Afro-Colombians</td>
</tr>
<tr>
<td>• There is pressure on the indigenous homelands and collective territories of Afro-Colombian communities because of the colonization of farmers—especially those dedicated to illicit crops—and the internal armed conflict.</td>
<td>• Improve quality of educational services, especially supply of well-trained teachers in these communities.</td>
<td>• Design of strategies for the protection and conservation of special ecosystems that contribute to the strengthening of territories and traditional systems of knowledge, conservation, and sustainable use of biodiversity.</td>
</tr>
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Table A.1. (continued)

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Forced displacement in Colombia is mainly the result of the social and armed conflict. It is the most serious humanitarian and social problem in Colombia today.</td>
<td>• Make the problem of forced displacement a priority</td>
<td>• Remove access barriers for the participation of the IDP in the poverty-targeted social programs including application of the Sistema de Selección de Beneficiarios (SISBEN) questionnaire and issuance of the SISBEN cards through a plan designed jointly with the municipal governments</td>
</tr>
<tr>
<td>• Adopt a common methodology among key stakeholders for estimating the size and characteristics of the IDP.</td>
<td>• Reduce displacement by implementing effective preventive measures at the local level.</td>
<td>• Empower the IDP at the national and local level.</td>
</tr>
<tr>
<td>• Create realistic incentives and opportunities for the reestablishment—return, relocation, and integration—of the IDP.</td>
<td>• Focus on regions, municipalities, and localities at high risk, and within those on the groups at high risk of being threatened.</td>
<td>• Increase incentives to resist displacement by ensuring protection of property rights on assets</td>
</tr>
<tr>
<td>• Ensure access of IDP children to public education.</td>
<td>• Convene direct dialogue among local authorities, organized citizens, and armed groups to demand respect for human rights of citizens and to exclude from armed conflict areas such as hospitals, cultural centers, and homes.</td>
<td>• Promote direct dialogue among local authorities, organized citizens, and armed groups to demand respect for human rights of citizens and to exclude from armed conflict areas such as hospitals, cultural centers, and homes.</td>
</tr>
<tr>
<td>• Conduct a national survey based on a probability sample of the entire population displaced.</td>
<td>• Establish regionally focused social funds as instruments that promote self-reliance in reestablishment projects oriented to community action to secure or recover assets, community-driven reintegration and development activities, and social and economic stabilization of particularly vulnerable groups, such as female heads of household and youth (male and female) in those focused regions, municipalities, and localities.</td>
<td>• Establish regionally focused social funds as instruments that promote self-reliance in reestablishment projects oriented to community action to secure or recover assets, community-driven reintegration and development activities, and social and economic stabilization of particularly vulnerable groups, such as female heads of household and youth (male and female) in those focused regions, municipalities, and localities.</td>
</tr>
<tr>
<td>• Promote regional agricultural initiatives that offer opportunities for the IDP to undertake productive activities.</td>
<td></td>
<td>• Promote regional agricultural initiatives that offer opportunities for the IDP to undertake productive activities.</td>
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</table>
Table A.1. (continued)

<table>
<thead>
<tr>
<th>Issues</th>
<th>Policy Objectives</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Colombia has made significant progress in reducing gender inequalities—particularly in improving the well-being of women</td>
<td>• Gender indicators should continue to be monitored to ensure that gains for women in education, literacy, health, and employment are not eroded by the continuing crisis in Colombia.</td>
<td>1. Crime and Violence</td>
</tr>
<tr>
<td>• While the status of females has improved, male human capital has eroded on the health and education fronts.</td>
<td>• The approach to gender needs to be broadened from a conventional focus on women to address the negative dimensions of gender for men.</td>
<td>• Retrain teachers to ensure they do not promote violent behavior among boys and submission among girls.</td>
</tr>
<tr>
<td>• Important interlinkages exist between gender, poverty, and inequality in Colombia Female-headed households are more likely to be poor and vulnerable than those headed by males.</td>
<td>• Given the immediate needs resulting from the crisis, it is important to consider gender in social safety net programs for the poorest and most vulnerable—in particular single-parent female households.</td>
<td>• Eliminate gender stereotypes in textbooks and other pedagogical materials.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop innovative programs to teach children nonviolent resolution skills and promote civic values.</td>
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<tr>
<td></td>
<td></td>
<td>• Address gender issues in programs aimed at reducing homicide rates, such as Convivencia Ciudadana.</td>
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<td></td>
<td></td>
<td>2. Reproductive and Sexual Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop integrated programs that address employment, violence, sexuality, and sexually transmitted diseases (STDs) and AIDS</td>
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<tr>
<td></td>
<td></td>
<td>• Use youth workers to reach other youth, and men to reach men.</td>
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<td></td>
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<td>• Use participatory learning in the form of role-playing and assertiveness exercises rather than traditional didactic training methods</td>
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<td></td>
<td></td>
<td>• Address causal factors related to adolescent sexual activity, including self-esteem, decision-making, gender roles, and values.</td>
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<tr>
<td></td>
<td></td>
<td>• Target youth and men where they normally gather.</td>
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<tr>
<td></td>
<td></td>
<td>3. Support to Female Single-Parent Families</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increase poor women's access to childcare and family planning, continue improvements in education, and reduce barriers to poor women's participation in the labor market</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective</th>
<th>Short Term</th>
<th>Medium and Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Raise employment</strong></td>
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</tbody>
</table>
| Labor Income | 1.1 Recover high positive economic growth.  
1.2 Increase female participation by providing childcare and preschool services, and reducing urban transport costs.  
1.3 Reduce labor market rigidities such as minimum wages and costs of labor contracts.  
1.4 Reform temporary public employment programs and privilege household heads. | 1.5 Increase female participation by facilitating access to birth control mechanisms to reduce fertility rates and by improving educational endowments. |
| Increase Income | 2.1 Increase productivity by reducing education inequities (access) and improving quality of education.  
2.2 Promote technical postsecondary education, private sector and vocational training, and internship and apprenticeship programs. | |
| | | 2.3 Workfare and youth training programs such as Jóvenes en Acción for youth and Manos a la Obra.  
2.4 Provide services related to production for Indigenous and Afro-Colombian communities |
<table>
<thead>
<tr>
<th>Objective</th>
<th>Short Term</th>
<th>Medium and Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonlabor Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Prevent predatory lending on mortgage credit.</td>
<td>1.2 Housing acquisition and housing subsidies.</td>
<td></td>
</tr>
<tr>
<td>2. Targeted subsidies via block tariff pricing of utilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Programs such as the PACES vouchers to allow poor students to pursue secondary education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>More Equitable Access to Social Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Provide basic education in poor neighborhoods</td>
<td>6. Improve water supply and sanitation in medium cities, small municipalities, and in the rural areas</td>
<td></td>
</tr>
<tr>
<td>2. Develop demand-side financing mechanisms in the form of conditional cash transfers to attract and retain children in school.</td>
<td>7. Promote initiatives for adequate monitoring, management, and disposal of wastewater</td>
<td></td>
</tr>
<tr>
<td>3. Provide healthcare for the poor.</td>
<td>8. Recover cost from nonpoor group beneficiaries of public social programs</td>
<td></td>
</tr>
<tr>
<td>4. Provide adequate basic services, particularly health and education, for Indigenous and Afro-Colombian communities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Provide scholarships and educational credit for postsecondary education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td>Short Term</td>
<td>Medium and Long Term</td>
</tr>
<tr>
<td>-----------</td>
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</tr>
</tbody>
</table>
| **Economic Risk** | 1.1 Promote housing ownership and real asset accumulation  
1.2 Protect human capital assets (nutrition programs for the poor).  
1.3 Reduce unwanted pregnancy rates, especially among teenagers. |  
| 2. Market insurance: | 2.1 Implement policies that seek to expand employment and increase productivity in the informal sector.  
2.2 Reduce costs of "being formal" (registration process and labor regulations) |  
| **Management of Risk** | 3.1 Create alternatives for unemployment support systems (insurance scheme avoiding perverse incentives).  
3.2 Create health insurance for the unemployed.  
3.3 Develop protection mechanisms for the informal sector.  
3.4 Subsidize healthcare and health insurance. | 3.5 Establish a countercyclical element of safety net.  
3.6 Expand the budget for social assistance to at least 1 percent of GDP by redirecting funds to well-targeted social assistance programs.  
3.7 Expand minimum pension schemes.  
3.8 Create assistance programs for the elderly (1% of payroll contribution that today subsidize contributions for the poor) |
Table A.2. (continued)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Short Term</th>
<th>Medium and Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Vulnerability to violence and crime</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Other Risk | 1.1 Protect households, especially poor ones with low educational endowments, from intrafamilial violence  
1.2 Reduce exposure to homicide risk, especially of the poor, and the young male population.  
1.3 Improve security of employment generators such as small businesses owners in poor neighborhoods | 1.4 Protect the rights of common citizens to life and against insecurity, homicide, rape, frights, gangs, loitering, threats, and guerrilla and paramilitary presence  
1.5 Protect property rights. |
| **2. Internally Displaced Population (IDP):** | | |
| | 2.1 Facilitate access of IDP to public subsidies and in-kind services by application of the SISBEN questionnaire and issuance of the SISBEN cards  
2.2 Empower IDP at the national and local governments  
2.3 Adopt a common methodology among stakeholders for estimating the size and characteristics of the IDP  
2.4 Create incentives and economic opportunities for the return, relocation, and integration of the IDP | 2.5 Reducing rate of displacement by focusing on regions, municipalities, and localities at high risk and within high-risk groups  
2.6 Increasing incentives to resist displacement by ensuring protection of property rights on assets.  
2.7 Promoting dialogue among local authorities, armed groups, and citizens to guarantee respect for human rights of citizens |
### Table A.3. Definitions Associated with Table 1

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty line</td>
<td>Value of a very basic basket of food products that provides minimum caloric intake of individuals of average age and sex.</td>
</tr>
<tr>
<td>Extreme Poverty</td>
<td>An individual will be considered extremely poor if his or her household per capita income falls below the extreme poverty line defined by DANE, based on the 1985 Survey of Expenses and Income.</td>
</tr>
<tr>
<td>Poverty</td>
<td>A person is considered to be poor if his or her household per capita income is below the poverty line, a multiple (between 2 and 2.5) of the extreme poverty line, to take into account other basic necessities.</td>
</tr>
<tr>
<td>Mean income</td>
<td>Average household per capita income.</td>
</tr>
<tr>
<td>Poverty gap</td>
<td>Describes the average distance to the poverty line.</td>
</tr>
<tr>
<td>Gini Coefficient</td>
<td>Measures the expected difference between two Colombians' income picked at random.</td>
</tr>
<tr>
<td>Quintiles (Top/Bottom)</td>
<td>The ratio of the share of income held by the richest quintile to that held by the poorest.</td>
</tr>
<tr>
<td>Inequality Urban–Rural Decomposition (Theil)</td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>Amount of income inequality explained by differences within rural and urban groups weighted by its share in the whole population.</td>
</tr>
<tr>
<td>Between</td>
<td>Amount of income inequality explained by differences between rural and urban groups of population.</td>
</tr>
</tbody>
</table>
Table A4. Inequality Decomposition, Urban Colombia

<table>
<thead>
<tr>
<th>Year</th>
<th>Observed</th>
<th>Direct effect via price</th>
<th>Indirect effect via mean endowments</th>
<th>Total</th>
<th>Education Endowment Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978–88</td>
<td>0.0</td>
<td>-1.9</td>
<td>3.3</td>
<td>1.4</td>
<td>-1.9</td>
</tr>
<tr>
<td>1988–95</td>
<td>4.2</td>
<td>-0.1</td>
<td>2.2</td>
<td>2.1</td>
<td>-1.7</td>
</tr>
<tr>
<td>1995–99</td>
<td>2.6</td>
<td>1.3</td>
<td>3.5</td>
<td>4.8</td>
<td>-3.0</td>
</tr>
<tr>
<td>1978–99</td>
<td>6.8</td>
<td>-0.7</td>
<td>9.0</td>
<td>8.3</td>
<td>-6.6</td>
</tr>
</tbody>
</table>

References


I. Summary

Since the 1960s, Colombia has adopted two different governance standards. One is government capacity to formulate and implement macroeconomic policies or reach aggregate economic targets. Another, much lower one, is the capacity of the national level to propose, enact, implement, and monitor sector-by-sector policies. The country was able to live with this separation while economic growth made sector inefficiencies relatively invisible. That changed recently with globalization, the intensification of the internal conflict, and—most obviously—when the country experienced years of stagnation or negative economic growth for the first time in nearly 50 years. It then became necessary to dig into the deeper causes of, and the linkages between, fiscal and monetary imbalances, on one hand, and sector inefficiencies, low investment, political and social instability, and an inadequate business environment, on the other. This Chapter discusses (a) how and why Colombia came to need a comprehensive—rather than today’s fragmented—approach to enhanced quality of government, (b) the main areas where higher quality of government appears to be most needed in the next few years, and (c) how the country could strategize about strengthening the quality of government.

1. This Chapter focuses on the quality of government. As proposed in this Chapter, there is quality of government when governments not only have the necessary capacity to make and implement policy, but also the capacity and commitment to select policies that are socially, politically, and economically sustainable. As such, the quality of governance includes checks and balances, legitimacy, and accountability. Since quality of government includes representation, participation, social control, and anticorruption capacity, it covers the Executive, the Legislative, the Judiciary, and all independent sanctioning and control organisms.
II. Background: A Dual Quality of Government

*How Did Colombia Come to Two Standards of Public Sector?* It could be argued that the separation between economic policymaking and other public policies began with the creation of the *Junta Monetaria* in 1963. Although the Minister of Finance was the President of the *Junta*, its creation was a significant step toward separation of economic policymaking from political interference. That separation was later ratified by the pathbreaking *Estatuto Cambiario*, or *Decreto-Ley 444* of 1967. Those two reforms, together with the constitutional and administrative reforms of 1968, gave the government the initiative on (in some cases full control of) monetary, trade, exchange, and fiscal policy.

Subsequent reforms, including strengthening of the independence of the Central Bank and elimination of budget subsidies in the Constitution of 1991, have further consolidated the independence of economic policymaking. Presidents have generally supplemented constitutional and legal provisions by appointing technically sound, politically independent ministers of finance and Central Bank presidents. As a matter of fact, Colombian ministers of finance are usually selected out of a self-referred invisible college of distinguished economists that look to the international community of prominent economists and to international monetary and development institutions as their main reference points.

When the government's economic policy is restricted to regulation and supervision (as in monetary, financial, and exchange matters), policy application generally has been satisfactory. When the government is also in charge of the administration (as in the case of internal taxes, customs, and the budget) (see Box 1), policy application is usually less satisfactory. Yet, substantial progress has been achieved over the years. Strengthening tax administration is a never-ending task in a country that has an average of one substantial tax reform every other year—and where the revenue impact of tax reform is generally short-lived. Likewise, budget transparency in terms of key budget classifications and reporting to the Congress and civil society is still far from contemporary good practices. Fiscal data are often late or unreliable (particularly in the case of subnational governments) and the country still has a long way to go in terms of performance and results evaluation and in terms of e-government for purposes of real-time data collection and reporting. There is still room to either reinforce on the margin the independence of the Central Bank\(^2\) or protect it against politically pressured exchange or debt measures.

As a result of the privileged institutional development of the economic policy sector over the last 40 years, this sector is currently much better equipped than any other sector to make and implement policy. Likewise, the whole area of economic policy has been less contaminated by accusations of government corruption, and the area of macroeconomic policy has been largely isolated from corporate-based

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2. As discussed, for instance, in the recent Alessina report regarding the composition of the Board of the Central Bank.
Box 1. Budget Implementation and Control

The area of budget implementation and control reflects the ambivalent development of Colombia's governance and quality of government. The country recently adopted the single account (Cuenta Única del Tesoro) and integrated financial management. Both tools enhance the government's capacity to monitor the flow of public expenditures and enforce hard budget constraints and overall fiscal targets. However, Colombia still has a long way to go with respect to disclosure and transparency in budget reporting to the Congress and civil society. The country is also far behind other Latin American countries such as Brazil, Chile, and Mexico with regard to transparency and control in the procurement process, anticorruption tools, and strategies for electronic government. Again, the primacy of macroeconomic goals has diverted institutional development from efficiency, accountability, and protection from anticorruption in day-to-day government operations.

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* See Chapter on Budgetary Institutions.

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demands, stakeholder capture, or clientele-based political parties. In sum, high quality of government has ensured rather sound, sustainable economic policy and implementation tools throughout the last 40 years.

Other sectors have not followed the pace of macroeconomic policy in terms of governance strengthening, efficiency, or political and fiscal sustainability. Until recently, the general approach to governance strengthening was to create autonomous or semiautonomous institutions that were somehow protected from clientele capture and other forms of political interference and corruption. This approach generally failed, not only because most autonomous institutions proved to be vulnerable to political patronage and corporate control, but also because most of those institutions entailed some degree of bureaucratic duplication or parallelism, additional fiscal cost, and diffusion of monitoring and control. In addition, autonomous institutions often escaped from official controls and civil society supervision. When one of those autonomous or semiautonomous institutions played a critical role in economic policymaking, as in the case of Empresa Colombiana de Petróleos (ECOPETROL), the national oil company, economic policymakers preferred the regulatory way to ensure transfer of the oil surplus for fiscal stabilization purposes, rather than the more personally painful and politically expensive way of

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3 Depending on their nature and the fashion at the time, those autonomous or semiautonomous institutions may have been called such things as *empresas públicas*, *establecimientos públicos*, or special funds.
reforming the institution from within.\textsuperscript{4} When the country began to reconsider the role of the public sector, some of those autonomous agencies were either suppressed or transferred to the private sector.

As reported in several other Chapters, most key Colombian government sectors have—to different degrees—partially fallen prey to their own corporate stakeholders or have been exposed to general patronage bonds. In both cases, rent-seeking practices feed political and individual interests on the supply side of government services. Transparency is restricted and control of the sector nurtures more-than-ordinary opportunities for corruption. Above all, protective barriers prevent either policymaking or effective implementation, thereby weakening governance.

Education is perhaps the most visible case of corporate (teachers' trade union) control and prevention of reform. Health reform has also been either controlled or diverted by service providers. The same can be said about infant, youth, and family services under the umbrella of the Instituto Colombiano de Bienestar Familiar (ICBF). Although the Cajas de Compensación Familiar appear to be more receptive to user demands than other social services, access to the Cajas still follows a closed-corporative structure—which is in turn due to the difficulty of proposing, agreeing to, enacting, and implementing overdue labor reform, including pension reform.\textsuperscript{5}

As in other sectors, the country has not been able to appoint technically independent managers for the labor sector. Or, when temporarily appointed, as in the recent case of the Instituto del Seguro Social (ISS), the interests of trade unions and contractors tend to prevail over the interest of the country as a whole.

Restricting providers of labor, goods, or other services is also common practice in transportation or infrastructure investment. Since sector expenditure policy is geared toward guaranteeing supply or maintaining a certain production function—rather than satisfying demand or otherwise ensuring efficiency in results—stakeholder capture of a given chunk of sector expenditure generally goes unchecked. Trade unions often prevent expenditure rationalization and productive efficiency in electricity or public transportation.\textsuperscript{6} Although the procurement regulatory framework has been reformed time and again, the country is still far from the most advanced procurement reform, as exemplified by Brazil, Chile, or Mexico in the

\textsuperscript{4} One exception worth noting is the public utility company of Medellin, Empresas Públicas de Medellín (EPM). A full account of this rather isolated best practice case remains to be added to the literature on Colombian public administration.

\textsuperscript{5} According to a recent World Bank survey, the Caja Nacional de Previsión Social (Government Employees Pension Fund, CAJANAL), the Caja de Previsión Social de Comunicaciones (CAPRECOM), and other pension and social security institutions are perceived to be among the most politicized and most corrupt in the country. The survey consulted employees, users of public services, and entrepreneurs. See Chapter on Corruption.

\textsuperscript{6} According to the World Bank survey cited in footnote 6, the Instituto Nacional de Vías (National Highway Institute, INVIAL) is perceived as one of the most corrupt and most politicized government institutions. See Chapter on Corruption.
Latin American context. It is no surprise to see potentially strong suppliers shy away from bidding competitions because the odds of their winning have been largely reduced by predetermined government inclination in favor of another potential supplier. Accusations of overpricing and underreporting are also frequent.

Unequal development in supervision, auditing, and sanctioning has also meant stronger governance capacity in the macroeconomic areas than in other areas of public sector activity. The Central Bank closely monitors monetary and exchange policies, while the Superintendencia Bancaria has kept a vigilant eye on savings and credit institutions. More important, the quest for sustainable macroeconomic policies and a sound financial sector is matched by the cooperative ear of both the Ministry of Finance and the Planning Department. Taken altogether, the monitoring and supervision capacity of the macroeconomic and financial sector has prevented—with only a few, notable exceptions—major scandals in either macroeconomic policymaking or the day-to-day management of public debt, the country’s reserves, or banking institutions.

Supervision, auditing, and sanctioning of the public sector is a different story. Indeed, the country’s capacity to monitor, audit, and sanction irregularities in the public sector is still far from the needs of market formation, globalization demands, and an enabling business environment. Different from the Superintendencia Bancaria, most superintendencias were quickly captured by their own stakeholders (as in the case of the Superintendencia de Cooperativas for the solidarity sector) or by political parties and their clientele (as seems to be the case with the recently created Superintendencia de Salud). The institutional development of the Contraloría General de la República is another case in point. Although inspired by the same Kemmerer mission that recommended creation of the Central Bank and the Superintendencia Bancaria in 1923, the Contraloría was soon tied by the bonds of political patronage. Still, today the Contraloría General de la República has been restricted by a mammoth organization where political appointees still manage to defend their interests at the cost of modernization and reform-minded staff.

Other auditing and sanctioning institutions have roughly followed the fate of the Contraloría. Attempts to liberate the human resource policies of the Procuraduría General de la República from political patronage ties have largely failed. Indeed, internal reform of the Procuraduría does not appear to have advanced as much as the reform of the Contraloría. The constitutional reform of 1991 followed a regionwide path toward the creation of technically competent judicial management. However, similar to other sectors, the top level of the Consejo Superior de la Judicatura remains in the hands of former judges and magistrates that tend to represent primarily their own corporate, monopolistic interests. There are even symptoms of magistrates’ capture of the Constitutional Court for the pursuit of their own political careers. The country is still far from timely and efficient administration of justice. Likewise, Colombia has achieved only limited progress (compared to, say, Canada and the

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7. Like the infamous case of the vanishing of US$13 million from the reserves managed by the Central Bank in the mid-1980s, or the always debatable rescue of banks in times of crisis.
United States) in developing means of alternative dispute resolution; unequal access
to justice still reinforces other sources of inequality of opportunity and reduces
spillover of growth benefits. Since violence and the internal conflict have further
debilitated property rights and safety and other basic human rights, large sections of
the population are not protected in their lives or assets. As a result, large segments
of the population cannot provide either personal or real guarantees to access capital
or consumption markets.

Because Colombia is one of the most decentralized countries in Latin America,
strengthening governance there necessarily means strengthening the capacity of the
public sector to deliver service and monitor compliance at subnational levels. How-
ever, the way Colombia conceived and/or implemented decentralization has con-
fused the division of responsibilities and weakened accountability. As discussed in
the Decentralization Chapter, sector capture of deconcentrated or decentralized
social services has now been compounded by subnational stakeholder protection of
the current level of fiscal transfers. Mayors’ and governors’ associations have equated
democracy with maintaining or increasing fiscal transfers regardless of the coverage
and quality of services. The fiscal demands of subnational governments have been
reinforced by trade unions and patronage-based political leaders that claim the need
to equate transfers with the cost of clientele-controlled rigid production functions.
As demonstrated by all reforms passed since the Constitution of 1991 and Law 60
of 1993, Colombia decentralization is supply targeted rather than demand driven.

Not surprisingly, the most recent government evaluation of one decade of
Colombia’s decentralization is primarily a study on social expenditure growth—not
an assessment of how decentralization per se enhanced quality, raised coverage, or
otherwise stimulated higher efficiency in allocation and production. In spite of
Colombia’s widely proclaimed regional leadership in fiscal decentralization, the
country has yet to develop the essential monitoring and evaluation capacity to
demonstrate how and to what extent decentralization has contributed to more effi-
cient service provision than the previously centralized model of service delivery.

III. The Problem with the Coexistence of Strong and
Weak Governance

Why is strengthened governance required in areas other than economic
Policy? For some years Colombia was able to grow and maintain good fiscal and
financial performance while keeping the dualism in governance between economic
policy and other sectors’ policy. So-called first-generation economic reforms appear to
demand only strong policymaking capacity in the areas of trade, monetary, exchange,
and overall fiscal targets. Politically difficult as those reforms might have been, they
penalized only a limited number of rather silent and shameful stakeholders that used

8. See Decentralization Chapter
to benefit from protectionism or profit from inflation or erratic changes in the exchange rate. The damaging experience of hyperinflation or abrupt fluctuations of the exchange rate in Argentina or Brazil moved the country to remain faithful to the solid principles of the Estatuto Cambiario, first established in 1967. In addition, trade liberalization was never as swift in Colombia as it was in other Latin American countries. The attentive eye of the international community has also helped the country maintain its traditional priority for sound, effective macroeconomic policy.

Several factors combined to put pressure on the country to adopt second- and third-generation reforms. The country urgently needs to offset the effects of low or negative economic growth in recent years on poverty expansion and reduced investment. Coexistence between strong macroeconomic governance and weak government capacity in other sector policies was sustainable only while economic growth provided a cushion for sector inefficiencies. The context of relatively open economies in an increasingly globalized world is finally pushing Colombia to explore all potential avenues for enhanced efficiency in resource allocation, higher productivity, a better savings and investment climate, and strengthened country competitiveness. Sector rigidities that were long tolerated are increasingly perceived as adding unnecessary transaction costs that limit the country’s competitiveness. As illustrated by the recent World Bank survey on corruption and politicization, both employees and managers are now fully aware that built-in inefficiencies in social services prevent labor productivity enhancement, and restricted government contracting protects low capital productivity. It is now more clear—than, for instance, at the time of the 1991 Constitution—that labor rigidities and capital overpricing reduce government efficiency to the point where the only solution is additional government indebtedness and crowding out the financial needs of the private sector.

Besides the urgent need to reestablish a sustainable pace of growth and counteract the frightening poverty effects of the ongoing economic slowdown, the fiscal and financial demands added by the Colombian internal conflict have made it evident that the country can no longer postpone long-overdue, sector-specific and across-sector reforms. Besides adding pressure on internal security expenditures, the intensification of Colombia’s internal conflict has multiplied both poverty and the need for social safety nets. Enhanced quality of government is required not only for efficiency-seeking, sector-specific reforms, but to reestablish protection of the most basic personal and economic guarantees and behavioral incentives. Across-sector reforms are needed to extend land titling and registration and to guarantee continuity in and equal access to justice, social services, and public utilities in conflict-ridden areas. It is not only that governance and high-quality government are needed to bring the internal conflict to an end; it is that governance is challenged and debilitated by the mere continuation of the conflict. Bringing the conflict to an end is a prerequisite for savings and investment, and mobilization of resources that have been marginalized by the internal war. More so than sector-specific reforms, across-sector reforms for strengthening overall governance are required to develop a credible enabling business environment.
Today's economic policymaking and implementation goes beyond first-generation reforms. Although all reforms are interlocked, making significant progress in transversal or across-sector areas such as monitoring, auditing, sanctioning, and protecting basic rights is necessary to supplement sound macroeconomic management and enhance the investment climate and service sustainability.

Colombians have known for some years what are the broad policy guidelines for second- and third-generation sector policy reform. In some cases, the specifics of those reforms—as proposed by certain other sector Chapters—have also been identified. Subsequent to the initial wave of reforms in the early 1990s, the country is already aware of the implementation risks and the potential resistance of stakeholders that daunted the reform spirit and jeopardized sustainability of reforms in, for instance, health, labor, the judiciary, education, and decentralization. As demonstrated by recent surveys and electoral results, Colombians appear to be persuaded that those reforms—either sector or across sectors—would come to supplement traditionally sound macroeconomic policy with the necessary microeconomic framework and incentives for economic agents to develop the full potential of labor, capital, land, and technology. The problem is that those second- and third-generation reforms require strengthened governance and enhanced quality of government—and this is precisely what the country has been short of for the last 20 or 30 years. There appears to be a vicious circle that goes from the incapacity of government to formulate and implement most needed reforms, to the fact that those reforms are precisely needed to strengthen governance in Colombia. Strategizing is needed to develop a virtuous cycle that connects incremental reform with the gradual building of high-quality government, then using new, strengthened government capacity for policymaking and implementing those reforms that are more difficult to pass and effectively apply.

IV. Strategizing to Strengthen Governance: Selectivity and Gradualism in Building High-Quality Government

As mentioned, Colombia is entering a new phase of its history—one that appears to have a propitious climate for strengthening governance. The new administration seems to give high priority to improving the quality of government, and citizens are demanding government reform for efficiency and sustainability of those other reforms analyzed in the accompanying Chapters. The challenge lies in translating growing awareness and demand into effective government strengthening for making and implementing sustainable policies.

It should be noted at the outset that strengthening governance and enhancing quality of government is more an art than a science. The best public sector leaders (including the Legislature and the Judiciary) and analysts can do is to follow guiding principles, assess how those principles have been applied elsewhere and with what results, and adjust to government culture and local idiosyncrasies.
The search for higher quality of government as a medium-to-long-term goal in itself. Quality of government is needed for sustainable policies, and sustainable policies may in turn reinforce quality of government. One of the most frequently encountered problems when trying to build government capacity is to confuse strengthening governance and quality of government with sector reforms. Strengthening governance and enhancing quality of government is an end in itself. As such, it requires identification of problems, strategizing, implementation, monitoring, and evaluation. As with any other program and project, improving the quality of government requires—above all—a program structure and clearly identified responsible agencies for program formulation, financing, implementation, monitoring, dissemination, evaluation, and control. (See Box 2 for a description of how it was done in the Clinton-Gore Administration in the United States and the Fox Administration in Mexico.)

Box 2. Efforts to Improve Quality of Government in the United States and Mexico

The Clinton-Gore Administration in the United States created the National Performance Review (NPR), a White House Policy Council designed to reinvent government. The NPR orchestrated the largest peacetime downsizing in U.S. history. In addition, the NPR prepared two major procurement reform bills, conducted two major performance audits of the federal government, and oversaw a major reform initiative aimed at improving the government's regulatory agencies. The NPR also formed the National Partnership Council, which reshaped labor-management relations in the federal government.

The Fox Administration in Mexico established the National Plan for Transparency and Anti-Corruption, primarily focused on the federal level. The federal government appointed an interministerial commission to monitor, evaluate, and revise the program. The Commission relies on a technical secretariat that monitors the program on a day-to-day basis and recommends program reforms.

The recommendation for Colombia is to appoint either a presidential council—à la the United States—or an interministerial commission backed by the President or the Vice-President—à la Mexico. Implementation and dissemination of the government's plan should go together. It is necessary to make citizens aware of the government challenge—and the need to support it if sector reforms are to be effectively implemented. Good practices from other countries may also be widely publicized since the country needs a mirror in which to see itself.

Monitoring and evaluating governance strengthening should be shared by nongovernment bodies and widely disseminated. Civil society, the Congress, and even subnational governments may all play a role in assessing progress in the government's plan to enhance quality of government.
SELECTING A MANAGEABLE PROBLEM AND PROPOSING STRATEGIES TO STRENGTHEN GOVERNANCE AND ENHANCE THE QUALITY OF GOVERNMENT. When it comes to strengthening governance in key sector areas, it is necessary to know what are the loopholes through which certain stakeholder interests restrict access—either legally or illegally—to government contracts, or otherwise restrict policymaking and implementation to the point of their prevailing over the public interest. Targeting reforms on specific loopholes or corruption opportunities tends to be more effective than broad guidelines and corresponding uniform monitoring indicators (see Box 3).

SELECTING THE RIGHT GOALS AND TOOLS. Colombia’s strategy to enhance good governance needs to include specific public sector reforms (goals and tools). What is needed in order to improve quality of government is to start with those governance-enhancing reforms that are least likely to arouse stakeholder opposition—or at least opposition so strong that the government is not prepared to cope with it. Multisector reforms that strengthen government capacity—such as those targeted at the procurement system or integrated financial management—usually arouse less frontal opposition than sector-specific reforms that affect long-entrenched interests of sector-organized groups—such as trade unions in the areas of health and education, and corporate associations for road construction and water provision. (See Box 4 for a discussion of what Colombia must do to achieve good governance.)

Similarly, focalized reforms—such as concentrating on a small number of government agencies at a time or mapping and simplifying sector procedures—are more doable than all-encompassing, final reform proposals such as changing government culture or eliminating party patronage (see Box 5).

Strengthening governance should follow a sequential strategy. Initial reforms should be selected in such a way as to ensure production of demonstration effects and some capacity building. From then on, the government may pursue more chal-

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**Box 3. Targeting Reforms to Plug Loopholes**

The Colombian public sector usually has been characterized as patronage oriented and stakeholder or corporate dominated. However, that broad characterization needs to be refined for governance policy reform. It is also widely accepted that the clienteles-dominated two traditional political parties have been weakened by urbanization, party fragmentation, and electoral support of independent candidates. At this point the country needs to know how to formulate, discuss, and implement reforms that open up markets for public services, be it the labor market for public employment or the procurement market for outside provision of goods and services. In addition, the government needs to make sure that closing the loopholes that create rent-seeking opportunities also close the door to corruption-rent opportunities.
Box 4. Steps to Ensure Good Governance in Colombia

Reform of administrative processes is usually less vulnerable to strong political opposition (from political parties or other rent-seeking stakeholders) than electoral reform, congressional reform, or labor law reform. Colombia needs to clearly identify why and how corporate control infiltrates the procurement process so that fair competition is reestablished. It has been claimed, for instance, that respect for the specially designed procurement process at the Empresas Públicas de Medellín (EPM) largely accounts for this success story within the Colombian public administration.

By analyzing key processes the Colombian government may close the loopholes that prevent good government in policymaking and implementation.

Other multisector processes that impinge on Colombia’s governance and quality of government are:

- Results indicators and transparency in budget reporting and disclosure. As exemplified by the Australian, British, and New Zealand examples, budget classifications and reporting can be organized in such a way that it facilitates discussion and participation by the Congress and civil society regarding policy objectives, result indicators, and budget execution.\(^a\)
- Open-ended contracts for intergovernment results agreements and corresponding earmarked transfers. Central government capacity to monitor, evaluate, and sanction noncompliance in case of “incomplete contracts” is essential to strengthen government capacity under decentralization.\(^b\)

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\(^a\) See Chapter on Budgetary Institutions
\(^b\) See Chapter on Decentralization.

...venting—and politically riskier—reforms. It must be borne in mind that institution building for strengthening governance and enhanced quality of government is necessarily a phased-in, medium- to long-term process. (See Box 6 for a discussion of the experience of Singapore with phased-in government strengthening.) Therefore, identification of intermediate goals is key to assess progress and to gain political support. In today’s Colombia, it is necessary to avoid the risk of postulating—even accepting that—the end of the internal conflict is the true test of strengthening governance. Perhaps the best way to avoid such a risk is to elaborate on and demonstrate the linkage between intermediate achievements in building higher-quality government and the likely scenarios and phases for finalizing the conflict. Publicly committing government to achieving certain intermediate goals, combined with disclosure and dissemination of progress evaluation, is perhaps the most powerful marketing tool for strengthening governance, and announcing broad goals and not being able to report on partial progress is usually a recipe for failure.
**Box 5. Focalizing Reforms**

Colombia has tried time and again to pass and implement comprehensive public sector reforms—most recently in 1992–93 and 1998–99. According to lessons learned from best practice experience, analyzing an agency and coming up with a tailor-made plan for that agency—and it is better if the plan matches and enhances the feasibility of ongoing sector reform—is usually more doable and more productive than across-the-board reforms for the entire public sector. Reform of a handful of individual agencies that play a key role in preventing and sanctioning corruption, such as the **Centralidad General**, the **Procuduriduría General**, or some of the **Superintendencias**, is likely to strengthen governance in most sectors of State administration. Likewise, reform of hard-to-transform government agencies such as the ISS and ECOPETROL could be precedent setting for the rest of the administration.\(^a\)

\(^a\) Reform of key government agencies could be supplemented with case studies and dissemination of best practice agencies such as the EPM.

**Box 6. Singapore’s Experience with Phased-In Governance Strengthening**

Colombia might follow the best-practice case regarding phased-in governance strengthening in Singapore which, in a period of just a few years, transformed itself from being one of the most corrupt countries in Southeast Asia to being one of the jewels of the world in the areas of transparency, anticorruption, and enhanced governance. The story of Singapore is one of giving the government the right tools to implement and evaluate reforms in any government sector. E-government, process simplification, improved regulatory frameworks, reduction of public employee direct contact with private citizens, institutionalized citizen participation, strengthened disclosure and accountability, enactment of new guidelines for human resource management, and agency-by-agency publication of customer service goals are some of the tools that empowered the government and strengthened governance in Singapore. Enhancing the quality of government appears to be a prerequisite for policymaking and implementation of sector-by-sector reforms. In this regard, strengthening governance should come before—or at least be simultaneous with—sector-specific reforms proposed in other Chapters.
Part II
Achieving Fast and Sustainable Growth
5

Macroeconomic and Fiscal Frameworks

This Chapter was written by Zeinab Partow.

The crucial requirement for the Colombian economy at the new millennium is to return to a path of sustained and substantial economic growth that characterized the country until the mid-1990s. Analysis has shown that economic growth is the key factor in poverty reduction in countries (Dollar and Kraay 2000). For Colombia, in particular, growth has been the key to poverty reduction: each additional point of growth in gross domestic product (GDP) per capita reduced poverty by approximately 0.6 percentage points. At the same time, it has been shown that the substantial progress in poverty reduction achieved during the 1980s and 1990s was largely erased by a few years of low growth, and by the 1999 recession. In fact, the recession in the second half of the 1990s brought poverty levels down to 1988 levels (Vélez 2002).

Colombia’s recent path threatens an unsustainable increase in deficits and debt, along with poor prospects for GDP growth and high unemployment. New realities have emerged in fiscal domain, including significant and persistent deficits and large future fiscal liabilities. The rapid expansion of the public sector over the previous decade, from spending one fourth of GDP in 1990 to over one third of GDP by the end of the decade, combined with growing liabilities, particularly on the pensions front, have led to significant and persistent deficits of a structural nature. The private sector, on the other hand, languishes: while government consumption grew by two thirds between 1994 and 2001, that of household remained basically unchanged, and private investment fell by over 37 percent. The weakness of the private sector is at the center of Colombia’s current economic woes. Private GDP has grown little since the mid-1990s, and private investment has deteriorated from its peak of near 12 percent of GDP in 1994 to under eight percent today. Total investment now stands at a level of about 15 percent of GDP, incompatible with the resumption of significant growth. Public sector consumption has in effect displaced the private sector as the major contributor to domestic demand. While the current
administration has recognized the need to strengthen fiscal accounts and has begun
to set a solid foundation for further reforms, these will need to be expanded and
accelerated in the coming years.

As public spending rapidly outstripped the sector's revenue generating capacity,
much of the fiscal deficit, particularly since the mid-1990s, has been financed with
debt, both domestic and external. Today, net public sector debt in Colombia stands
at about 46 percent of GDP. In 1997, prior to the onset of the recession and to the
rapidly deteriorating fiscal balances of 1998 and 1999, public debt stood at 27 per-
cent of GDP. Spending on interest payments to service public debt now stands at
near five percent of GDP, constituting approximately a quarter of the central gov-
ernment's expenditures, more than twice its investment budget. Colombia now faces
the combined challenges of reducing its debt levels to ensure sustainability and
achieving growth rates that are sufficient to reduce poverty levels and increase
employment. Continued fiscal adjustment is unavoidable if debt sustainability is to
be attained; just as important, the quality of the adjustment is key for a return to
growth rates in the four-to-five percent range.

Macroeconomic management over the past decade has thus failed to deliver the
habitual steady growth that characterized the country. The mix of reforms at the
beginning of the decade, and more importantly, their implementation, generated
inconsistencies that made the reforms incompatible as a package. The rapid fiscal
expansion, and the resulting appreciation of the peso, was inconsistent with the
goals of the apertura, or opening up of the economy (Echavarría, 2000).¹ The per-
ceived "failure" of the apertura generated opposition to deeper reforms,² and the
combination of fiscal expansion and incomplete reforms resulted in Colombia's
much-vaunted stability giving way to increasing volatility.

Table 1 summarizes the volatility of a number of macroeconomic and fiscal vari-
ables and shows that volatility increased for all of these with the exception of the
terms of trade. This did not generally occur in other Latin American countries; a
number of authors (among them Gavin et al. (1996), Herrera et al. (1999), IDB
(1997)) have pointed out that domestic volatility in many countries of the region
declined over the 1990s. As mentioned above, one hypothesis is that in Colombia,

¹ Fiscal expansion was a major culprit in the revaluation of the peso during the 1990s, along
with capital inflows, expectations of greater revenues from oil, the use of the exchange rate
as nominal anchor, and productivity growth. Analysts (e.g. Edwards, 1998; Cárdenas,
1996; Zuleta and Arias, 1997) disagree as to the relative importance of each of these fac-
tors in the peso's devaluation.
² Echavarría (2000) argues that Colombia's trade reforms were partial and relatively super-
ficial, and that the country did not enjoy a significantly more open economy at the end
of the 1990s as compared to the beginning of the decade. He notes that trade in goods
and services as a portion of GDP has not changed over the past thirty years, and while
there was an "opening" in trade of goods in particular, this was less marked that in other
Latin American countries.
Table 1. Increased Volatility in Colombia in the 1990s

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<tr>
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<th>1970s</th>
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<th>1990s:1980s (percent)</th>
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<td>1.8</td>
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<tr>
<td>Fiscal volatility</td>
<td>1.3</td>
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<td>2.7</td>
<td>91</td>
</tr>
<tr>
<td>Exchange rate volatility</td>
<td>1.1</td>
<td>1.5</td>
<td>2.4</td>
<td>57</td>
</tr>
<tr>
<td>Monetary volatility</td>
<td>6.8</td>
<td>3.5</td>
<td>3.7</td>
<td>56</td>
</tr>
<tr>
<td>Terms of trade volatility</td>
<td>13.0</td>
<td>10.4</td>
<td>5.8</td>
<td>-44</td>
</tr>
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</table>

Note: Data represent the standard deviation, in percentage terms, of changes in GDP, in the fiscal balance/GDP, in the real exchange rate index, in M1, and in the terms of trade.

as a result of the forces at play during the decade, namely a new constitution, large oil discoveries, an acceleration of illegal activities and an intensification of the internal conflict, there was a loss of momentum in completing the reform agenda, and this exacerbated volatility. Along these lines, the IDB (1997) finds that on the whole, major reformers in the region enjoyed greater economic stability in the 1990s. Gavin et al. (1997) perform formal statistical tests of the empirical relationship found by Lora and finds that the relationship is significant and robust.3

It is important to note that while the country’s long-standing internal conflict has undoubtedly played a role in heightening the degree of uncertainty facing economic agents, and is a constraint on Colombia’s achievement of a higher level of potential GDP growth, it is not the sole constraint to growth. In this spirit, this Chapter reviews some of the factors that underlay the severe recession of 1998–99, and outlines policy priorities to address the current challenges facing Colombia. These challenges can be summarized as the need to attain primary balances that are sufficient to ensure sustainable debt-to-GDP ratios, while attending to the quality of adjustment such that growth is not compromised.

I. The 1990s: From Rapid Growth to Recession

Prior to the 1990s, Colombia was among the better performers in Latin America, with the enviable record of unbroken annual GDP growth for over 50 years, even during the “lost decade” of the 1980s.4 In the early 1990s, this trend seemed set to continue, or even accelerate, as important reforms were undertaken in the areas of trade, the financial sector, private sector participation, and decentralization. Sup-

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3 The studies are not conclusive as to the direction of causality which may, of course, be in either direction from reforms to stability or vice versa.

4 García and Jayasuriya (1997) argue, however, that government reaction to economic crises over the past 30 years and the policies chosen, while enabling the country to enjoy a rare stability, also prevented Colombia from enjoying higher growth and greater prosperity.
ported by the introduction of these structural reforms, output grew by 5 percent a year during 1992–95. By the middle of the decade, however, as many of its neighbors aggressively pursued wide-ranging reforms and saw improved growth, Colombia’s performance began to weaken. The country’s gradualist approach to policymaking and reform did not keep pace with that of other countries in the region.5 Throughout the 1990s, Colombia’s fiscal accounts experienced a continual and accelerating deterioration. The Non-Financial Public Sector (NFPS) deficit worsened from a level of 0.2 percent of GDP in 1991 to 6.4 percent of GDP in 1999, largely as a consequence of the rapid growth in Central Government deficits which had increased from 0.4 percent of GDP in 1991 to 7.1 percent in 1999. Growing deficits and declining growth culminated, in 1998–99, in a recession of a magnitude unprecedented in the country’s history.

One of the major changes that took place in the fiscal arena during this period was the public sector’s unprecedented expansion. Colombia began the decade with a relatively small state, but ended it with a comparatively large one. Public sector (NFPS) consumption grew from an average of 10 percent of GDP between 1970 and 1993, to an average of 18.5 percent during the 1994–2001 period. The most rapid expansion took place between 1996 and 1999. As a proportion of total consumption, the public sector accounted for 12.5 percent prior to 1993, but grew to 21 percent by the 1994–2001 period. In South America, only the Brazilian public sector consumes more.

The confluence of two major events that occurred at the beginning of the decade of the 1990s helps explain the origins of Colombia’s fiscal problems: a new constitution and expectations of large oil discoveries. A new constitution came to replace one that had been in place for nearly 100 years. The new constitution reflected a new political and development agenda whose major goal was to enable Colombia to take full advantage of changing global realities. The new agenda aimed to rationalize the role and scope of government by favoring the concentration of public sector activities in the supply of public goods with high externalities, and to establish the necessary incentives and institutions for the promotion of resource allocation according to market-based principles. These objectives were to be achieved by liberalizing external trade6 and the financial sector, and by increasing the role of the private sector through privatizations, concessions and a greater participation in the provision and administration of physical infrastructure and public services.

5. Colombia, along with Uruguay, is characterized by the IDB (part II, 1997) as one of the continent’s slower reformers. On an index of structural reforms, Colombia’s rating declined from above the Latin American average in the 1980s, to below it in the 1990s.

6. Between 1990 and 1999, the average nominal tariff came down from 44.6 percent to 11.6 percent, and effective protection decreased from 59 percent to 20.5 percent during the same time span. Tariff dispersion was reduced from 23 rates to four, and quantitative restrictions were eliminated. At end-1998, Colombia scored a two on the IMF’s 10-point scale for classifying the restrictiveness of trade regimes (a higher score indicates a more restrictive regime.). (IMF Selected Issues paper, mimeo, 2001)
At the same time, the manner in which a number of other reforms were implemented tended to expand the size and role of the State. The Constitution, and subsequent laws, included provisions to accelerate the devolution of power to communities through accelerated decentralization, and the enhancement of the development of human capital and the delivery of social services to favor income redistribution and fulfillment of basic needs. The parallel contraction of the Central Government that should have logically accompanied the decentralization of social services, did not, however, materialize. The expansion of the judicial sector and of defense spending followed the argument that the absence of the State from rural and remote areas was associated with growing violence and guerrilla conflict.

Thus, while the intent may have been increases in citizen participation, in the devolution of power through decentralization, and in political accountability and rationalization of government activities, the outcome, paradoxically, was the generation of major new obligations for the public sector and for the central government in particular. Half of the total increase in central government spending during the decade can be attributed to the new obligations enshrined in the Constitution and in other laws passed during the initial years of the 1990s (Table 2). Substantial new spending was targeted to education and health through departmental and local governments. Transfers by the central government to the social security sector represented further significant resource requirements, as did the restructuring of the judicial sector. It is important to note, however, that in addition to greater spending due to new commitments, central government expenditures on wages, salaries, and goods and services also grew, by almost 50 percent between 1990 and 1998. This

<table>
<thead>
<tr>
<th>Table 2. Growth in Central Government Spending Due to Legal and Constitutional Changes, 1990–98 (percent of GDP)</th>
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<tbody>
<tr>
<td><strong>Territorial Transfers</strong></td>
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<tr>
<td>Municipal Participations</td>
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<tr>
<td>Situado Fiscal</td>
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<td>FEC</td>
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<tr>
<td><strong>Social Security Transfers</strong></td>
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<tr>
<td>Law 100/1993</td>
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<td>Electricity Subsidies</td>
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<td>Modernization of the State</td>
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<td>Judicial Sector Restructuring</td>
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<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
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*Source: Echeverry-Garzon (2001)*

7 In addition to obligations created by the Constitution and related laws, significant fiscal expansion took place in 1966, and especially in 1997, as public spending was used in an attempt to forestall the effects of an impending recession.
highlights the continuing difficulty of the public sector in adapting to decentralization and to a new role for the state as envisioned by the reforms of the early 1990s.

The new spending commitments generated by the Constitution were accompanied by a significant easing of Colombia’s liquidity constraint as a result of large oil discoveries in the early 1990s, the second salient feature of the decade. As a consequence, the country would expect about US$3 billion per year between 1996 and 2002, the period of peak production, representing over 25 percent of exports and at the time expected to bring in between 6 and 8 percent of GDP. In classic fashion, the projected increase in revenues fueled spending growth. The boom in the oil sector generated growing revenues as well as high expectations in terms of future income flows, and significantly softened the budget constraint at different levels of the public administration. The investment rating enjoyed by the country—as a result of high levels of international reserves, low debt indexes, and the expectations of a petroleum boom—facilitated indebtedness with external capital markets.

As a result of these forces—namely the spending obligations created by constitutional and other legal reforms, and by more ample and easy access to financial resources following the oil boom, and exacerbated by attempts to avoid recession through fiscal expansion in 1996–97—central government spending rose by over 70 percent, from 11 percent of GDP in 1990 to 19 percent in 1999. The NFPS went from spending 24 percent of GDP in 1990 to 37 percent in 1999. Local governments leveraged future oil royalties and transfers, unsustainably expanding their debt. Spending accelerated as the decade wore on, with nearly three quarters of the increase taking place between 1996 and 1999.

Revenues, despite numerous tax reforms during the decade, did not keep pace (Figure 1), resulting in a continually growing deficits at both the central level (7.1 percent of GDP in 1999) and NFPS level (5.8 percent). Between 1990 and 2000 half a dozen major tax bills were passed. The total impact of the bills through 2001 has been an increase in revenues of about 4 percent of GDP, while central government expenditures grew by over nine percentage points of GDP.

The resulting fiscal imbalance was, however, temporarily obscured by surpluses in the decentralized sectors, principally in social security and the oil sector, and by large privatizations. These surpluses allowed the generation of positive consolidated public sector balances in the early 1990s, but which rapidly declined to a deficit. In this respect it is illustrative to note that negative current savings have characterized Colombia’s fiscal accounts since the mid-1990s. At the general public sector level,

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8. In reality, between 1996 and 2000, oil revenues amounted to between 2.5 and six percent of GDP, averaging about 3.5 percent of GDP for the period.


10. The second half of the 1990s also witnessed an escalation in Colombia’s internal conflict. Security outlays (police and military) rose from 2.4 percent of GDP in 1994 to 3.2% in 1998.
current revenues have not covered current expenditures since 1996. For the central government, current savings have been negative since 1994, reaching a peak of $-6.4$ percent of GDP in 1999 (Figure 2). This has meant that as revenues lag, current expenditures as well as investment are often financed by higher indebtedness.

In 1999, at the nadir of the recession, economic activity contracted by 4.3 percent, the NFPS deficit reached 6.3 percent of GDP, private investment fell by over 60 percent, and private consumption dropped seven percent. One in five Colombians was unemployed, and the plunge in demand brought the inflation rate down.
from over 16 percent to nine percent in just one year. Imports also collapsed, falling by 25 percent, helping to bring the current account to near balance. In September 1999 the exchange rate band was abandoned in favor of a floating of the peso. The financial system entered into crisis as high interest rates and negative economic growth stretched the payment capacity of most borrowers, and arrears in loan portfolios grew.

Over the past two years GDP growth has resumed, with the economy expanding just under three percent in 2000, followed by 1.6 percent GDP growth in 2001; the main engines of growth in 2000 were the recovery of exports and of manufacturing. The recovery remains fragile, however, as evidenced by the loss in the momentum of economic expansion in 2001 and early 2002. Since 1999, the Government’s adjustment program has led to a gradual reduction of the NFPS and CG deficits to 3.8 percent and 5.8 percent of GDP, respectively, in 2001, helped along by high oil revenue (Figure 3). However, the pace of the adjustment was also significantly slowed in 2001, partially as a result of lower growth, but also due to the difficulty of significantly reducing expenditures and increasing revenues in the short term in an environment of political fragmentation and internal conflict.

II. Policies for Adjustment

In 1999, in response to the severity of the recession, the new government embarked on an ambitious program of stabilization and adjustment. The general thrust of the policies, supported by a three-year IMF Extended Fund Facility, was to tackle both short- and long-term issues: addressing the recession would consist of immediate

**Figure 3. Growing Deficits**

![Diagram showing Growing Deficits](image)
measures for fiscal consolidation and financial sector restructuring backed by longer-term structural reforms. The program was supported by the depreciation of the peso that had taken place in 1998 and 1999, which brought the effective real exchange rate to a level similar to that of the early 1990s, when Colombia's external current account was near balance, prior to the onset of large-scale oil exports.\textsuperscript{11} The program had inherent risks related to the need for timely congressional approval of significant structural reforms, reliance on privatization revenues, and a rapid emergence from the recession. All of these risks materialized to some extent.

The first priority was to attack the deficit and fortify the financial system. To address the public sector deficit, actions on both the revenue and expenditure fronts were taken. At the beginning of 1999, to address the decline in revenues associated with the weakening of the economy, a number of measures were introduced. These included a widening of the base for the value added tax (VAT) (although its level was later reduced from 16 to 15 percent), higher fuel taxes, and programs to strengthen tax enforcement. The tax administration (Dirección de Impuestos y Aduanas Nacionales, DIAN) was reinforced through a program to reduce collection lags, identify delinquent accounts, collect arrears, and reduce contraband.\textsuperscript{12}

Although these measures assisted in increasing revenues, which were further helped by the notable increase in oil prices in 1999 and 2000, a more substantial tax reform was judged to be needed, and one was approved in late 2000. The tax package was expected to yield about two percent of GDP, although given the slower rate of economic recovery, actual yields in 2001 were expected to be lower. The package was based on an increase in the VAT from 15 to 16 percent, an increase in the presumptive income tax rate from five to six percent of net assets, and an increase in the financial transactions tax from 0.2 to 0.3 percent. In addition, the financial transactions tax, originally intended as a temporary tax to obtain resources for financial system restructuring, was made permanent by the tax package. The package established some temporary tax incentives for the repatriation of capital, but did relatively little to reduce existing loopholes and exemptions.

On the expenditure side, due to the inflexibility of public sector spending obligations, only relatively limited measures could be taken in the short term. These im-

\textsuperscript{11} Changes in the foreign investment regime were also implemented at the time to encourage foreign direct investment by improving the terms that governed investments in the oil sector by lowering royalty payments and scaling back the role played by Empresa Colombiana de Petróleos (ECOPETROL) in its partnerships with private operators.

\textsuperscript{12} Privatization proceeds were to play an important role in revenue generation in 2000, and were expected to finance nearly the full amount of the combined public sector deficit for the year. This did not materialize (with the exception of the privatization of Carboles de Colombia (CARBOCOL) because investor interest remained weak due to continued attacks by the guerrillas against electricity installations, the withdrawal by Bogotá of the plan to sell its telephone company, and the time required to prepare public banks for divestment or liquidation.
tially included a tight public salary policy involving a reduction in real wages, although the measure was invalidated by the Constitutional Court in 2000. Significant downsizing of the public sector at the decentralized level proceeded in response to the need to address the worsening fiscal and debt conditions of territorial governments. Further efforts at public sector downsizing relied on the privatization or restructuring of public enterprises in the banking and mining sectors. The inflexibility of Colombia's expenditure structure, however, meant that the brunt of the adjustment fell on the central government's investment spending. This declined by over a third to a mere one percent of GDP. Significant reductions in spending would require structural reforms, described below.

Avoiding a systemic crisis in the financial sector constituted the other immediate concern of government policy during 1998–99. A multipronged strategy was pursued to divest or liquidate public banks, provide mortgage debt relief, grant incentives to facilitate the restructuring of private debt, restructure and recapitalize private banks, and strengthen the regulatory and supervisory framework. As a result of the government's interventions, conditions in the financial sector as a whole improved in 2000, and continued to pick up in 2001. The proportion of nonperforming loans was reduced and capital adequacy ratios of the banking sector increased. Nevertheless, the portfolio of mortgage institutions remains weak due to continuing problems in the housing sector. In response, the government has introduced capitalization and restructuring plans to be monitored by the Banking Superintendency, and has developed a framework for the development of capital market instruments for long-term mortgage financing. The cost of resolving the financial sector's problems in Colombia, though significant, remains relatively low at about eight percent of GDP (in 2000) in gross terms. By way of comparison, the International Monetary Fund estimates the costs of other crises at about 55 percent of GDP in Indonesia, and 20 percent in Korea and Mexico. The lion's share of resources in Colombia, over 60 percent, is expected to be devoted to the resolution of public

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13. This decision was in turn reversed in late 2001 by a new Constitutional Court
14. In all, four public banks were liquidated or merged. Two private banks are in the process of being prepared for privatization or liquidation, and a number of smaller private institutions were intervened and closed. Five private banks were conditionally recapitalized. A number of debt relief programs were implemented in 1998 and 1999, financed with public resources, to assist mortgage debtors through the refinancing of loans at lower interest rates and the reduction of loan principals. To facilitate the restructuring of corporate debts, credit lines administered by second-tier banks were introduced. The banking superintendency also adopted a temporary, six-month regime defining the conditions under which the classification of restructured loans could be upgraded. This was supplemented by the passage of Law 550/1999, which suspended traditional bankruptcy procedures for five years, and created an alternative, voluntary debt resolution mechanism based on agreements between debtors and creditors. A financial sector reform law was enacted in June 1999, which, among other measures, strengthened prudential norms and the power of the authorities to deal with troubled banks in a timely manner.
banks, with a smaller, though at about 20 percent significant, proportion going to mortgage debt relief (IMF Selected Issues 2001).

The limited maneuvering room available to the government to reduce its expenditures or to significantly increase revenues, combined with accumulated problems of fiscal mismanagement, meant that deep structural reforms were going to be needed if a significant change in the trend of worsening fiscal indicators was to be accomplished. Along with debt service, the two most important areas of expenditure at the central level were transfers to the social security system and to departmental and municipal governments and the government's reform program aimed to address them.

One of the key obstacles facing the government in its fiscal consolidation efforts was the constitutional requirement that nearly half of all current revenues be transferred to local governments. This meant that the government would keep only one out of every two additional pesos in revenues from enhanced tax collection or increase in tax rates, and was an impediment to expenditure reduction. A constitutional reform (Acto Legislativo) was therefore passed in 2001 that delinked territorial transfers from the central government's current revenues for a period of eight years, providing instead for a real growth in transfers of between two and 2.5 percent per year. At the end of the transition period, transfers would be calculated as a proportion of average current revenues of the previous four years.

Another important achievement of the constitutional reform was the creation of a single fund, the Sistema General de Participaciones (SGP), comprising the three main types of territorial transfers: the situado fiscal, the participaciones municipales, and the Fondos de Crédito Educativos (FEC). The latter transfer had acted as a gap-filling mechanism to cover the shortfalls in teacher salaries, and its size varied countercyclically as current revenues rose or fell. The FECs inclusion in the SGP should put a cap on this type of transfer given that further discretionary transfers by the central government are avoided. Another important impact of the Acto Legislativo is the limit it places on the central government's operating expenses, with the exception of pensions, which cannot grow by more than 1.5 percent in real terms over the transition period.

Simultaneously, to support and sustain this reform, and to help insure against future needs to make further discretionary transfers to local governments, there was the need to improve the control and distribution of resources under the fiscal decentralization system given the expected reduction in transferred resources as a result of the Acto Legislativo. By the end of the 1990s, transfers had become an important

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15. The government's original proposal was to maintain transfers constant in real terms. This was rejected by Congress and the two to 2.5 percent real growth compromise was reached. Because the government's calculations of fiscal savings associated with the reform were based on projected growth rates of 4.5 percent and above during the transition period, it is now unlikely that these savings will materialize given the lower growth projections, at least during the first years of the transition. On the other hand, the reform would ensure predictable transfer income for local governments.
threat to fiscal sustainability, not only because of their direct link to central government revenues, but also as a result of the transfer of resources having preceded the transfer of responsibilities. The ensuing lack of accountability led to growing deficits and debt at the local level and to a decline in the quality of public services, especially education and health. It was considered critical to complement the Acto Legislativo with a reform of the existing law (Law 60/1993), which specified the distribution of resources both by sector and regionally, and which effectively defined the effectiveness and efficiency in the delivery of social services. The new law that accomplishes this (Law 715/2001) promotes the transfer of responsibility by automatically certifying larger municipalities to autonomously manage the provision of education services, incorporates performance goals for the education sector, and facilitates the geographical redistribution of resources and teachers to ensure expanded coverage and higher quality.

The reform strategy also emphasized the correction of perverse incentives under which subnational governments and their lenders operated, and began to eliminate discretion on the part of the central government. In the short term, fiscal adjustment and increased control of resources at the decentralized level were to be accomplished by Law 617/2000. This law was enacted in response to the critical fiscal and debt conditions facing many subnational governments, and also to provide relief to entities in the financial system with high exposure to subnational debt. The law provides partial guarantees of territorial debt contracted up to 30 June 2001, under the condition that the subnational government concerned subscribe to a fiscal adjustment program with the Ministry of Finance. The law also restricts current spending growth of territorial governments to 90 percent of observed inflations, and provides loans to subnational governments to finance downsizing of personnel.

In addition to rationalizing the territorial transfer system and reforming the distribution of funds to promote greater effectiveness in the supply of health and education, and to encouraging fiscal adjustment at the local level, the government's reform program also envisioned actions to provide a hard budget constraint for local governments through changes in regulations related to territorial debt, and a territorial tax reform which would allow local governments to draw on larger revenues to fulfill their responsibilities. With respect to territorial debt, a decree was issued that regulates the borrowing of territorial entities, which should contribute to the elimination in the discretionality in the treatment of debt and therefore to ending unsustainable borrowing and limiting bailouts. On the other hand, while a territorial tax reform proposal was presented to Congress in 2001, the proposal was limited to administrative measures and would not have increased tax revenues substantially. In any case, the measure is unlikely to be approved by Congress.

The looming deficits of the social security sector, and the unavoidable financing pressures implied by them, are the most serious problems confronting the fiscal accounts over the coming years. These pressures are the result of imbalances between contributions and benefits in the various public pension regimes and, more recently, the high operating costs of the health system under the Instituto del Seguro Social.
(ISS). The government has attempted to define consensual solutions to bring the sector into balance in the long term, and a controversial and incomplete reform proposal was presented to Congress in late 2001. This remains a major pending reform. Some measures to address ISS operating deficits have also been taken, including a renegotiation of the entity’s collective bargaining agreement, a restructuring of outstanding debt to providers, and a reduction of the backlog in surgeries. It remains to be seen whether these measures are sufficient to address ISS problems.

Finally, to provide the overall framework for continued fiscal sustainability, the government has presented a Law of Fiscal Responsibility for Congressional approval. This law is intended to provide a basis for aggregate fiscal discipline through ex-ante constraints and agreements. The law’s main elements are: the establishment of a primary balance goal for the aggregate non-financial public sector; the reorganization of the budget system; the reinforcement of fiscal discipline and transparency through inclusion in the budget of contingencies, tax expenditures, and limits for forward budgeting; ensuring that unpaid commitments are included in the following year’s budget; and the regulation of local government indebtedness (see Chapter on Budgetary Institutions).

III. Main Issues and Options

This section highlights a few of the main issues requiring priority attention over the coming years. The list is selective, not exhaustive.

a) Fiscal Sustainability

Despite progress on the reform agenda, a number of issues continue to undermine Colombia’s economic performance. The first priority is returning the fiscal accounts to a sustainable path, a necessary, though far from sufficient, condition for growth. Sustainable fiscal policy is an essential component of strong macroeconomic performance. Fiscal deficits can result in slow growth rates since they often lead to rising interest rates and financial repression and an increase in the current account deficit and, in turn, real exchange rate appreciation. Low and stable fiscal deficits can increase prospects for growth, which in turn allow for further sound fiscal management, thus creating a virtuous circle (Easterly, Rodríguez, and Schmidt-Hebbel 1994).

Two medium-term scenarios (2002–10) were developed to illustrate the potential impact of continuing the pursuit of adjustment and structural reform versus the case where reforms are abandoned and the fiscal imbalance widens (Table 3). The results are consistent outcomes under expected parameters of the domestic economy and

16. The proposal does not address the reform of the special pension regimes granted to selected subgroups of the public sector. A proposal to address these regimes is to be made by the government during the first legislative session of 2002.
Table 3. Two Medium-Term Scenarios

<table>
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<tr>
<th>High Case Scenario</th>
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<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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<tr>
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<td>Public Sector Debt</td>
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<td>58.7</td>
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<td>72.9</td>
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international economic conditions. In the reform, or high case, scenario, the nonfinancial public sector would enjoy a primary surplus of three percent of GDP in the medium term. Fiscal adjustment and continued declines in inflation would support an increase (depreciation) in the real exchange rate. A more competitive real exchange rate and low domestic interest rates would in turn lead to an expansion of economic activity, and medium-term growth rates would converge to 4.5 percent of GDP.

Under the low case scenario, fiscal accounts deteriorate due to lagging reforms, and debt service payments grow. The deficit increases from 3.3 percent in 2001 to seven percent in 2010. Growth stagnates, not rising above two percent per year, and investment and savings rates remain low. Given the elasticity of poverty rates to growth, the low case scenario would imply that poverty would remain almost unchanged: sluggish growth of two percent per year would decrease poverty rates to 54.4 percent by 2010, only one percentage point less than today's level (Vélez 2001).

These scenarios coincide with other studies that have estimated that a significant primary surplus will be necessary over the medium and long term to ensure fiscal sustainability. Easterly and Yuravlivker (2000), in a comprehensive exercise that
accounts for Colombia's contingent liabilities, calculate that a permanent primary surplus of about 4 percent of GDP will be needed to ensure the sustainability of fiscal accounts. The *Comisión de Racionalización del Gasto y las Finanzas Públicas* (1997) also found that a primary surplus of about 4 percent of GDP per year would be needed to ensure debt sustainability. Posada and Arango (2000) conclude that debt sustainability would be ensured over the next 50 years if primary surpluses between one and 1.5 percent of GDP were generated. Of course, the longer it takes for primary surpluses of these levels to be generated, the larger will be the surpluses required in the future to reach a sustainable level of debt.

The Debt Sustainability Chapter also estimates that a significant primary surplus will be needed for debt sustainability in the medium term. To avert an explosion of the debt-to-GDP ratio, the combined public sector has to generate a permanent primary surplus of about four percent of GDP.\(^{17}\) This calculation incorporates the present value of all net public sector liabilities, including public pension payments (of the implicit liabilities) under a no-reform scenario; the scenario also assumes long-term GDP growth rates of 3.5 percent. In 2001, the public sector primary balance stood at 1.4 percent of GDP. In other words, the Colombian public sector will have to generate 2.6 percentage points of GDP in additional savings on a permanent basis. This estimate does not take into account the incoming administration's program for significantly increasing military and social expenditures over the coming years. This level of fiscal adjustment is a necessary and sufficient condition for ensuring fiscal sustainability.

Even under the above relatively benign scenario, if the primary surplus were kept permanently at four percent of GDP, it is estimated that the total net debt of the public sector would nevertheless continue increasing, reaching about 57 percent of GDP by 2010. To further highlight the vulnerability of Colombia's fiscal path in the absence of comprehensive reforms, one can project the path of public sector debt under the assumption that the primary balance is kept constant at its 2001 ratio with respect to GDP (1.4 percent). Under this scenario, debt would rise from about 46 percent of GDP in 2001 to about 80 percent in 2010 (assuming an annual real GDP growth rate of 3.5 percent). On the other hand, to maintain the debt-to-GDP ratio at today's level of 46 percent of GDP, primary surpluses between 4 and 6 percent of GDP would have to be maintained over the next decade. The magnitude of the required adjustment means that significant measures on both the expenditure and revenue fronts are needed.

\(^{17}\) See the Chapter on Public Debt Sustainability and Management for details.
push for greater military spending, expanding direct and contingent liabilities, and spending on infrastructure.

As has been mentioned, central government spending in Colombia grew rapidly over the past decade, from 11 percent of GDP in 1990 to 20 percent in 2001. This growth was due to new constitutional requirements for increased transfers and greater spending on security and the judicial sector, and was a result of generous collective bargaining agreements (for example, teachers, ISS), and a failure to control other expenditures related to salaries at both the centralized and decentralized levels. In order of magnitude, the largest expenditure categories at the central government level are related to (a) territorial transfers, (b) debt service, (c) transfers to the social security system for pension payments, and (d) salaries. Transfers and debt service payments are also the categories that have experienced the most rapid growth during the 1990s (Figure 4). Looking to the future, and in the absence of additional adjustment measures, all of these spending categories, with the possible exception of salaries, are expected to grow as a proportion of GDP.

i. Territorial Transfers

One of the priorities of the current administration has been to address the growing burden on expenditures posed by territorial transfers. The emphasis has been on limiting the growth of transfers and delinking them from the central government's current revenues, and rationalizing expenditures by local governments and increasing efficiency and effectiveness of these expenditures. As mentioned above, the

Figure 4. Growth of Expenditures
recently approved Acto Legislativo places limits on the real growth of territorial transfers, but at the same time imposes a lower threshold on their growth during the eight-year transition period. Thus, as a proportion of GDP, transfers will only decline if the economy grows at a rate greater than two to 2.5 percent, and unless growth performance improves substantially, territorial transfers will continue to pose a burden on expenditures. In effect, in this case expenditure adjustment is more the result of rapid growth than of spending cuts.

The most effective means of capping territorial transfers is to address the high costs of personnel payments in health and education. The bulk of territorial transfers go to financing health and education spending at the local level. In turn, the lion’s share of health and education spending is consumed by salary payments. Unless this is dealt with through, for example, the empowerment of municipalities to fully manage the health and education sectors, the renegotiation of public teachers’ salary and promotion scales, the introduction of greater competition through the possibility of hiring private sector teachers, and an accelerated shift in health subsidies from supply to demand, it is unlikely that measures in other areas will be sufficient to significantly attack the fiscal deficit. The newly approved reform of Law 60 (Law 715/2001) aims to address some of these issues. Continued efforts to rationalize expenditures in education and health will be key both in limiting the danger of pressures for further discretionary increases in transfers and, just as important, in helping ensure the effectiveness and efficiency of these expenditures. The Chapters on Decentralization and Health and Education contain further discussion of these themes.

In addition, the revenue bases of departments and municipalities need to be improved through the passage of a territorial tax reform bill. At the local level, unless territorial governments possess an adequate tax base, there is a risk that transfers will remain insufficient to cover their needs, particularly because responsibilities are increasingly transferred to them as mandated by Law 715. Under these circumstances, the central government will continue to be faced with an implicit liability in terms of territorial debt. An illustration exemplifies the magnitude of foregone revenues: the actual land tax rate is about 0.4 percent, although by law (Laws 14 and 44) a rate of 1.6 percent is permitted. Moreover, the cadastral valuation (avaluo catastral) is typically only 40 percent of the commercial valuation (avaluo comercial), and only 60 percent of the respondents in a survey (1997) indicated that they in fact pay the land tax. This means that municipalities currently collect only six percent of the potential revenues to be obtained from collecting the land tax (World Bank 1998).

Further, an effort to improve the quantity and quality of information at the departmental and municipal levels is urgently needed. Data availability and reliability at the territorial level is poor. An effort is underway (Programa Para el Fortalecimiento del Sistema de Información Territorial, FOSIT) to make improvements in this area, which urgently needs to have higher priority. The success of
efforts to rationalize subnational expenditures, incorporated into Laws 617/2000 and 715/2001, and the upcoming fiscal responsibility law, depends on the availability of reliable data on revenues and expenditures at the territorial level. Currently, such information is often contradictory, with large inconsistencies among the various sources (Consejo Superior de Política Fiscal [CONFIS], Central Bank, Contraloría, and so forth).

ii. Debt Service

The "bottom line" in fiscal sustainability analysis is the behavior of public debt with respect to GDP as a result of the long-term restrictions faced by fiscal policy. In Colombia, while GDP grew by an average 2.6 percent between 1991 and 2001, interest payment on debt grew nearly five times as fast in real terms, and domestic interest payments grew over eight times as rapidly as GDP. This growth, in addition to being the result of the contracting of new debt, has also been due to the effect of the devaluation of the peso and of low growth during the period; it has been calculated that the impact of these two variables on the level of debt between December 1997 and December 2001 has been about 10 percent of GDP (Documento Asesores 2/2002, CONFIS, 7 March 2002). Total public debt service currently makes up one-fourth of the central government's expenditures, more than twice the central government's investment budget. Of this, internal debt service consumes the larger portion, an estimated 13 percent of total expenditures in 2002, up from a mere three percent in 1990. External public debt service declined during the first half of the 1990s, from near 9 percent of expenditures in 1990 to three percent in 1996, but has since risen substantially to an estimated 10 percent of central government spending in 2002.

Following Fischer and Easterly (1990), the annual growth of public debt is equal to the growth of the primary fiscal deficit, minus the portion of the deficit that is financed by servitude income, plus the nominal interest payments on public debt. As a proportion of GDP, public debt falls with inflation and with economic growth. The implication is that debt dynamics depend on the sign and on the difference between the real interest rate and the real growth of GDP:

\[
\Delta \left( \frac{\text{debt}}{\text{GDP}} \right) = \frac{\text{primary deficit}}{\text{GDP}} - \frac{\text{servitude}}{\text{GDP}} + \left( \text{real interest rate} - \text{GDP growth rate} \right) \]

If the real interest rate is lower than the rate of growth of the economy, primary deficits can be maintained that are larger than servitude income without increasing the debt ratio. With an interest rate higher than GDP growth, this is not possible. If the primary deficit exceeds servitude income and if the real interest rate exceeds GDP growth, debt as a proportion of GDP will grow explosively. It has been estimated that even the most dynamic economies can expect maximum revenues from servitude on the order of two to 2.5 percent of GDP. Under such circumstances, if the real interest rate exceeds the growth of GDP, primary deficits that exceed servitude income cannot be maintained without generating an explosion in debt ratios. In
Colombia, the average real interest rate over the past 20 years has been about five percent, while the average GDP growth has been about three percent. Under such a scenario, and with projections for insufficient primary surpluses if further fiscal reforms are not undertaken, Colombia’s fiscal accounts will simply become unsustainable. The Debt Sustainability Chapter analyzes this subject. Here, only two points will be highlighted.

First, while debt management strategies may help to marginally reduce the burden of Colombia’s public debt, the key is the control of the total stock of (nonfinancial) public debt as a proportion of GDP, which has doubled since the mid-1990s to about 45 percent of GDP in 2001. It should be remembered that realistically, given the dynamics of Colombia’s projected future fiscal balances, a reduction in the stock of debt is highly unlikely. This underscores the importance not only of fiscal prudence, but of the efforts to generate growth levels that are closer to Colombia’s level of potential GDP growth, estimated to be about 3.5 to four percent per year. While fiscal prudence is a necessary condition for sustained growth, it is far from sufficient, stressing the importance of a return to significant levels of investment, to enhanced productivity and competitiveness, and to an emphasis on the creation and maintenance of human capital. All of these are topics addressed at length in other accompanying Chapters.

Second, the significant growth of domestic debt is a relatively recent development that needs to be monitored closely. Net domestic debt of the NFPS as a proportion of GDP increased by 50 percent between 1998 and 2001. A significant proportion of this debt is concentrated in relatively few hands, including domestic pension funds, ISS, the Caja Nacional de Previsión Social (CAJANAL), and the financial system. While there has been a concerted effort by the administration in recent years to limit its reliance on the domestic financial market in order not to crowd out the private sector, Colombia’s continued limited access to external capital markets and its large projected financing requirements in the medium term make it likely that the domestic market will be required to absorb significant amounts of public paper. Greater attention to this issue is needed.

iii. Pensions

The issues of pensions and pension reform are taken up in another chapter, so they will be only briefly mentioned here in terms of fiscal importance. Today, pension-related transfers constitute the third-largest expenditure category for the central government, at just over two percent of GDP in 2000, and its largest liability. Without a pension reform that addresses the issues of the transition period, it is projected that these transfers would at least double by 2010, and may triple, depending on the shape of the reform. The pension reserves of the ISS began to be drawn down in 2001, and estimates indicate that reserves will be exhausted by 2007, at which time the government will be faced with making the necessary transfers to cover ISS pensions.
For the fiscal impact of a reform to be felt in the near term, a reduction of the transition period from the old regime to a reformed one is necessary. While the 1993 Social Security law was a major step forward in that it recognized the contingent liabilities of the system and created a new, actuarially improved one, it suffered two major problems. The transition period between the old and the new regimes, during which certain beneficiaries could maintain the benefits of the old regime, at 20 years, was too long. Since the old regime was not financially sound, the contingent liability of the public sector is still growing. The excepted regimes are the other problem—defense, teachers, and ECOPETROL workers kept special retirement benefits, and their contributions are well below what is required to finance those benefits. Reforming the special regimes and bringing them in line with the general system is necessary for longer-run actuarial soundness, although it should be noted that in the near term this will imply larger fiscal outlays by the government to cover its contribution as employer.

iv. Public Sector Salaries

As a result of political resistance, the reduction in the public sector's wage bill has been tackled through wage reductions and freezes rather than through a contraction in the size of the public sector. This approach is unsustainable and undesirable because it affects the quality of the public sector. It is also not politically feasible in the longer term.

Even though savings in absolute terms may be minor, a reform of the public sector through liquidation of entities, mergers, and so forth, is needed in order to create fiscal space, if only for real wage growth and improvements in quality, efficiency, and effectiveness. In this regard, a serious review of expenditures in the sectors of justice and defense is required. These two areas account for fully 70 percent of the central government's wage bill and constitute an equal proportion of spending on goods and services. Given general security conditions in the country, these outlays have not often come under serious scrutiny, nor have they been characterized by accountability or transparency. Nevertheless, given the likelihood that expenditure in these areas, particularly defense, will increase in coming years, such a review is needed.

c) Net Worth and Illusory Adjustment

Following Easterly (1999), fiscal adjustment is considered illusory if it results in the reduction of assets of the state. This raises the issue of the reduction in the level of public investment in recent years in Colombia, largely as a result of the magnitude of other expenditure obligations and their inflexibility.

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18 An exception has been the apparently large layoffs, reportedly on the order of 65,000, undertaken at the territorial level, although reliable information on this is scarce.
In addition to the question of the magnitude of public spending, the issue of its inflexibility is important. While a number of significant measures have been taken to tackle expenditure reduction, including a real reduction in some public sector wages, upper limits to the growth of general operating expenditures as included in the Acta Legislativa and Law 17/2000, and restrictive budgets, Colombia has tended to rely on GDP growth for fiscal correction. This is partly due to the difficulties posed by reducing inflexible expenditures. Three highly rigid categories, debt service, transfers, and salaries, grew to represent 86 percent of central government spending in 2001. As can be seen in Figure 5, this has resulted in the squeezing of investment outlays, which have in effect been treated as a residual.\(^{19}\) The result has been a decline in central government investment, which by the end of the 1990s had fallen to less than half its 1990–97 level. Private investment has not only been unable to fill the resulting gap, but has declined dramatically over the past five years to a current level of under 8 percent of GDP.

Information regarding Colombia's investment gap is lacking, and its availability would make an important analytical contribution. An investment gap has important effects on productivity and production costs, with effects on export competitiveness and foreign trade, and on the profitability of capital and investment. Through all these channels, Colombia's growing investment gap will lead to slower growth unless it is addressed.\(^{20}\)

d) Revenues

While new expenditure obligations were created in the 1990s, the formulation of a coherent strategy of revenue generation met with less success. Between 1990 and 2000 six major tax bills were passed (Figure 6). The total impact of the bills through 2001 has been an increase in revenues of about four percent of GDP, while central

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\(^{19}\) It is important to note that information on public investment suffers from inconsistency of definition and from dubious reliability, particularly at the local government level. Investment by local governments ostensibly makes up around 2.5 percent of GDP. The bulk of this investment is in the social sectors, financed by intragovernmental transfers. Outlays are often misclassified as investment spending in order to comply with the requirements and earmarking of transfers. A significant portion of this type of spending would not fall under the definition of fixed capital formation.

\(^{20}\) A related theme within the framework of public sector net worth and the stock approach to fiscal adjustment are Colombia's liabilities, both direct and contingent. These have been estimated at 180 percent of 1997 GDP and include public pension liabilities (by far the largest), and bailouts of financial institutions, territorial debt, infrastructure concessions, and the achievement of peace and its concomitant expenditures (Echeverry-Garzon and Navas-Ospina 1999). Similarly, a number of public sector "contingent assets" are estimated at about 55 percent of GDP, comprising oil, gas, and coal reserves, and the electromagnetic spectrum.
Figure 5. Composition of Expenditures

Figure 6. Major Tax Reforms, 1990–2000
government expenditures grew by over nine percentage points of GDP. The tax reforms of 1990 and 1992 were motivated by structural reforms of the economy and by the need to reduce distortions in the tax structure, while later reforms, in 1995, 1997, and 2000, originated in fiscal crises and the need for stabilization. The approach has been an incremental one: a tendency toward a unification of tariffs, the widening of bases, especially that of the VAT, and the simplification of tax administration; the use of tax retention and prepayment; stimulation of domestic and foreign investment through reduction of rates and granting of tax incentives; shifting the tax structure toward indirect taxes, which are easier to levy; and stimulating domestic capital markets (Alonso, Olivera, and Fainbohm 1998). This incremental nature has ultimately resulted in a tax structure that is excessively complex.

A comprehensive tax reform at the national level is required. Colombia's tax structure has deteriorated in recent years, with a significant erosion of the tax base through increasing incentives and exemptions. A widening of tax bases through the elimination of various exemptions and a simplification of the VAT structure (partially accomplished in the most recent tax reform) is needed. An overly complex tax system has created incentives for noncompliance, and tax evasion in Colombia is high by international standards. This is exacerbated by the existence of a large informal sector, which contributes only marginally to fiscal revenue. Future tax reforms should aim to expand the tax base rather than increase rates, reduce earmarking, and improve the administration and collection of taxes (see the Chapter on Taxation Issues for more detailed options). The government has commissioned a comprehensive review of Colombia's revenues (Misión de Ingresos), the recommendations of which will be made public in the near future.

e) The Central Bank

Colombia's macroeconomic stability and management are challenged by institutional weakness. While stability in the "rules of the game" is acknowledged as being key to economic growth, it faces a formidable obstacle in Colombia's extremely detailed 1991 Constitution and in the activeness of the Constitutional Court in interpreting and enforcing its prescriptions. This has also meant that even small alterations in economic institutions require constitutional amendments, and are thus faced with lengthy and highly politicized discussions between the executive, legislature, and judiciary. While it is beyond the scope of this Chapter to comment on the myriad institutions that touch upon economic life, we will briefly discuss the Central Bank because it is a key institution for macroeconomic management.

The desirability of an independent Central Bank is by now a widely accepted tenet of economic policymaking. It is thought to lead to greater stability in monetary policy and to lower inflation. In Colombia, Central Bank independence was granted in the 1991 Constitution. Nevertheless, as testimony to Colombia's perennially consensual policymaking, the Constitution also decreed that this independ-
ence was to be constrained in a number of ways. While inflation reduction is stated as the Central Bank's primary objective, the Constitution also states that it is to be attained through consensus and discussion with the government. The Constitution stressed, in particular, the need for the government to maintain an active role in the choice of exchange rate policies and regimes, implying that the government would have an important role in managing monetary policy. Constitutional Court rulings have further muddied the waters by questioning the precedence of the Central Bank's inflation targets. Moreover, over the years, the Central Bank's independence has been threatened outright by Congress, and more subtly, particularly in recent times of economic recession, by calls for it to engage in monetary emission to "support growth."

The consequences of less-than-full independence of the Central Bank were evident in 1996 and 1997, when its monetary stance was particularly loose, contributing to financial turbulence. Even today, the government is actively engaged in exchange rate policy through its monetization of proceeds from sovereign debt issues on international capital markets; movements in the exchange rate throughout 2001 were influenced not by Central Bank actions but by announcements from the Ministry of Finance regarding the timing of repatriation of these proceeds. The ability of a sitting president to name at least one third (two of six members) of the Board of Directors may compound the political nature and timing of decisions.

In sum, the evidence is that the Central Bank actually needs a greater, rather than lesser, degree of independence to manage monetary policy. The influence of any one administration on the Board can be diminished by further staggering nominations and by precluding those who have served in the current administration from serving on the Board.

IV. Conclusions

As has become apparent over the past decade, Colombia's fiscal problems are not merely cyclical, but structural. Continuing fiscal adjustment and institutional changes are needed to address these problems. Continued efforts on both the revenue and expenditure fronts will be required to ensure a return to fiscal sustainability, particularly in the face of expanding liabilities from, for example, public pensions and increasing pressures for expanding military expenditure, to name but two.

It should be borne in mind, however, that while revenues can be increased through a comprehensive reform that makes the structure less complex and more efficient, the margin for increasing revenues significantly in the short term, without negatively affecting growth, is likely to be small. Passage of a tax bill that does not correct the deficiencies of the current regime will only necessitate, as it has in the past, further rate increases within a year or two as "tax fatigue" sets in following a temporary rise in revenues. In the effort to render the tax structure more efficient,
serious consideration needs to be given to a reduction or reassignment of Colombia’s high payroll taxes.

Given the structural character of fiscal deficits in Colombia and the need to generate significant primary surpluses, major efforts in expenditure reduction are fundamental. Expenditure adjustment has often been inefficient and inequitable, because it has at times concentrated on short-term measures with relatively low political costs, such as de facto investment cuts, payroll freezes, or wage increases below inflation. These are unsustainable in the longer term and form part of what has been called an “illusory fiscal adjustment” as the assets of the state deteriorate, undermining future growth. While the inflexibility of expenditures makes spending reduction a difficult challenge given the large combined burden of debt service payments, transfers, and public sector salaries, combined with emerging obligations and liabilities, spending cuts are imperative to achieving sustainability in the fiscal accounts. This will necessarily require further politically difficult reforms. A number of options are available and have been considered, though not yet implemented, in Colombia. Primary among these is addressing pension transfers through a cut in the transition period between regimes. Other avenues include the review of expenditures in the justice and defense sectors, which consume fully 70 percent of the central government’s personnel and goods and services outlays. Regarding territorial transfers, as these are defined in the Constitution, the degrees of freedom are limited, although an emphasis on addressing the high proportion of health and education spending that is dedicated to payroll and benefits would help to ensure that future demands for additional transfers are limited.

Changes during the 1990s fundamentally altered economic institutions, with perhaps the biggest being the acceleration of the drive toward decentralization. While this responded to a national political desire to bring government closer to the people, it also created the impetus for larger expenditures within a loosened budgetary constraint. In response to widespread severe fiscal imbalances and unsustainable levels of debt at the local level, the emphasis in recent years, understandably, has been on the restriction of decentralized resource assignment and its increased management from the center (provisions in Law 715/2001 are an example of this). This has negative longer-term consequences because Colombia will remain in a halfway house between a centralized and decentralized state, where territorial governments will have little incentive to responsibly manage resources the control of which continues to reside at the central level, with important fiscal consequences. The enhancement of service delivery, one of the main justifications for decentralization, may be compromised at the very time that human capital improvements are key to enhance Colombia’s competitiveness and growth prospects. Rather than backtracking on decentralization under the guise of fiscal restraint, local governments need to be empowered to manage central transfers and to raise own revenues within the confines of fiscal responsibility. The Decentralization Chapter addresses these issues and gives examples of successful efforts, including reforms in education in Bogotá and other municipalities.
The government has presented a fiscal responsibility law for discussion and approval by Congress. This is a commendable effort and follows on a number of experiences with similar laws in the region. For such a law to provide an effective constraint in Colombia, improvements in data collection and accounting and budgeting need to be made, particularly ensuring realistic revenue projections. Specific fiscal targets and explicit sanctions in the event that these targets are not met are essential if the law is to be truly effective. Moreover, within any formulation of fiscal responsibility laws, the rules governing the accumulation of resources and their use in the Petroleum Stabilization Fund (FAEP) and royalties allocations should be revisited. This is particularly important because Colombia projects major oil discoveries over the next decade. As international evidence shows, it is far easier to establish such rules before the arrival of the resources when a “voracity effect” is certain to take hold. While the FAEP has accumulated relatively significant resources over the years (about US$1.5 billion), these have nevertheless fallen short of expectations and have not had an impact on curbing expenditures.

Macroeconomic and fiscal stability is only one pillar for development; the others are well-functioning markets, stable laws, an efficient and effective bureaucracy, good infrastructure, and abundant human capital. While fiscal rectitude and stable monetary policies may be some of the necessary conditions for a resumption of robust economic growth, they are not sufficient. Growth depends on engaging in activities that increase the net worth of the country. Investment, a boost in external competitiveness, and increased productivity are necessary. With Colombia’s large fiscal obligations and limited resources, the country can ill afford to have one of the highest labor costs in the region, where payroll taxes and parafiscal payments constitute over half of the payroll. Instability in the rules of the game, frequent tax regime changes, Constitutional Court rulings that fundamentally alter economic relations, and repeated bailouts of various sectors of society have compounded the uncertainty associated with Colombia’s internal conflict, and have resulted in record-low private investment levels.

To achieve the desired outcomes within tight budgetary constraints, the government has to improve the efficiency of public spending. A demand for resources that surpasses supply means that there is an increasing need for prioritization of expenditures and for an enhanced emphasis on accountability and transparency.

References


The Tax System

I. Introduction

In the 1990s, public sector outlays, fiscal deficits, and the public debt rose sharply in Colombia. The importance of oil revenues increased, but the allocation of resources became more difficult because of the already existing earmarking restrictions on the use of public resources, and the decision to channel most of the oil revenue outside the budget. As the size of the nonfinancial public sector increased sharply, it became an important factor in helping explain the better macroeconomic performance before 1990 than after. Reflecting these outcomes, in recent years the fiscal deficit and the sustainability of public debt have been sources of concern for Colombian policymakers, private agents, multilateral institutions, and foreign private creditors.

The crisis of 1998–99 was a breaking point in the economic history of the country, growth was negative (−4 percent) and the public sector deficit1 was more than 5 percent of the gross domestic product (GDP). Under the adjustment program approved in the fourth quarter of 1998, public expenditures have been contained, and tax collection increased, boosted by changes in the design of the main taxes. However, these changes may have introduced new distortions into the system.

II. Background

Total taxes increased from 16.1 percent of GDP in 1995 to 18.7 percent of GDP in 2001 (Table 1). The amount collected at the different institutional levels followed different paths. The national government, which accounted for over 60 percent of the total, and

1 The public sector includes the nonfinancial public sector and the Central Bank.
### Table 1. Colombia—Structure of Taxes

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<td>17.5</td>
<td>16.7</td>
<td>17.4</td>
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<td>2.7</td>
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<td>3.5</td>
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<td>1.1</td>
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| **Percent of Total** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Of which by type of government |      |      |      |      |      |      |      |
| National Taxes           | 64.0  | 64.2  | 62.0  | 64.6  | 64.1  | 69.0  | 72.2  |
| Taxes Collected by Local Government | 14.3 | 14.9  | 17.1  | 15.4  | 16.2  | 15.5  | 13.9  |
| Departments              | 6.2  | 6.0  | 6.3  | 5.7  | 5.4  | 5.7  | 5.3  |
| Municipalities           | 8.1  | 8.9  | 10.8  | 9.7  | 10.8  | 9.8  | 8.6  |
| Social Security Contributions | 2.1 | 2.0  | 2.0  | 2.0  | 1.9  | 1.5  | 1.3  |
| Of which by type of tax |      |      |      |      |      |      |      |
| Income Tax               | 27.9  | 26.2  | 31.6  | 28.0  | 28.7  | 28.2  | 31.0  |
| Tax on Banking Transactions |      |      |      |      | 3.4  | 3.7  |      |
| Consumption (VAT, etc) | 37.9  | 41.1  | 44.9  | 38.8  | 39.5  | 40.8  | 39.6  |
| Taxes on International Trade | 6.2 | 5.4  | 6.3  | 6.8  | 5.4  | 5.7  | 5.9  |
| Social Security Contributions | 21.7 | 20.9 | 20.9 | 20.0 | 19.8 | 15.5 | 13.9 |
| Other                    | 6.2  | 6.6  | 7.0  | 6.3  | 6.6  | 6.3  | 5.9  |

Memorandum items
1 Social security contributions and other payroll contributions are collected by institutions outside the central government
2 They include pension contributions and health insurance

*Source* Estimates based on data provided by CONFIS, IMF, and High Commission on Taxes

...municipalities, increased their collection. National taxes increased 3.2 percent of GDP, and taxes collected by municipalities increased 0.3 percent of GDP; in the same period, the taxes collected by departments were quite constant, at around 1 percent of GDP. At the national level the most important taxes are the income tax and the value added tax (VAT) (Table 2). They provide 80 percent of the total collected by the central gov-
### Table 2. Colombia—National Taxes

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<td>Corporate</td>
<td>22</td>
<td>22</td>
<td>27</td>
<td>25</td>
<td>24</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>of which: from oil activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>18</td>
<td>16</td>
<td>17</td>
<td>19</td>
<td>18</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Tax on Banking Transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Value Added Tax</td>
<td>41</td>
<td>47</td>
<td>48</td>
<td>46</td>
<td>44</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>Excise taxes</td>
<td>0.6</td>
<td>0.7</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>of which: from gasoline and APCM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes on International Trade</td>
<td>0.6</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Other</td>
<td>10.3</td>
<td>10.8</td>
<td>9.8</td>
<td>11.3</td>
<td>10.7</td>
<td>12.6</td>
<td>13.5</td>
</tr>
</tbody>
</table>

| **Percent of Total** |      |      |      |      |      |      |      |
| Income Taxes         | 38.9 | 35.0 | 27.6 | 38.2 | 39.3 | 35.8 | 38.5 |
| Corporate            | 21.2 | 20.5 | 27.6 | 21.9 | 22.4 | 20.8 | 22.2 |
| of which: from oil activities |      |      |      |      |      |      |      |
| Personal             | 17.7 | 14.5 | 17.0 | 16.3 | 16.8 | 15.0 | 16.3 |
| Tax on Banking Transactions | 5.0  | 5.0  | 5.0  | 5.0  | 5.0  | 5.0  | 5.0  |
| Value Added Tax      | 39.8 | 43.6 | 48.9 | 40.6 | 41.1 | 40.8 | 38.5 |
| Excise taxes         | 5.8  | 6.5  | 6.1  | 4.4  | 4.7  | 4.2  | 4.4  |
| of which: from gasoline and APCM | 5.8  | 5.6  | 5.1  | 4.4  | 4.7  | 4.2  | 4.4  |
| Taxes on International Trade | 9.7  | 8.4  | 10.2 | 10.6 | 8.4  | 8.3  | 8.1  |
| Other                | 5.8  | 6.5  | 7.1  | 6.2  | 6.5  | 5.8  | 5.2  |
| Tax on Banking Transactions | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**Note:** Contributions on the payroll other than social security contributions are included as taxes. Estimates based on data provided by CONFIS, IMF, and High Commission on Taxes.

The tax system. In 1998, a tax on financial transactions with a rate of 0.2 percent was introduced as a temporary measure with the aim of financing the resolution of the banking crisis that emerged that year. This tax became permanent in 2000 with a rate of 0.3 percent.

The oil industry is an important source of public resources for the central government, Empresa Colombiana de Petróleos (ECOPETROL), and territorial entities. Resources are captured by a regime of royalties\(^2\) and the income tax on

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2 There is a general regime of royalties on mining activities. Subnational entities receive royalties for mining production that go to producer departments (47.5 percent), producer municipalities (12.5 percent), and port municipalities (8 percent). The rest (30 percent) is transferred to the National Royalties Fund, which allocates resources in the producing regions primarily for purposes of investment. The most important royalty is on oil exploitation.
ECOPETROL and the private enterprises that share oil exploitation with ECOPETROL. The central government receives the income tax on the oil activity and its participation in ECOPETROL profits. Moreover, there is an oil financial fund (Fondo de Estabilización Petrolera), which is fed with contributions from royalties and ECOPETROL, aimed at smoothing the use of oil resources. The fund is managed by the Central Bank.

Since the beginning of the 1990s, taxes on foreign trade have been reduced, reflecting the trade reform carried out in the first part of that decade; the amount collected in 2001 was only 1 percent of GDP. Social security contributions (pension contributions and health insurance) have lost relative weight in favor of the income tax, taxes on consumption, and the new tax on banking transactions.

The tax collection of territorial entities averaged 2.6 percent of GDP from 1995 to 2000. Taxes on liquor, beer, and tobacco provide the bulk of the amount collected by departments (Table 3), while the main taxes collected by municipalities are a property tax (impuesto predial unificado) and a business tax (impuesto de industrias y comercio).

Colombian tax collection differs from the experience of developed countries in the level and composition of tax collection (see Table 4). In particular, the relative weight of the Colombian income tax of total taxes is below the percentage of this tax in the total collected by developed countries, where the personal income tax is the most important item. At the same time, the composition of Colombian tax collection differs from that of developing countries included in Table 4. The income tax has a higher weight in Colombia than in other developing countries. In both cases, taxes on consumption are higher than the income, corporate, and personal tax, and the relative weight of the personal income tax is less than 10 percent of the total. For developed and developing countries, the relative share of taxes on foreign trade in the total is small.

The present tax system is the result of decades-long reform. (See the Appendix at the end of this Chapter for a summary of previous tax reforms.) Important lessons about present distortions and administrative difficulties can be drawn from previous tax reforms. The different reforms were the response to pressing fiscal problems at the time of their implementation.

Table 3. Colombia—Taxes Collected by Departments (1999)

<table>
<thead>
<tr>
<th>Percent of the Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquor</td>
</tr>
<tr>
<td>Tobacco</td>
</tr>
<tr>
<td>Beer</td>
</tr>
<tr>
<td>Surcharge on gasoline</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: High Commission on Taxes.

3. Colombia has not followed the international experience, no excise taxes are collected by the national government.

4 More than 25 percent of the Colombian income tax is levied on oil activities.

5. The changes introduced in the first part of the 1990s are analyzed in Shome (1995).
Table 4. Comparative Composition of Tax Revenue (Average 1995–97)

<table>
<thead>
<tr>
<th>Percent of GDP</th>
<th>OECD Countries</th>
<th>Developing Countries</th>
<th>Western Hemisphere Colombia*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>America</td>
<td>Pacific</td>
</tr>
<tr>
<td>Income Taxes</td>
<td>13.9</td>
<td>15.3</td>
<td>15.7</td>
</tr>
<tr>
<td>Corporate</td>
<td>3.1</td>
<td>3.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Personal</td>
<td>10.8</td>
<td>12.3</td>
<td>11.4</td>
</tr>
<tr>
<td>Consumption</td>
<td>10.2</td>
<td>5.7</td>
<td>6.9</td>
</tr>
<tr>
<td>General</td>
<td>6.6</td>
<td>3.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Excises</td>
<td>3.6</td>
<td>2.0</td>
<td>2.6</td>
</tr>
<tr>
<td>International Trade</td>
<td>0.3</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Social Security Contributions</td>
<td>9.5</td>
<td>6.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>33.9</td>
<td>27.4</td>
<td>26.7</td>
</tr>
</tbody>
</table>

| Percent of Total                | OECD Countries | Developing Countries | Western Hemisphere Colombia* |
|                                | All            | America | Pacific | Europe | All    | Hemisphere | Colombia* |
| Income Taxes                   | 41.0           | 55.8    | 58.8    | 37.6    | 30.8   | 21.3       | 28.4      |
| Corporate                      | 9.1            | 10.9    | 16.1    | 8.1     | 16.7   | 14.8       | 17.9      |
| Personal                       | 31.9           | 44.9    | 42.7    | 29.5    | 14.1   | 14.8       | 10.5      |
| Consumption                    | 30.1           | 20.8    | 25.8    | 31.5    | 38.5   | 45.8       | 44.4      |
| General                        | 19.5           | 13.5    | 16.1    | 20.3    | 23.1   | 31.0       |           |
| Excises                        | 10.6           | 7.3     | 9.7     | 11.1    | 15.4   | 14.8       |           |
| International Trade            | 0.9            | 1.1     | 2.2     | 0.8     | 22.4   | 16.8       | 6.2       |
| Social Security Contributions  | 28.0           | 22.3    | 13.1    | 30.1    | 8.3    | 16.1       | 21.0      |
| Total                          | 100.0          | 100.0   | 100.0   | 100.0   | 100.0  | 100.0      | 100.0     |

* Table 1
Source: Tanzi and Zee (2000)


The most important advances of the reforms approved in the 1990s were the unification of the income tax rates for incorporated organizations and corporations, the unification of the rate for corporations and the marginal rate for natural persons, the introduction of a general regime of withholdings tax payments, and the payments through the banking system.

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6 In this Chapter, a tax reform is a law that changes the tax basis and/or rates, or introduces new taxes.
III. The Tax System: Issues and Policy Recommendations

The Ministry of Finance has estimated that, beginning in 2003, the primary balance would have to be increased by at least 1 percent of GDP to maintain in 2010 the present ratio of public debt to GDP (50 percent) (CONFIS 2002). However, these calculations include neither an increase in public expenditures related to the armed conflict, nor any enlargement in public investment reflecting the need to increase the supply of public goods and services. New estimates indicate a gap of at least 2.3 percent of GDP instead of 1 percent, resulting from the need to increase (a) military expenditure (0.5 percent annually); (b) public investment to maintain the present coverage of public goods (0.5 percent annually); and (c) public expenditure for building penitentiary facilities (0.3 percent annually).

Policy actions aimed at eliminating or reducing the fiscal gap would have to enhance economic growth because the private sector is concerned about public deficits. The approach taken in this Chapter is that the needed fiscal adjustment would have to be shared by an increase in taxes and a reduction in expenditures. The Chapter discusses the means of raising the collection of the central government at least 1.5 percent of GDP annually. Some of the changes proposed, based on efficiency reasons, could however reduce the amount actually collected; the proposed tax increase has to be enough to absorb these losses.

The suggested tax adjustment is framed by the following principles:

- Public expenditure is a more efficient tool for income redistribution than taxation. In general, redistribution through taxation is carried out by increases in taxes on the use of physical capital. Consequently, the minimum gross return demanded from a private project increases, reducing the growth rate of output and income.

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7. The exercise assumes that the measures taken in the last two years (tax reform approved in 2002, law 617 and the constitutional reform on transfers to territorial entities) will produced 0.8 percent of GDP annually

8. These estimates are based on the preliminary findings about fiscal sustainability of the High Commission on Taxes.

9. There is an extensive literature on the quality of fiscal adjustments. In general, there is support for reducing current expenditures instead of increasing taxes. However, the tests provided by different authors have not been conclusive because of the statistical difficulties of separating causes and effects. The fiscal adjustment of Ireland in the 1980s provides an example of these difficulties: the fiscal consolidation occurred during the period of the soaring U.S. dollar. The favorable competitiveness effect of the real depreciation might have overcome the negative output effect provided by the negative fiscal impulse.

10 International experiences about fiscal adjustments based on tax increases are not conclusive. The Clinton adjustment (U.S. 1992) was successful; the De La Rua adjustment (Argentina 2000) was not.
• Exemptions and exceptional regimes make administration more difficult and promote evasion and inequities.
• Developing countries share the experience that the increases in tax rates, above a certain threshold, boost informal markets. Instead of raising rates, the adjustment primarily has to be based on expanding the tax base and eliminating exemptions.

a) National Taxes

The two most important taxes in Colombia, the income tax and the VAT, present distortions. The successive revisions introduced since 1990 have eroded their base (Shome, Handl, and Schenone 2000), and facilitated significant amounts of evasion.

There are several studies about evasion in Colombia. Based on the figures on income distribution, Steiner and Soto (1999) estimate that the corporate income tax evasion rate was 14 percent in 1995, and that the personal income tax evasion rate was 24 percent. Accordingly, the evasion rate for the whole income tax was 20 percent. Using the input–output matrix, they also compared the potential with the actual VAT. For 1991, the evasion rate was 28 percent.

In light of the earmarking of taxes and oil resources, the allocation of public resources through the budget has become a matter of concern. Table 5 provides information on tax earmarking for 1999.

Following are recommendations aimed at increasing tax collection and reducing distortions. They are based on Shome, Handl, and Schenone (2000) and extensive discussions with Ulpiano Ayala.

i. Income Tax

The main problems identified in the income tax are the large number of distorting incentives included in the corporate income tax, and the several exemptions granted by the personal income tax.

**Corporate Income Tax.** The corporate income tax is levied on the world income of national firms, and on income gained by foreign firms in Colombia. The general rate is 35 percent. There is also a minimum presumptive tax on net wealth with a rate of 5 percent; this tax is not neutral because it creates a bias in favor of larger debts. The Colombiam law allows firms to contract with the administration the maintenance of the present tax rules for 10 years, paying an additional rate of 2 percent. The remittances of dividends pay a special tax with a rate of 7 percent. However, gains are exempted if they are invested in the country. There is also a credit for supporting the employment creation.

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11 This issue has become relevant regarding globalization. For a discussion see Tanzi (1995)
12 The tax may create conditions to make back-to-back operations for taxpayers with resources held outside Colombia, thereby reducing the net wealth
Table 5. Colombia—Central Government-Earmarked Taxes (1999)

<table>
<thead>
<tr>
<th>Tax</th>
<th>Earmarked Portion as Percent of the Total</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income tax, VAT, tariffs, gasoline, stamps, financial transactions</td>
<td>24.5</td>
<td>Transferred to other public institutions to support education and health of low-income population</td>
</tr>
<tr>
<td>Income tax, VAT, tariffs, gasoline, stamps</td>
<td>20.0</td>
<td>Transferred to other public institutions to support housing, sewerage, sports and health, and education infrastructure</td>
</tr>
<tr>
<td>Financial transactions</td>
<td>75.5</td>
<td>Restructuring the financial sector</td>
</tr>
<tr>
<td>Surcharge gasoline</td>
<td>100.0</td>
<td>Maintenance of roads</td>
</tr>
<tr>
<td>Liquor and tobacco</td>
<td>100.0</td>
<td>These taxes were transferred to the departments with the aim of financing health and education expenditures</td>
</tr>
</tbody>
</table>


The Colombian law had established a complete adjustment for inflation aimed at introducing in the taxable base the gain and losses created by inflation. However, in 1998, the adjustment on inventories was eliminated, leaving a crippled system.

A number of entities and activities are exempted; the main exemptions are the nonprofit organizations, the public services enterprises (water, sewerage, electricity, telephones, and gas), enterprises located in free zones, livestock funds, collateral funds organized by financial institutions, publishing firms, and new firms operating in areas of natural disaster. Moreover, capital gains resulting from operations with financial values are exempted.

In 1998, 140,000 firms paid 2.3 percent of GDP under the corporate income tax. The bulk was provided by big taxpayers (the unit of large taxpayers manages 1600 taxpayers with legal residence in Bogota). The annual payment with the tax return accounted for 50 percent of this amount.

The number of firms and entities exempted and the sources of income exempted explain the difference between the potential and the actual collection. Moreover, there are items that can be deducted from the amount of the tax or the tax base.

Recommended policy changes include:

- Reducing in stages the corporate rate down to around 32 percent, in order to increase the competitiveness of Colombia as a destination for internationally mobile investment.
- Eliminating exemptions for firms with operations located in the Paez River and other areas of natural disasters, and for particular sectors in publishing firms, lotteries, liquor producers, and cooperatives.
• Eliminating the exemption for capital gains resulting from operations with financial assets
• Setting slower rates of depreciation for some categories of fixed assets (buildings and long-lived machinery) and reintroducing the inflation adjustment on inventories
• Introducing in the tax base the income generated by enterprises of public services, the livestock funds, and funds organized by financial institutions.
• Reintroducing the presumptive income tax on gross assets as minimum income tax; if the tax return establishes a higher tax, the presumptive tax becomes a payment in advance.
• Eliminating the credit for employment generation, compensating with reductions in wage and payroll taxes.
• Eliminating the option to pay in order to limit future tax liabilities and audits
• Reviewing the treatment of charity credits.

Finally, the tax on gross assets is neutral regarding debts. Consequently, adopting this tax could be a more efficient channel to increase taxation on income or property.

ii. Personal Income Tax
Collection of the personal income tax has improved mainly because of the increase in tax collection efficiency. This tax on gross assets is neutral regarding debts. Adopting this tax could also be more efficient if it is implemented with increased amounts of taxes withheld at the income taxation source for different categories of income (such as fees, financial gains, and rents). The amount withheld from wages and payments accompanying annual tax returns provides minor amounts under this tax. The rates of the personal income tax (20, 29, and 35 percent) are similar to those applied in the region, but the initial rate (20 percent) is higher in Colombia. There is also a minimum presumptive tax on net wealth with a rate of 5 percent.

An important number of potential taxpayers are outside the scope of the personal income tax. The threshold for a salary exempted from taxation is much higher in Colombia than in other developing countries. Thus, the high threshold exempted reduces the number of taxpayers; more than 90 percent of wage earners are exempted. Also, this exemption reduces the effective tax rate, the effective rate for the wage earners who fill out and submit tax returns is only 0.8 percent, while the effective rate for natural persons averages 12 percent. As a result of various rates and thresholds, similar amounts of income can generate different amounts of personal income tax depending on the types of income including in the income tax base.

Two issues have to be highlighted about the design of this tax. First, the method of withholding income provides the bulk of the amount levied by the personal

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13 Annual payments under the personal income tax are around 0.2 percent of GDP, 350,000 tax returns were submitted.
income tax—more than 80 percent of the total. The main sources of withheld income include formal sector salaries, fees, financial yields, and rents from real estate. Second, the collection obtained with annual tax returns is very small, between 0.1 and 0.2 percent of GDP.

Compared to international experience, the number of exemptions of the income tax is very high in Colombia. Natural persons with income below three times the average per capita income are exempted, and wage earners pay the tax on only 70 percent of their income (30 percent exempted). Consequently, this tax presents a fairness problem.

A stylized description of the personal income tax collection is the following (as percent of GDP): 0.2 percent comes from the annual tax returns submitted by 350,000 taxpayers; tax returns account for 0.6 percent with retaining of 0.3 percent on salaries and 0.1 percent on other sources of income. While the retaining in the source provides 0.3 percent from labor payments and 1.4 percent from other sources of income. As a result, the amount collected is 1.9 percent of GDP. The effective tax rate for wage earners without tax returns is less than 0.2 percent. However, other sources of income are subject to higher tax rates.

Recommended policy changes include:

- Enlarging the base of the personal income tax by eliminating the 30-percent exemption for wage earners,\(^{14}\) and introducing a general exemption for all taxpayers\(^ {15}\) equivalent to two times the minimum wage.\(^ {16}\)
- Introducing new rates of 15, 25, and 35 instead of the present rates of 20, 29, and 35.
- Reintroducing the presumptive income tax on gross assets as minimum income tax; if the tax return establishes a higher tax, the presumptive tax becomes a payment in advance.
- Introducing a common definition of salaries paid and earned for purposes of the corporate and personal income taxes and for purposes of payroll taxes.

iii. Value Added Tax

The key problems with the VAT are the transactions exempted and various rates, including zero rates for operations other than exports (material for primary schools, books and scientific magazines, etc.). The implicit VAT and the regime for capital goods add other difficulties in managing this tax.

The design and administration of the VAT are complex, with numerous exemptions, various rates, an implicit VAT aimed at protecting privileged domestic activi-

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14. This change will have effects on wage earners with salario integral. The elimination of these effects requires changes in the labor code.
15. The amount of the general exemption will have to be coordinated with the VAT reform if the "first best approach" is followed (see the section about the VAT).
16. This exemption is fixed in a number of minimum wages.
ties, and a special procedure for the VAT on capital goods. The productivity of this tax is low compared to the international experience. As an indication of the narrow base and evasion, the VAT collection as a ratio to GDP has been below a third of the VAT rate. With the aim of strengthening efficiency and fairness, a reform has to enlarge the base and bring all rates in line with the general rate.

The optimum reform of the present system, aimed at increasing collections and reducing distortions, would eliminate all exemptions and establish a single rate of 16 percent. To protect low and medium income people, targeted subsidies and a general exemption in the personal income tax should be introduced. There should be a zero rate for exporters, other zero rates should be removed. The VAT on capital goods should be credited against the VAT. A national excise tax regime for luxury goods other than beer and tobacco should be introduced with a flat rate of 30 percent.

As a transition the recommended policy changes include:

- Eliminating the rates of 8 and 10 percent.
- Expanding the base of VAT to include paper and printing, beer and tobacco, and personal services, transportation, and construction
- Eliminating the implicit VAT on selected imports.

iv. Tax on Financial Transactions

The tax on banking transactions, introduced in 1998, has become an important source of funds. Its low administrative cost is an advantage. The Pastrana Administration has defended this tax on the basis that it could capture tax revenues from the informal economy and illegal activities, including drug traffic and paramilitaries. However, the banking sector resisted the introduction of the tax because it discourages financial intermediation. The composition of monetary aggregates has changed in favor of cash since the introduction of the tax reflecting the actions taken by private agents aimed at avoiding this tax. In spite of the distortions, this tax could be maintained as a mean of collecting resources. However, the loopholes of the regime and the shift of people are eroding the effectiveness of this tax to collect more resources pretty fast.

v. Taxes on International Trade

Taxes on foreign trade have been reduced since the beginning of the 1990s, reflecting the trade reform carried out in the first part of that decade. The amount collected in 2001 was only 1 percent of GDP. Rather than an increase in the amount collected, further changes in trade policies would be oriented to reducing the possibilities of trade diversion involved in the Andean Agreement, and preparing the country for its entry into the American Free Trade Zone initiative.

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17 The implicit VAT was introduced in 1998. The Appendix to this chapter provides a description of this tax and the distortions involved.
vi. Social Security Contributions

Social security contributions have averaged 3.2 percent of GDP; their relative weight in the total collection has been around 19 percent. These taxes on payrolls have suffered an important reduction since 1998, reflecting the unemployment increase in the aftermath of the 1998–99 crisis, and consequently the reduction in the tax base.

Because the level of payroll taxes is very high in Colombia, there is no room to increase rates. Payroll rates will push up unemployment because of the negative link between taxation and employment in the formal labor market. Further reform in these areas should be focused on the cost of using labor, the financial imbalances and iniquities of the pay-as-you-go pension system, and the misallocation of resources in the health insurance scheme.

vii. Taxation on Oil Activities

The new royalty system, introduced recently, seems to provide flexible rules balancing risks and reward for the investor and the government. Because oil is a non-renewable resource, the most important issue is how the resources provided by the oil production should be divided between present and future generations and between the national and subnational governments. Official projections for the medium term assume that a new oil field, with a capacity similar to Cusiana, could begin production in 2004–05. With the aim of preserving resources for future generations, the resources provided by other new fields could be used to repay public debt.

b) Subnational Taxes

The national government has transferred excise taxes on the consumption of liquor, beer, and tobacco to the departments. The departments also manage these taxes with the exception of beer, which continues under the administration of the central government. There are other minor taxes; some of them overlap with similar taxes managed by municipalities (such as the tax on motor vehicles, taxes on gambling, and the slaughter tax). The national government needs to streamline its laws regarding subnational taxes, eliminating exemptions and special regimes.

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18. Payroll taxes (as percent of the payroll) are (a) pension contributions, 13.5 percent; (b) health insurance, 12.0 percent; (c) severance fund contributions, 8.3 percent; (d) accident insurance, 2.5 percent; (e) training, 2.0 percent; familiar welfare and other allowances, 7.0 percent. Total: 45.3 percent (36.2 percent paid by employers and 9.1 percent paid by employees).

19. The National Directorate of Planning has estimated that the supply of jobs is reduced between 0.25 and 0.35 percent for each percentage point of increase in payroll taxes. For the present size of the labor market this means the destruction of between 40,000 and 57,000 jobs.

20. A labor reform may involve a reduction in the level of payroll taxes.
The main taxes managed by the departments (liquor and tobacco) have low elasticity and are subject to high evasion. With regard to the tax on liquor, there is room for improvements. The monopoly in the supply of liquor established by some departments has seriously distorted the liquor market. As a result, the size of the market and the potential amount of the tax collection have been reduced. A reform aimed at increasing the tax revenue levied on liquor would have to eliminate monopolies and reduced tax rates.

Municipal taxation rests on two main taxes, a property tax (impuesto predial unificado) and a business tax (impuesto de industria y comercio). In addition, in recent years, the surcharge on the price of gasoline has become an important source of revenue for municipalities (Table 6). The property tax has a fair revenue-raising potential. To reach the potential, the transfer of technologies to identify properties and assess their values is a key element. The contribución de valorización, which partly transfers the cost (and benefit) of specific public projects to the direct beneficiaries, is another tax with good prospects for increasing revenues.

In addition to these taxes, municipal governments operate several small taxes (a slaughter tax, a tax on public performances, gambling taxes, stamp taxes, and a tax on the extraction of sand, gravel, and stones).

In spite of the improvements that the municipalities have made as a whole, they are very dependent on the transfers provided by the national government under the fiscal decentralization. The relative weight of these transfers in total receipts is extremely high especially for small municipalities.

Fiscal decentralization has been under pressure because of evidence of the distorted incentives including in the system. Territorial entities may have been inhibited from developing their own tax base because of the reliance on transfers provided by the central government. It has also been noted that the quality of expenditures has not improved. The capacity of territorial entities of running deficits and bor-

<table>
<thead>
<tr>
<th>Taxes Collected by Municipalities (1999)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of the Total</td>
</tr>
<tr>
<td>On property</td>
</tr>
<tr>
<td>Industry and commerce</td>
</tr>
<tr>
<td>Surcharge on gasoline</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: High Commission on Taxes

21 The Pastrana Administration has presented a draft bill reforming the taxation on liquor. Analysis of the market and a reform proposal can be found in Oxford Center and FEDESARROLLO (2001).
rowing freely in financial markets, and the possibility of the central government bail-
ing out local governments, have become matters of concern. To correct these prob-
lems, the Congress approved both a constitutional reform (2001), changing the sys-
tem of transfers, and Law 617 of 2001 establishing tight fiscal rules for departments
and municipalities. These new rules have reduced the need to share national taxes
with subnational entities.

c) Tax Administration

In most countries, both developed and developing, there is room for improving tax
administration. The main objectives of a tax reform strategy would be to change the
behavior of the average taxpayer, and to raise the compliance rate of the taxpayer
population (Baer and Toro 2000). These main objectives must also drive the tax
reform, including the Colombian.

The multiple exemptions of the income tax and the VAT have created some of
the difficulties faced by the Colombian tax administration. Furthermore, the
implicit VAT and the VAT on capital goods have added more problems. On one
hand, a new tax adjustment would improve the capabilities of the administration to
enlarge the tax bases and eliminate exemptions. On the other hand, the administra-
tion would be worse off under some proposals recently advanced. For instance, the
administration would be overloaded if the tax on financial transactions were cred-
ted to the income tax.

In recent years, the Colombian administration has carried out a number of pro-
grams aimed at improving taxpayer compliance and reducing evasion. In this regard,
Law 488 of 1998 improved the administration through the designation of the
Directorate of National Taxes and Customs (DIAN) as an autonomous institution
for budgetary and administrative purposes, and the inclusion of a fiscal police with
the aim of supporting tax collection. An assessment about the budgetary autonomy
for the DIAN provided by law 488 is needed.

Law 488 also introduced the auditing benefit, however which facilitates evasion.
Firms can fix the amount of income tax they pay for a number of years with an
increase of 30 percent in the tax declared. In return, firms receive as benefit, after a
period of time following the submission of the tax return, exemptions from tax
auditing, which is normally carried out by the tax administration.

The strategy pursued by the DIAN addresses the main issues on tax administra-
tion in the areas of collection, control, cashing, and efficiency indicators. The suc-
cess in increasing taxpayer compliance hinges on the balance between the different
aims of the plan. Identification of taxpayers, control of taxpayers responsible for
submitting tax returns and paying taxes, and services supporting taxpayers will
increase adherence to the rules.

In this regard, important advances have been introduced under the Public Finan-
cial Management Project (PFMP) prepared with the support of the World Bank.
Various steps have been taken to help taxpayers fulfill their obligations. These
include establishing special units to provide services to taxpayers, importers and exporters, including facilities for large taxpayers to file tax returns. The impact of these efforts has been reflected in the increase in the number of tax and customs declarations filed. The PFMP has provided the DIAN with tools to manage the heavy information flow associated with 4 million tax declarations filed annually. A new taxpayer current account system has been implemented, along with a system that updates the current account by incorporating administrative decisions. The system can create new products to improve the enforcement capability of Colombian tax administration. It would be important to explore how the programs carried out under the PEMP could be continued and deepened.

The plan has to be accountable, establishing indicators for the efficiency of the management. These indicators have to cover monetary targets, such as the recovery of overdue taxes, and other nonmonetary goals, such as deadlines for actions of the administration and efficiency ratios for controlling tax returns and payments.

In the area of collecting, actions aimed at refining and updating the catalogue of taxpayers will continue as a key element of the plan. At the same time, the procedures to detect taxpayers with overdue tax returns and payments have to be strengthened. As an important complement, in the unit for large taxpayers, targets about the number of taxpayers with overdue tax returns and payments would have to be redefined.

The annual budget establishes targets for the DIAN collection and for the different units. The plan to control compliance is articulated around these targets. This area may improve developing actions focused on the main taxes, the income tax, and the VAT. Concerning the income tax, the procedures used for the administration to cross-check data from different sources show good potential for increasing revenues. In the case of the VAT, there is room for enhancement of the billing procedures, an effective control on VAT returns, and cross-checking of data.

Finally, in the area of collecting tax arrears, actions could be enhanced establishing targets on the administration portfolio of overdue credits. At the same time, it is important to maintain the financial cost of taxpayers’ overdue debt in line with market rates.
Appendix
A Summary of Previous Tax Reforms

I. Reforms Approved by the Gaviria Administration (1990 and 1992)

To a considerable extent, the changes in public finances that took place in the 1990s reflect political commitments prescribed in the new Constitution and the trade reform carried out by the government during 1990–94. These changes, which sought to increase social fairness and efficiency, involved increases in public expenditures without a parallel increase in revenues. As a result, new revenues were needed to support the new constitutional pact and the openness process.

The aims of the reform approved in 1990 were to substitute the lost revenues resulting from the trade reform, and promote private savings. On one hand, the VAT rate was increased from 10 percent to 12 percent; the tax base was expanded, including some services with a rate of 4 percent. At the same time, the rates of 20 percent and 35 percent on luxury goods were maintained. On the other hand, capital gains resulting from operations with financial values were exempted. Investment funds were exempted from income tax. In the 1990s taxes on profit remittances were reduced to 20 percent, and in 1996 they were reduced to 12 percent. In addition, the reform introduced a fiscal amnesty for financial capital held outside Colombia. The changes introduced in the VAT and the income tax increased the collection 2 percentage points of GDP.

Law 6 of 1992 introduced new changes in the VAT and the income tax. This law expanded the VAT base and increased the rate from 12 percent to 14 percent; the rates on luxury goods were to be 20, 35, and 45 percent. The VAT on capital goods could be deducted from the income tax. This change distanced the Colombian VAT from the consumption-type VAT, the easiest VAT model for administrative purposes. Since the approval of Law 6, the administration had to define capital goods and control the breakdown of purchases between inputs and investment.

The rate of income tax was increased from 35 percent to 37.5 percent because a surcharge was added. Beginning in 1996, the tax on profit remittances was reduced gradually to 7 percent. A temporary contribution on mining activities (oil, gas, coal, and nickel) was created. This surcharge could be credited to the income tax. The rate of 14 percent for the VAT and the surcharge on income tax were established for the period 1993–97.

22. Compared to a consumption-type VAT, this scheme provides a once-and-for-all increase in the collection because tax returns and payments are bimonthly for the VAT and annual for the income tax.
II. The Reform of 1995

The main objectives of the 1995 reforms were to establish as permanent the VAT rate of 14 percent, and substitute the special contribution of the income tax for new rates. A new VAT rate of 16 percent was established beginning in 1996. To improve VAT administration, some taxpayers became retainers of 50 percent of the VAT included in their purchases. This reform enlarged the income tax base and included public enterprises and public services enterprises as taxpayers under this tax. If the retain under the income tax were used to capitalize the firms or finance new investments, they would be exempted for eight years.

Law 223 eliminated the surcharge on income tax and established new rates for corporations (35 percent) and persons (20, 29, and 35 percent). A presumptive tax was created on gross assets with a rate of 1.5 percent, and the rate on the presumptive tax on net wealth was increased from 4 percent to 5 percent. Taxpayers have to pay the higher alternative, and the payment was going to be considered an advance on the income tax. The temporary contribution on mining activities was substituted by a permanent surcharge with gradual reductions until 2000. The new surcharge could not be credited to the income tax. In addition, the law established general rules for the taxes collected by the departments on beer, liquor, and tobacco.

The results achieved by this reform did not meet expectations because additional revenues were not collected. Generous exemptions from the income tax for investments in the area of the Paez River might explain the disappointing result. With the aim of providing help for the region of Paez River, Law 218 of 1995 granted exemptions for 10 years on income tax for investments made in the departments of Cauca and Huila. Also, the imports of capital goods for investments in these departments received tariff exemptions.

Law 345 of 1946 introduced a compulsory investment in Security Bonds for corporations and persons with a wealth over COP150 million.

III. The Reform of 1998

The main objective of this reform was to reduce the fiscal deficit that in the central government was 5 percent of GDP. The principal changes were the elimination of exemptions for an important number of imports, and the VAT rate was reduced from 16 percent to 15 percent. The reduction became effective at the end of 1999. At the same time, Law 488 established a rate of 10 percent on some goods and services. Again, the VAT on capital goods was changed; the tax would have to be credited to the income tax instead of being deducted from it.

This reform created a new form of VAT, the "implicit VAT," as a way of protecting domestic activities from imports exempted from the VAT. In customs, the general rate is levied on imports, with some exemptions. In addition, imports exempted from the VAT pay an implicit VAT. The similar local production is also exempted...
from the VAT. Consequently, the VAT included in their purchases of inputs becomes a cost. Using domestic cost structures, the administration calculates for a number of products the implicit VAT as the VAT that these products would have paid had they not been exempted. The implicit VAT became a burden to administer. Decree 1344 of 1999 established the implicit VAT for 78 tariff items with rates between 0.7 percent and 9.6 percent. Since the number of exempted goods is higher, it is unclear how the items were selected. The collection under the implicit VAT is 0.1 percent of GDP.\footnote{23}

This reform introduced changes in the design of the income tax. As a support for job creation, a deduction from the amount of the tax was introduced. The presumptive tax on gross assets and the inflation adjustment for inventories and purchases made in the fiscal year covered by the tax return were eliminated.

This law provided more resources for the departments and the capital through a new surcharge on ACPM. Fifty percent of the collection under this surcharge was for the departments and the city of Bogotá; the other 50 percent was earmarked for the improvement of national roads.

Using special powers, President Pastrana signed a decree creating a temporary tax on financial operations at the rate of 0.2 percent.

IV. The Reform of 2000

In 2000, the Pastrana Administration presented a new tax reform with the aim of reducing the growing fiscal deficit. To increase revenues the tax on financial transactions became permanent and its rate was increased to 0.3 percent, and the VAT rate was increased again from 15 percent to 16 percent. Some services previously exempted from the VAT were included in the base of this tax. In 2001, taxes collected from the main taxes (the income tax, the VAT, the tax on financial operations) increased. Some writers have identified the tax adjustment as the main cause of the low economic growth that year.

Law 663 eliminated the VAT on capital goods as a deduction from the income tax. Since the inception of this law, firms have included the VAT on capital goods in the cost of the investment. Therefore, a portion of the tax is included in the annual capital amortization credited to the income tax.

\footnote{23 Recently, the Andean High Court ruled that, under the Andean Agreement, the levy of this tax on imports from the other Andean partners is illegal.}
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Public Debt Sustainability and Management

This Chapter was written by Mario Adolfo Cuevas, Clemente Luis Del Valle, and Vicente Fretes Cibils.¹

I. Summary

Over the last seven years the level of total gross public debt in Colombia has been rising steadily in absolute terms and as a proportion of GDP. In addition, public debt service has risen significantly. Both the level of the debt and the debt service are worrisome, and to avoid a debt crisis the government must further strengthen its primary fiscal balance—from a primary surplus of about 1.4 percent of GDP in 2001 to a permanent primary surplus of at least 4 percent of GDP in the medium term. To achieve this, the government will have to implement policies to strengthen the fiscal “fundamentals” (through cutting public sector expenditures and increasing public sector revenues). Moreover, the government must complement the fiscal adjustment with improvements in public sector debt management (through strengthening debt management capacity and debt portfolio management).

II. Background

The total gross stock of Colombia's public debt,² both internal and external, increased from about 27 percent of GDP in 1994 to about 58 percent of GDP in

¹ This chapter has benefited from comments provided by several colleagues. We would like to thank them and especially Jorge Garcia-Garcia, who gave us useful suggestions on an earlier draft.
² There are several types of public sector liabilities other than "debt." The following terminology is adopted throughout this paper (a) direct-explicit liabilities are liabilities established by law or contract and include "full faith and credit" debt, expenditures
2001. This resulted primarily from rising fiscal imbalances at different levels of government throughout the decade (see Figure 1). The steady growth in fiscal imbalances first became visible in the central government accounts, but this was initially masked by surpluses in other parts of the public sector.

Figure 1. Public Sector Balances

![Graph showing public sector balances from 1991 to 2001.](image)

*Source: IMF and WB Staff estimates*

3. In net terms, the total stock of public debt represented about 46 percent of GDP in 2001. Net debt is total gross debt minus the stock of Treasury bonds (TES) held by all public sector entities. The evolution of debt aggregates in the last decade is discussed with reference to gross aggregates because estimates of net debt in Colombia are available only from 1999 onward.

prescribed by budget law, and claims for services rendered (the timing and amount of these liabilities may nevertheless be affected by contingencies); (b) direct--implicit liabilities are liabilities on which it is presumed, with good probability, that the government will make good, but without a legal obligation to do so; (c) contingent--explicit liabilities are recognized in legally binding documents, but the extent and timing of payment hinges on uncertain future occurrences; and, (d) contingent--implicit liabilities refer to an expectation that government will accept a liability without having a legal obligation to do so. For more details on the classification of public sector liabilities, see *Budgeting for Fiscal Risks*, by Allen Schick, World Bank, September 1999.
The central government accounts started the decade of the 1990s with a small surplus. However, since 1992 the central government has posted a series of increasing deficits, which peaked in 1999 with a deficit of 7.4 percent of GDP. Total expenditures increased from about 15 percent of GDP in 1992 to nearly 20 percent of GDP in 1999. By contrast, total revenues fell from about 15 percent of GDP in 1992 to 12 percent in 1999. Behind the deterioration in the central government accounts are some of the institutional changes brought about by the 1991 Constitutional reform, and the resulting impacts of the economic policies implemented throughout the decade.

The 1991 reforms transferred to subnational levels of government considerable discretionary spending powers, but not the responsibility to fund this spending. As a result, the central government financed through fiscal transfers subnational expenditures over which it had little control. In addition, the central government had often negotiated large increases in the salaries and benefits of employees of subnational governments (for example, teachers and health sector personnel) which subsequently had to be funded through additional fiscal transfers. Moreover, recognition of central government implicit and contingent liabilities arising, for example, from the public pension funds (the Cajas Públicas) and the financial sector (as evidenced in the 1999 restructuring of the financial sector) put upward pressure on expenditures.

Other reforms (although correct for increasing efficiency in resource allocation) negatively affected fiscal revenues (for example, trade liberalization led to a fall in tariff revenues). More important, several reform packages aimed at strengthening tax revenues were only partially successful. The economic slowdown compounded fiscal weaknesses because tax revenues fell in tandem with sluggish economic activity. This led to increased reliance on nonrecurrent revenue-generating measures, such as privatization, and more significantly on increased public sector debt to finance the central government deficit.

By the mid-1990s it became evident that the public sector accounts were rapidly deteriorating. The public sector deficit rose steadily—basically tripling from just over 2 percent of GDP in 1995 to 6.4 percent in 1999. Large central government deficits, growing deficits at the subnational level, dwindling social security surpluses, and volatile oil revenues all contributed to the deterioration in the public sector balance. This is evidenced by the continued erosion of primary balances in the second part of the decade, when the public sector primary balance went from a very small deficit in 1996 to a deficit of 2.7 percent of GDP in 1999.

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4. Total public sector revenues have remained at around 27 percent of GDP since the mid-1990s, while total expenditures increased from just under 30 percent of GDP in the mid-1990s to about 33 percent of GDP by 1999. Throughout this period, the Central Bank posted a small average surplus equivalent to 0.28 percent of GDP.
The increased debt service augmented the vulnerability of public sector finances. Total public debt interest service increased from about 2.2 percent of GDP in 1994 to about 4.5 percent of GDP in 2000. Total interest service on internal debt increased more than proportionately—almost threefold—from 1 percent of GDP in 1994 to about 2.9 percent of GDP in 2000 (see Figure 2). In 2001, total interest service remained roughly stable at 4.5 percent of GDP, with a fall in domestic interest payments to an estimated 2.3 percent of GDP being offset by an increase in external interest payments.

In this context, both the level and structure of public sector debt changed. In the early 1990s, the government reduced its total debt from about 40 percent of GDP in 1991 to about 30 percent of GDP in 1994—mostly through debt retirement and buy-back operations, financed in part by high oil revenues. External debt fell sharply from about 32 percent of GDP in 1991 to about 14 percent of GDP in 1996. However, as the public sector accounts began to deteriorate in the mid-1990s (particu-

Figure 2. Interest Payments of the Public Sector

![Graph showing interest payments of the public sector from 1994 to 2001.]

Source: IMF and WB Staff estimates

5. The real average rate of interest paid on domestic government debt has been high and volatile. It has averaged 7.3 percent since 1997 (for one-year TES securities), peaking at around 20 percent in 1998 and falling as low as 2.2 percent more recently. It follows that the steady increase in the government’s interest burden cannot be explained by high real interest rates alone, although this factor cannot be neglected as an important cost source.
larly central government accounts), debt levels increased. Throughout this period, central government debt increased more than proportionately, thus taking an increasing share of public debt. Of the total gross public debt outstanding in 2001, about 40 percent of GDP was central government debt (up from about 16 percent of GDP in 1991). A sizeable portion of the change in the level of total debt occurred through an increase in external debt, which reached about 26 percent of GDP in 2000, bringing the share of external debt in total debt close to the levels of the early 1990s. Most of the increase in the external debt after 1996 has been driven by central government borrowing—other levels of government have faced statutory and procedural restrictions on external borrowing. However, both the central government and subnational entities have continued to issue domestic debt to finance their increasing expenditure program throughout this period. As a result, domestic gross public sector debt rose steadily, from about 14 percent of GDP in 1994 to about 27 percent of GDP by 2000 (see Figures 3 and 4).

This period is also characterized by a drastic change in the sources of finance (see Figures 5 and 6). At the beginning of the 1990s most new financing was coming from nonmarket sources (for example, bilateral and multilateral agencies, and the

**Figure 3. Gross External and Domestic Debt of the Public Sector**

![Graph showing gross external and domestic debt of the public sector.](image)

*Source: IMF, MoF, Contadora and WB Staff estimates*

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6 These restrictions are discussed in the Legal Framework and Governance subsection of this Chapter
Central Bank). However, during the 1990s, as a result of a transformation of the overall public sector institutional framework, the government relied more on the financial market (both internally and externally) as the main source of funding—half of domestic debt and two thirds of external debt are now market based.

More specifically, the implementation of the Constitutional reforms of the early 1990s led to elimination of Central Bank financing of the fiscal deficit. As a result, the central government had to tap the domestic market on a more competitive basis to finance its expenditure program. The domestic debt of the central government continued to rise through a large expansion in issuance of Treasury bonds (TES, see Annex I). This increase resulted mainly from (a) the need to finance growing deficits, and (b) an attempt to limit the exposure to currency risk and to make only limited use of additional external financing. Tapping the domestic market was also

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7. In 1990, debt to the Central Bank amounted to 50 percent of the total internal debt of the public sector—falling to less than 1 percent by the end of the decade. The Central Bank has nevertheless continued to contribute to financing the government through transfers of its balance sheet surpluses (for example, in 2001, these transfers represented about 0.7 percent of GDP).

8. In the mid-1990s, the authorities expected large foreign currency inflows resulting from exploitation of the recently discovered oil fields (Cusiana). This expectation also created incentives for increasing reliance on the local capital markets.
expected to foster development of the domestic capital market through lengthening of the yield curve and deepening the market.\footnote{The share of TES bonds of longer maturity—five years or longer—increased from 12 percent in 1995 to 37 percent of the outstanding stock of TES bonds in 2000}

The sources of external financing also changed considerably throughout the decade (see Figure 6). Whereas in 1990 official debt amounted to 66 percent of the total stock of public external debt, this had fallen to only 39 percent by 1999. The share of commercial bank debt fell relative to the total stock of public external debt, from 32 percent in 1990 to 23 percent in 1999. In contrast, sovereign bonds gained considerable ground over this period, increasing from about 2 percent in 1990 to over 50 percent of the total external debt of the public sector by 2001. This resulted mainly from Colombia’s good access to international financial markets and its borrowing strategy.

In contrast to the case of central government debt, the stock of subnational government debt has remained relatively stable since 1991—fluctuating between 7.4 and 9.2 percent of GDP. The borrowing requirement of subnational public entities has been somewhat limited, in part because financing gaps have often been met through direct fiscal transfers from the central government (as has already been mentioned). In fact, the external debt of subnational entities has been continuously falling, mainly as a result of the restrictions on external borrowing by subnational entities, that is, they require Congressional approval to issue external debt. However,
this has been fully compensated by an increase in domestic debt. In 1991, the domestic debt of subnational levels of government amounted to about 3 percent of GDP, rising to about 5 percent of GDP by 1995, and to about 6 percent by 1999 (see Figure 7). Domestic commercial bank lending to subnational governments has been the main source of the increase, either directly or through rediscounting of Financiera de Entidades Territoriales (FINDETER) loans. This has partly resulted from (a) the explicit or implicit credit guarantees from the central government, and (b) loopholes in the implementation of the Ley de Semifondos, aimed at regulating subnational government borrowing, creating “perverse” incentives for both subnational governments and banks to expand credit rapidly.

Recent fiscal adjustment efforts have made good progress in restoring a fiscally sustainable path. In 2000, the public sector deficit was almost halved, to −3.5 percent of GDP; moreover, the primary fiscal balance showed a surplus (although small) of around 0.9 percent of GDP—for the first time in several years. However, there are still large and growing implicit and contingent public sector liabilities (arising mainly from the pension system in the Social Security system, the financial sector, and subnational levels of government), which are not yet fully reflected in the fiscal accounts, threatening Colombia’s fiscal stability in the future.10

10 The nature and size of this type of liability is discussed at greater length in other Chapters.
III. Issues, Diagnosis, and Policy Recommendations

a) The Primary Balance and Debt Sustainability

The current level and structure of Colombia’s public sector liabilities are risky and vulnerable. Should current trends continue in the absence of comprehensive policy reforms, particularly in Social Security, public sector debt is likely to become unsustainable. To analyze the sustainability of public sector debt, we calculate the primary fiscal balance necessary to keep public sector debt on a sustainable path using a model that includes (a) the present value of all net public sector liabilities (including implicit and contingent liabilities from Social Security); and (b) key economic parameters and projections in a base case scenario (see Annex II) for a

\[ \text{This is the level of the primary balance expressed as a ratio to GDP that if generated "permanently" by the government, would keep the debt-to-GDP ratio sustainable. However, the debt-to-GDP ratio does not necessarily "stabilize" or reach a "constant" value during the projection period, because the steady state debt-to-GDP ratio is achieved only in the long term.} \]
detailed discussion of the model and Table 1 for a summary of key assumptions and projections).  

According to the analysis, to avert an explosion of the debt-to-GDP ratio, the public sector has to generate a permanent primary surplus of about 4 percent of GDP. This adjustment can only be done through a combination of measures to simultaneously (a) cut public sector expenditures, and (b) increase public sector revenues. (For details on the specific policy actions and measures to achieve both (a) and (b), see Chapters on the Macroeconomic Framework and the Tax System.) Such level of fiscal adjustment is a necessary condition for ensuring fiscal sustainability and avoiding the outcome of other countries (for example, Argentina) that have delayed strengthening the “fundamentals,” particularly the fiscal accounts, through financial engineering (see Annex III).

Moreover, by comparison, for the last six years the average primary balance-to-GDP ratio was −0.37 percent (that is, a deficit). During this period, the debt-to-GDP ratio grew very rapidly (the average expansion rate of the debt-to-GDP ratio was about 6 percent per year), thus suggesting that the current path of the debt-to-GDP ratio in the absence of adjustment is not sustainable. It follows that in the absence of comprehensive reforms, keeping debt on a stable path requires a sustained fiscal adjustment in the primary balance of at least 2.6 percent of GDP (to bring the primary surplus to 4 percent of GDP, from about 1.4 percent in 2001). If the primary surplus were kept permanently at 4 percent of GDP, it is estimated that

<table>
<thead>
<tr>
<th>Table 1. Key Assumptions and Projections* (percent)</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>2002</strong></td>
</tr>
<tr>
<td>Real GDP Growth (p.a.)</td>
</tr>
<tr>
<td>Inflation (p.a.)</td>
</tr>
<tr>
<td>Nominal Exchange Rate</td>
</tr>
<tr>
<td>Depreciation</td>
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<td>Real Interest Rate</td>
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<tr>
<td>Total Public Sector Debt (of GDP)</td>
</tr>
<tr>
<td>Domestic</td>
</tr>
<tr>
<td>External</td>
</tr>
</tbody>
</table>

*Base case scenario

12. In the base case scenario, it is assumed that some fiscal policy reforms are implemented, but more comprehensive reforms (for example, reforms to the pension system in the Social Security System) are only partly implemented.

13. Primary balances are defined here with respect to the consolidated public sector, including Social Security and subnational government entities. For consistency with other chapters, we consider that seigniorage revenues accrue to the government "above the line" (through the reported Central Bank balance).
The total net debt of the public sector would nevertheless continue increasing, reaching about 57 percent of GDP by 2010 (see Table 1).

The vulnerability embedded in public finances in the absence of comprehensive reforms can also be shown by projecting the path of the total net debt of the public sector under the assumption that the primary balance-to-GDP ratio is kept constant at the 2001 surplus level (just over 1.4 percent of GDP). As can be seen in Figure 8, total net debt would rise from about 46 percent of GDP in 2001, to about 80 percent of GDP in 2010 (assuming real GDP growth of 3.5 percent per year). In this scenario, the debt-to-GDP ratio would be rising at an average annual rate of about 8 percent per year, implying an acceleration in the rate of increase of the debt-to-GDP ratio from the 1994–2000 level (when the debt-to-GDP ratio increased at an average annual rate of about 6 percent).

Figure 9 shows the path of the primary balance required to stabilize the debt-to-GDP ratio at the 2001 level (about 46 percent of GDP). As can be seen, the pri-

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**Figure 8. Debt-GDP Ratio**

*Primary Balance Constant at 2001 Level*

Source: World Bank estimates  GDP growth at 3.5 percent p.a.

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14. If the 2001 primary balance was adjusted to filter out cyclical or noise components, the resulting "structural" primary balance would in fact be lower, since unusually high oil revenues improved the fiscal accounts that year. With the primary surplus kept constant at the lower, adjusted level, the debt-to-GDP ratio would increase even faster. Similarly, the size of the fiscal adjustment required for debt sustainability would be greater than 2.6 percent of GDP.
mary surplus would have to be maintained in the range of 4 to 6 percent of GDP in the next decade to keep the debt-to-GDP ratio constant (higher than the 4 percent of GDP required to keep debt on a moderately rising but still sustainable path).

Table 2 shows the sensitivity of these calculations to changes in the rate of GDP growth; for example, if GDP growth is 2.5 percent per year in the long term (instead of 3.5 percent), the permanent primary surplus that keeps the debt-to-GDP ratio along a sustainable path is 6.2 percent of GDP (instead of 4 percent, as before). The sensitivity of these calculations to the recognition (explicitly) of liability payments arising from Social Security (mainly pensions) in a scenario of limited structural reforms is also shown in Table 2. For example, if GDP is assumed to grow at a rate of 3.5 percent per year and Social Security “payments” (of the implicit liabilities) are excluded from our calculations, a permanent primary surplus of 0.8 percent of GDP would be sufficient to keep the debt-to-GDP ratio on a sustainable path. This should be contrasted with the 4 percent primary balance-to-GDP ratio required once Social Security (implicit liabilities) are included explicitly as flow-payments in these calculations.15

15 Should comprehensive Social Security and other reforms take place, the present value of contingent and implicit government liabilities could fall sharply, implying that the permanent primary surplus required to keep the debt-to-GDP ratio on a sustainable path would be smaller than 4 percent of GDP.
Table 2. Permanent Primary Surplus: Sensitivity Analysis* (percent)

<table>
<thead>
<tr>
<th>GDP Growth Rate</th>
<th>1.5</th>
<th>2.5</th>
<th>3.5</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Including Social Security</td>
<td>8.0</td>
<td>6.2</td>
<td>4.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Excluding Social Security**</td>
<td>1.7</td>
<td>1.2</td>
<td>0.8</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*Permanent primary surplus as a percentage of GDP required to ensure a non-explosive debt path  
**Hypothetical scenario that excludes the future fiscal impact of implicit pension liabilities

The impact on debt ratios of slower long-term GDP growth can also be illustrated with reference to a slow-growth scenario (see Figure 10). If it is assumed that the primary balance quickly converges to 4 percent of GDP during the projection period, but that GDP growth is slower than in the base case (1.5 percent annually, instead of 3.5 percent), *ceteris paribus* projected total debt would rise to almost 70 percent of GDP in 2010 and keep rising thereafter—instead of stabilizing at about 57 percent as in the base case. Furthermore, since the permanent primary surplus that generates a nonexplosive debt path with long-term growth of 1.5 percent annually is 8 percent of GDP (when pension liabilities are included in the calculations) it is clear that in the slow-growth scenario, a primary surplus of 4 percent of GDP is not consistent with a stable debt path.

Figure 10. Debt-GDP Ratio

*Primary Balance Constant at 4 percent of GDP Slow Growth Scenario*

Source: World Bank estimates GDP growth at 1.5 percent p.a.
The average real interest rate has also impacted the fiscal accounts in the past, contributing to the overall fiscal deficit. For example, during 1995–96 and 1998–99, from the strictly financing needs of the public accounts, about half of the increase in the overall financing needs of the public sector was due to increased domestic interest payments. Put differently, about half of the increase in total debt in those years could be attributed to financing current interest payments on domestic debt. During 1995–2001 (a period of rapid expansion of public debt stocks) the real interest rate on domestic public debt averaged about 8.5 percent. By contrast, with fiscal adjustments, the average real interest rate on domestic debt could fall to a range of 5 to 6 percent.

We also estimated the sensitivity of permanent primary surplus to changes in average real interest rates, ceteris paribus (Table 3). For example, if Social Security payments (of implicit liabilities) were included in the analysis and real interest rates amounted to about 5.5 percent over the long term (instead of 5.2 percent as in the base case), the permanent primary surplus required to restore fiscal sustainability would be 5.1 percent of GDP (instead of 4 percent of GDP as in the base case).16

In sum, the analysis shows that Colombia needs to further strengthen its fiscal accounts in order to increase the primary fiscal balance and ensure fiscal sustainability in the medium and long term. This can only be achieved through policy actions that will cut public expenditures and increase public revenues. This is necessary because, even under a relatively benign macroeconomic scenario but in the absence of comprehensive reforms, an adjustment of at least 2.6 percent of GDP in the primary surplus from the 2001 level is required to restore fiscal sustainability. If this adjustment in the primary balance were carried out, the debt-to-GDP ratio would nevertheless continue rising, reaching about 57 percent of GDP by 2010, but this ratio would likely be in a nonexplosive path.

b) Vulnerability and Management Risks in the Debt Structure

To complement the fiscal adjustment, Colombia needs to strengthen its debt management capacity to increase its efficiency and effectiveness for managing a vulnera-

Table 3. Permanent Primary Surplus: Sensitivity Analysis* (percent)

<table>
<thead>
<tr>
<th>Real Interest Rate</th>
<th>4.5</th>
<th>5.0</th>
<th>5.2</th>
<th>5.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Including Social Security</td>
<td>1.7</td>
<td>3.4</td>
<td>4.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Excluding Social Security</td>
<td>0.3</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Permanent primary surplus as a percentage of GDP required to ensure a non-explosive debt path
**Hypothetical scenario that excludes the future fiscal impact of implicit pension liabilities

16. It is worth noting that the analysis is "partial equilibrium" in essence, and explores the impact on the permanent primary surplus required to keep debt on a sustainable path, of changes in individual economic variables—that is, all else remaining the same.
bile and complex debt portfolio. Indeed, Colombia’s debt portfolio is highly vulnerable to unexpected changes in both real interest and exchange rates. The high vulnerability to real interest rates is caused by the relatively large share of debt with short maturities and high refinancing risks. In addition, growth in foreign-currency and exchange rate-linked debt, has led to an increase in vulnerability to exchange rates. Such exposures could create short-term liquidity problems for the government at times of strong unanticipated adverse movements in real interest or exchange rates (see Table 4).

The rapid growth of debt stocks to finance growing expenditures in the past led also to a deterioration in the structure of the portfolio. Management of the debt portfolio has been constrained because (a) domestic markets are shallow and incomplete; (b) access to international markets has been limited, particularly in the last few years; and (c) weak debt management capacity. Underdeveloped and incomplete domestic markets led to a reliance on relatively expensive financing sources and shorter maturity instruments. Moreover, the maturity of new external government bonds has been shortened to between three and five years.

Given the limited development of domestic markets and the absence of hedging instruments, the government is exposed to liquidity and refinancing risks. Although the value of domestic bonds redeemed every year has not increased significantly relative to the size of the portfolio, the shares of floating and indexed domestic debt

Table 4. Short-Run Impact of Changes in Key Variables on Public Sector Debt Service*

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>Impact on Debt Service as Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic real interest rate increases by about 75 percent of its standard deviation**</td>
<td>0 5</td>
</tr>
<tr>
<td>COP depreciates by 10 percent relative to USD</td>
<td>0 4</td>
</tr>
</tbody>
</table>

*With debt portfolio held constant as of end-2001. Direct short-run impact. Impact could vary in a dynamic setting, if impacts from new borrowings and debt rollovers are factored into the calculations.

**The standard deviation at a monthly frequency was about 1300 basis points over 1997–2001.

Source: WB Staff calculations.

17 Due to lack of comprehensive information on public debt other than central government debt, this discussion is centered on the latter. Unless otherwise stated, all references in this subsection are to gross central government debt, and the discussion excludes other government liabilities.
18 Colombia lost investment grade rating in 1999.
19 Real interest rates on domestic debt have averaged about 8.5 percent since 1995, compared with about 5 percent (in real terms) on external debt.
20 Constraints on access to international markets were eased in 2001 owing to a structured operation that used a World Bank guarantee and that allowed the government to again tap the 10-year segment of the market.
instruments grew from 13 percent by the end of 1996 to 48 percent by the end of 2001, thus significantly increasing the interest and exchange rate exposures. Given the high volatility of domestic real interest rates, managing this exposure is a key challenge to be addressed (see Figure 11, showing the volatility of Colombia’s real interest rates). High domestic real interest rate volatility has translated into highly variable real coupon payments on public domestic debt—the average coupon (expressed in real terms) increased from close to 5 percent in 1998 to nearly 12 percent in 1999, falling steadily to levels close to 8 percent by 2001 (see Figure 12). The increase in real interest rates on domestic debt experienced during 1998–99 played an important role in the growth of public debt stocks in those years, as new debt was contracted partly to finance the rise in the cost of servicing public debt.

In the mid-1990s, when the government started issuing bonds in domestic markets, the strategy for mitigating the refinancing risk built up in the domestic portfolio was to issue longer-term external debt (10 years or more), increasing therefore, the average maturity and smoothing the external debt profile. However, this strategy could not be sustained for long in the context of large and growing fiscal imbalances, and the deterioration in access to international capital markets. As a result, the external portfolio also has a concentration of refinancing risk (although relatively less than in the case of the domestic portfolio). More specifically, in the external market, debt redemptions are clustering between 2003 and 2005, whereas in the domestic market, debt redemptions are clustered in 2002 and 2003. In 2001, for the

**Figure 11. Domestic Real Interest Rate Volatility**

*3-month standard deviations.
Source: WB Staff calculations
first time the government carried out a debt exchange operation in domestic markets, aimed at smoothing out the near-term redemptions schedule. Additional operations of this nature have been implemented in recent months with relative success, however close to 47 percent of domestic debt still matures in the next four years, thus suggesting that important refinancing risks still remain in the portfolio.

Exposure of the portfolio to foreign exchange volatility could become a serious problem. First, with the abandonment of formal exchange rate targets and recent adoption of an inflation target by the Central Bank, the volatility of the exchange rate could be increased. Second, given the structure of the debt portfolio, the overall impact of the exchange rate on debt service could have a greater impact than interest rate effects because the former affects about half of the "principal" of the portfolio in addition to the interest rate component. Third, the management of foreign currency risk is more difficult because there are no derivatives markets for the government to hedge its currency exposure.21 The government has partially managed this risk through matching, to the extent possible, assets and liabilities in terms of currency structure. Nevertheless, the accelerated increase in the

21. This is to be expected. Since the government can choose to set or influence the value of domestic currency through various policy instruments, issues of moral hazard immediately arise. In the absence of comprehensive monitoring and supervision mechanisms available to potential counterparties, the availability of hedging instruments is generally very limited
foreign stock of debt has outpaced growth in international reserves and exports, increasing foreign exchange exposure (see Figure 13). In addition, there is an increasing proportion of domestic debt indexed to the exchange rate. Thus, the government’s debt management strategy in the future will have to focus on managing the exposure of the total debt portfolio denominated in foreign currency or linked to the exchange rate.

Effective debt management has also been limited by weak institutional capacity and lack of an appropriate governance framework. Moreover, the lack of well-defined formal benchmarks used in day-to-day operations for the overall debt portfolio has also constrained efficiency in debt portfolio management. See Annex I for further discussion of key vulnerabilities in the government debt portfolio, and Annex IV for a more detailed technical discussion of portfolio and funding strategy benchmarking.

c) Key Government Liabilities and Potential Impact on Debt Management

Explicit, implicit, and contingent liabilities arising from subnational government entities, the Social Security and pension systems, and the financial system, among

Figure 13. Public External Debt Ratios

![Graph showing Export/Debt Ratio and Reserve/Debt Ratio from 1996 to 2001.]

Source: WB Staff calculations

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22 Issues relating to the institutional framework and the need for thorough risk management analysis will be discussed in subsequent sections.

23 No formal domestic benchmark has been produced. A benchmark for the external portfolio has been produced but it has never been implemented.
other factors, have increased the vulnerability of fiscal accounts and are likely to worsen debt exposures. The existing framework for debt management faces severe limitations on handling these types of liabilities because no entity has the mandate nor the capacity to register and quantify them.

Subnational government entities are currently exposed to refinancing risks, because most of their debt has maturities of between three and five years. In addition, debt servicing is mostly linked to the 60-day deposit rate, creating substantial exposure to interest rate risk. To complicate matters further, a new law requires the government to provide a formal guarantee that could cover up to 40 percent of the outstanding debt and 100 percent of the new debt of departments and municipalities that negotiate a debt restructuring and fiscal adjustment program. This would shift the problem of debt servicing and financing from the subnational level to the central government.

In addition, the recent crisis of the financial system, and in particular of the Housing Savings and Loan Associations (CAVs), has also led to an increase in government liabilities (funded through the issuance of government debt as per Law 546, and Fondo de Garantía de las Instituciones Financieras [Financial Institutions Guarantee Fund, FOGAFIN] debt instruments with the guarantee of the central government). The combination of these liabilities (both direct and contingent) represents an increase of nearly 7 percent of GDP in total government liabilities in 2001 alone. Furthermore, the public sector has also accumulated large pension liabilities (for example, in Social Security). Calculations of pension system liabilities vary, but there is agreement that at the end of 2001 the order of magnitude of the net present value of these types of liabilities amounted to about 200 percent of GDP.

The government also faces other contingent liabilities arising from the efforts during the last decade to involve private sector participation in infrastructure, which included power purchase agreements and “minimum traffic” toll road guarantees. In 2000, a law was passed by the Congress requiring the central government and other public sector entities to quantify all implicit and explicit risks associated with guarantees, and to appropriately budget for them. More recently, the public telecommunications company provided guarantees to the private sector to foster an expan-

24. Interest rate exposure already induced a major debt-service problem for subnational entities in 1998 and 1999, after real interest rates on domestic debt increased substantially (the applicable nominal interest rate reached about 37 percent per year in mid-1998, when inflation averaged just under 19 percent).

25. Most large and medium-sized municipalities (excluding Bogotá) had already renegotiated their debt by end 2001. However, these restructurings mostly addressed refinancing risks by smoothing the debt profile, but did not deal with interest rate exposures (most municipal debt carries floating interest rates). At the same time, the central government has now provided a more formal guarantee on municipal debts.

26. Recent reforms of the supervisory and regulatory framework for the financial sector may have lowered the relative magnitude of contingent liabilities.
sion of telecommunications infrastructure; limited monitoring capacity meant that no provisions were made by the government for these liabilities at the time of budget preparation.

Information on these liabilities remains sparse because no entity currently has the mandate nor the capacity to register and quantify the magnitude of all implicit and contingent liabilities of the public sector in Colombia. The government has recently started adopting a more systematic approach to the management of these types of liabilities. In 1997 the Department of National Planning (DNP) conducted, for the first time, a study to quantify the value of contingent and implicit liabilities. Law 448 of 1998 provided a legal framework that introduced the obligation to quantify and budget for the risks associated with the public sector's contingent liabilities. This law also authorized the creation of a Guarantee Fund that would facilitate the financial management of resources budgeted by different public sector entities to deal with contingent liabilities, mandating the Ministry of Finance to oversee the operations of the overall scheme. A small unit within the General Directorate for Public Credit at the Ministry of Finance was created in 2001 to fulfill the Ministry's responsibilities in this area. Although the scope of operations of the new unit is still limited and its authority insufficient to fully address all issues pertaining to management of the public sector's contingent liabilities, its creation is nonetheless an important step in the right direction.

d) Policy, Legal, and Institutional Framework for Central Government Debt Management

i. The Legal Framework and Governance

The lack of a comprehensive and coherent conceptual and legal framework for debt management, combined with overlapping responsibilities among various institutions of the government and the Central Bank, substantially reduce the effectiveness and efficiency of the country's debt-management system. Weaknesses and gaps in the legal and regulatory framework reduce transparency and accountability. The scope of debt management is unnecessarily restricted—no entity currently has the legal mandate or capacity to comprehensively manage all types of explicit, implicit, and contingent liabilities of the public sector; as part of a unified strategy. In fact, Colombia's debt policy has been driven mainly by the need to finance the fiscal deficit, and consequently, debt decisions have been taken with limited systematic analysis of risks, and without a strategic framework for debt management.

27. The 1997 DNP Report estimated that total public sector contingent liabilities amounted to 154 percent of GDP, with pension and infrastructure-related liabilities accounting for 140 percent and 8 percent of GDP, respectively.
28. See Manejo de Pasivos Contingentes en el Marco de la Disciplina Fiscal en Colombia, 2002, by Jorge Enrique Cardona, XIV Regional Seminar on Fiscal Policy, 28–30 January; Santiago, Chile
In 1995, a special risk management task force was created within the Dirección General de Crédito Público (General Directorate for Public Credit, DGCP) to carry out Colombia’s first risk analysis and to provide guidance on the introduction of a comprehensive risk management framework. The concept of risk management was gradually introduced into the operations of the DGCP in the second part of the 1990s. In 1996, a Comité Asesor de Deuda Pública (Advisory Committee for Public Debt, Debt Committee) was informally created to advise the Minister of Finance on debt management issues, including the approval of portfolio and issuing (funding) strategy benchmarks. The risk management unit of DGCP was designated as the Secretariat of the Debt Committee. The Debt Committee approved an initial set of foreign debt portfolio benchmarks in May 1997, and a first strategy review was carried out in December 1998. The Debt Committee has met only a few times and no portfolio benchmarks have been established yet for either domestic debt or for the portfolio as a whole. Moreover, the lack of formality and enforceability characterizing this framework constrains management of debt portfolio risks, and prevents needed changes in the formulation of public debt policy in Colombia. As a result of these gaps, the only "formal" guiding policy for debt management remains almost exclusively dictated by the fiscal dimension.

While there is no single framework law for public debt management (see Box 1), the governance structure for debt management is also deficient. There is no clear separation of accountabilities and responsibilities between the higher-level bodies responsible for policy design and approval (the Minister of Finance and the Debt Committee), and the levels in the Ministry responsible for policy execution (the DGCP and Treasury). As a result, the Minister needs to formally approve (by means of a resolution) the execution of many individual operations carried out by the DGCP and Treasury. Given the dynamics of capital market operations and the limited time a Minister can allocate to this process, in fact, the decisions are taken by the DGCP and Treasury but the formal accountabilities are not properly established.

ii. The Domestic Debt Markets

In the 1990s, Colombia underwent a series of important institutional changes in the domestic capital markets, including the privatization and internationalization of banking services, the creation of a public debt market, and the reform of Social

29 The Debt Committee is chaired by the Minister of Finance, and members include the technical Vice-Minister of Finance and the head of Dirección General de Tesorería. It also includes the head of the Monetary Policy and Foreign Exchange Operations Unit of the Central Bank as an observer. In turn, the DGCP is invited to participate as an observer at the International Reserves Committee of the Central Bank.

30 In the case of domestic Treasury debt auctions, the Minister is consulted about at what rates to declare an auction vacant. The Minister is also regularly consulted on the terms of the international bond operations.

31 Most of the privatized banks had been nationalized in the 1980s during the financial crisis.
Box 1. Legal Framework for Debt Management in Colombia

The legal framework for public debt management in Colombia is complex:

- Issuance of Treasury bonds is regulated by a law that sets a ceiling consistent with the budget approved every year.
- The Treasury (not DGCP) is authorized to issue short-term paper for cash management purposes, but not for budgetary financing purposes.
- A 1992 Central Bank resolution gives the Central Bank authority over the issuance of short-term domestic public debt. The resolution also establishes that the Central Bank must approve the financial terms of all international public debt operations.
- In 1995 Congress gave the Finance Ministry increased flexibility with international bond operations. Congress would approve a multiyear quota for the gross value of operations that can be executed without requiring case-by-case authorization by Congress. The annual authorization to issue external debt was subsequently changed from a gross to a net basis.
- The Finance Ministry has authority over debt issuance by public entities. Subnational governments need additional approval by Congress to issue foreign debt.
- The Ley de Semaforos of 1997 links the total indebtedness of a public entity to its debt servicing capacity.
- A 1998 law establishes that any public entity issuing any type of contingent--explicit liability should estimate the magnitude of the liability incurred and its capacity to service the liability.

Security that led to the creation of private pension funds. Despite some progress, domestic debt markets remain shallow and underdeveloped. Key obstacles to their development include (a) the use of a complex, nontransparent benchmark for the minimum rate of return of pension funds (established by law); (b) the presence of conflicting incentives that do not stimulate efficiency gains in the mutual fund industry; (c) limited know-how of mutual fund management techniques; (d) deficiencies in the current market makers system: liquidity is concentrated in very few points of the curve, the current ranking is too biased to the longer term instruments and some of the market makers (particularly the security houses) may be exposed to serious duration risk that could affect the capacity of the system to support the market in the difficult times (e.g: increases of the interest rate) (e) money markets are very inactive affecting the secondary market activity of the government bond market (f) cumbersome procedures for the authorization of securities-lending transactions that increase transaction costs; and (g) the use of an old and possibly biased methodology for calculating the Interest Rate Index (DTF) rate, which might limit
its value as a benchmark for the wholesale market for bank asset operations (loans) and contributes to the segmentation of the markets.

iii. The Capacity of the Debt Office

The institutions currently responsible for cash and debt management, namely the DGCP and the Treasury, are facing technological and human resource gaps that restrict the efficiency and effectiveness of debt management in Colombia. These gaps are major areas of concern, in view of the increase in the value of the debt portfolio, its growing complexity, and the reliance on financial markets for funding strategies.

Initially, the DGCP was primarily a back-office operation responsible for the timely service of government debt. It was also responsible for negotiating agreements with international official financing institutions. In 1993, the Ministry of Finance decided to stop refinancing operations with commercial banks and instead decided to access international capital markets directly. A small team was then created to support front-office operations in international markets, reporting directly to the director of the DGCP. In the early 1990s, the DGCP also housed a unit in charge of managing the debt portfolio of the government with the Central Bank, the asset portfolio of loans negotiated with subnational and other public institutions, the portfolio of explicit guarantees provided by the government to other public institutions, and local bond issuance operations by subnational entities.

Following the 1991 constitutional reform, it was determined that Central Bank financing of the fiscal deficit would be phased out. The domestic debt management unit was therefore reoriented toward the supervision and management of other domestic liabilities. When large-scale Treasury bond operations began, a new taskforce reporting to the Deputy Director for Planning was established using vacancies from different areas of the DGCP, but with no formal structure within the organization. The Risk and Financial Planning unit (the middle office) was also created as a task force in 1995, but without a formal structure. In 1999 a decree was issued to formalize these previous institutional changes. This decree was initially challenged and it was only in 2001 that the partial reforms envisioned in the 1999 decree were introduced, the units responsible for risk management functions and international capital markets were transformed into individual deputy directorates.

The DGCP employs a staff of about 100 and is divided into five deputy directorates (dealing with domestic capital markets, international capital markets, traditional external debt loans, risk management, and operations), and two units reporting directly to the head of the DGCP (legal and special projects). Modernization of the internal organizational structure of the DGCP has nevertheless been slow. Fur-

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32. Although the government was involved in several fully integrated refinancing operations with international commercial banks (the so-called "Jumbo," "Concorde," and "Challenger" operations), the negotiations and structuring of these operations were the responsibility of a small group of advisors at the Ministry of Finance. This advisory group was dismantled in 1993.
thermore, the current structure remains a collection of the partial, unsystematic reforms that took place in the last decade. This has resulted in lack of transparency and has eroded internal lines of responsibility and accountability. This situation has been compounded by the high turnover rate of heads of the DGCP between 1998 and 2000.\footnote{There have been three DGCP directors in the last three years.}

Moreover, the hiring practices and low-wage structure established by public sector law are becoming more and more binding, as business has shifted from dealing with official financing sources to private, market-based operations. The human resource and skills profile needed for market-based operations at the DGCP is similar to the profile demanded by higher-paying private financial sector institutions. As a result, junior staff trained at the DGCP often leave the institution to work in the private sector, generating high staff turnover. This problem is also present at more senior levels, also resulting in high management turnover. As a result of staffing problems, management of Colombia’s large and complex international and domestic portfolios is frequently left in the hands of relatively inexperienced staff. This situation also erodes the capacity of the Debt Office to identify and take advantage in a systematic way of active debt management operations such as debt exchanges and buyback operations. In other cases, limited capacity may result in increased operational risk in the execution of relatively complex operations like derivatives to cover cross-currency risks (swaps and futures).

Unnecessary layers of complexity in the institutional arrangements for debt management operations also increase transaction costs and inefficiencies. Cash management operations and negotiations with "captive sources" for Treasury bonds are the responsibility of a unit in the Treasury. Although evidence indicates that there is good communication between the DGCP and Treasury,\footnote{There is a Treasury committee headed by the Deputy Minister to supervise cash management projections and execution, in which the DGCP participates} there is nevertheless a spurious split of responsibilities with no central accountability. As a result of the relatively recent decision by the Central Bank to allow issuance of short-term Treasury bills, the Treasury is in charge of short-term paper, while the DGCP is responsible for medium- and longer-term issues, with no senior "operational" manager responsible for operations across the entire spectrum.

The analysis of international markets and of active debt management operations is currently carried out using nonintegrated information and technology (IT) systems—a basic back-office system and a multiplicity of spreadsheet-based systems—that cannot be updated quickly and that rely on limited automated functions. This makes the overall process of debt management and operations slow and exposed to high operational risks. It also substantially limits the capacity of the Debt Office to engage in active debt management operations (for example, buybacks, swaps, and exchanges) that require very current and precise information. Although in the last seven years the DGCP has engaged in several (in-house) IT developments, these
efforts have not produced the expected results. The basic back-office operation has been partially automated through a system developed in-house and based on outdated database technology (INGRES), which was introduced in 1995 and modified in 1997. Today there is still no integrated database for external and local debt that could be used to generate a full portfolio analysis on a timely basis.

e) Strengthening the Framework for Debt Management

Colombia’s fiscal imbalances require strong fiscal adjustments. In addition, in light of the large risk exposures and vulnerabilities of its debt portfolio, it requires a transparent policy for debt management. An improved fiscal discipline, together with strong debt portfolio management, including the control of the growth of debt stocks, will help restore fiscal and debt sustainability. The initial success of the fiscal stabilization program provides the government with the necessary credibility to implement an active debt management strategy. Actions in this regard will also provide additional comfort to investors and thus help reduce the costs of borrowing and keep liquidity and refinancing risks to a minimum. Failure to address the issues raised by the portfolio structure, and shortcomings of the institutional framework and the portfolio strategy for debt management, could significantly delay the full impact of the fiscal stabilization efforts.

i. Improving the Legal Framework and Governance

To create a proper legal and governance framework for debt management operations, the government should prepare and submit for Congressional approval a framework law consolidating all legal and regulatory instruments on debt management. Key principles of the proposed framework law should include provisions for (a) separation of policy formulation, implementation, and evaluation functions; (b) creation of a new Debt Office (by merging the DGCP and Treasury) and redefinition of the role and structure of the Debt Committee in light of the proposed new framework; (c) creation of an independent entity reporting directly to the Minister of Finance for the evaluation of debt policy implementation, including the definition of provisions for ensuring adequate checks and balances; (d) very clear objectives that include risk–cost tradeoff issues as a central dimension of debt management, (e) use of mod-

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35 Part of the problem is caused by a lack of understanding of the Debt Office’s own needs, and also by the limited time invested in conveying information to the IT developers. Furthermore, senior management has not fully supported the IT development process, shifting responsibilities to more junior staff.

36 For example, in the late 1990s, the full impact of the fiscal adjustment in Brazil was delayed because, at that time, Brazil lacked an adequate debt management strategy to deal with a vulnerable debt structure.

37 For further discussion of the key principles that could underpin a new framework law, see “Guidelines for Public Debt Management,” World Bank and IMF, March 2001.

38 External auditing could be used as an alternative to the creation of a new auditing unit.
ern financial instruments and tools for active debt management; (f) definition of responsibilities and accountabilities at different levels of the government; and (g) separation of debt management from the Central Bank’s mandate, particularly with regard to the issuance of short-term Treasury bills to improve the government’s cash management flexibility. (See Box 2 for a brief description of the Brazilian experience with reform of the legal and governance framework for debt management.)

Within this new framework, the Minister of Finance, with the advice of the Debt Committee, should define a set of portfolio benchmarks and the overall strategy to achieve it. A clear and transparent mandate for the execution of this policy decision should then be given to the Debt Office (or the DGCP). Moreover, the assessment and evaluation of the quality of the execution of debt policy should be conducted by an entity or auditing unit (or external audits) independent of the Debt Committee and the Debt Office.

Box 2. Reform of the Legal Framework for the Debt Management Office in Brazil

A new institutional framework for debt management has been adopted in Brazil under Decree No. 3782 of April 2001. The Public Debt Office now comprises three main units: back, middle, and front offices. The back office is responsible for the registry, control, servicing, and accounting of both domestic and foreign debts. The responsibilities of the middle office include the development of medium- and long-term strategies aimed at reducing debt costs and risks, macroeconomic monitoring, and investor relations. The front office is responsible for the design and implementation of short-term strategies related to bond issuance in international and domestic markets. The new institutional framework will result in a substantial improvement in debt management capacity, allowing for the standardization of operational controls, better monitoring of risks, and the separation of functions concerning long-term (strategic) and short-term (tactical) planning.

ii. Debt Management Strategy and Portfolio Restructuring

To improve debt management and debt portfolio structure, the following specific steps could be considered (a) the Debt Office (or the DGCP) should develop new portfolio benchmarks for the short, medium, and long term;39 (b) the new benchmark strategies should be presented to the Debt Committee, and submitted for sub-

39. The strategy should distinguish between portfolio and issuance (funding) benchmarking, and should include a formal risk management framework as a guiding principle (for example, use the concept of maximum tolerable budget-at-risk—that is, maximum BaR—as a selection criterion).
sequent approval by the Minister of Finance with the Committee’s advice; the strategy should include the systematic use of active debt management operations (exchanges, swaps, buybacks, and so forth) to modify the existing stocks and the funding strategy for the new operations; and (d) the Minister of Finance, with the advice of the Debt Committee, should provide clear guidelines to the Debt Office (or the DGCP) for implementation of the strategy. In addition, to facilitate management of the explicit contingent liabilities of the government, the Debt Office (or the DGCP) should develop and implement a plan to improve monitoring (registration and quantification) of these types of liabilities.

The portfolio and issuing (funding) strategies should integrate the long-term fiscal and debt sustainability analysis of the government, with a thorough analysis of portfolio risk exposures. These benchmarks should reflect the government’s assessment of an “acceptable” level of fiscal risk (budget-at-risk and or cash-flow-at-risk) relative to the expected reduction in cost of funding. To reduce central government debt exposure, a comprehensive restructuring of the debt portfolio is warranted. More specifically, debt portfolio restructuring should address the “bunching” of domestic debt and external debt amortization. The strategy could include the maximum level of amortizations that the government could “tolerate” under different scenarios of interest and exchange rates, and seek a set of financial instruments and terms that could achieve that benchmark. Given that there are no hedging instruments available that could be used to manage foreign exchange risks of the size associated with the government’s portfolio, and that international reserves provide only a limited natural hedge, this type of risk should be managed through the control of the primary issuance of instruments and making strong efforts to deepen the domestic debt markets. (See Box 3 for an overview of the Brazilian experience with the modernization of the risk management strategy.)

iii. Strengthening the Capacity of the Debt Office

To strengthen the capacity of the Debt Office, the Ministry of Finance should centralize operations in a single Debt Office, with expertise in both cash and debt management (merging the DGCP and Treasury), alternatively, within or outside the Ministry (as a special administrative unit or an institute), in accordance with the new framework law. In the short term, the government should prepare an action plan that includes at least the following key elements: (a) an organizational chart, including a front office, a middle office responsible for strategic debt analysis and risk management, and a back office; (b) a human resources plan, including staffing and training; (c) a comprehensive diagnosis of information systems and plans for improvement; and (d) proposals for the elimination or transfer to other entities of all noncore functions.

40 In some countries (for example, Poland, Sweden, and the United Kingdom) the Committee is actually a board chaired by the Minister of Finance and empowered to take key decisions.

41 The front and back offices should ideally be the same ones for cash and debt management operations.
Box 3. Risk Management in Brazil

The main types of risks arising from public debt currently being monitored by the Brazilian government are (a) refinancing risk, (b) market risk, and (c) credit risk. Risk analysis is conducted under an Asset and Liability Management (ALM) framework, using a model that allows debt managers to project expected and potential debt costs under different refinancing strategies in the medium and long term. Key debt management indicators, such as average maturity, duration, and debt composition are generated for each strategy, thus allowing senior management to choose the optimal strategy to be pursued. A more powerful risk management system, introduced in early 2002, also allows a comprehensive examination of the characteristics of the assets and liabilities of the public sector, and the adoption of alternative approaches to “at-risk” models (for example, Cost-at-Risk, Cash-Flow-at-Risk, and Budget-at-Risk)

The proposed functional structure consists of a unit responsible for leading transactions (the front office), one responsible for analyzing portfolio risks and aligning the actual portfolio with the benchmarks (the middle office) and, finally, a unit in charge of settlements (the back office). The DGCP and Treasury should be merged into a debt management unit to ensure consistency along all the term–structure of government debt, and to eliminate overlaps (especially in the back office and domestic front offices). Two possible alternatives for institutional design have been identified: (a) transforming the Debt Office into a special administrative unit under the Ministry’s structure (following the example of the tax and customs units), or (b) creating a separate institute under the Ministry of Finance following the structure of institutions like FOGAFIN. There are advantages and disadvantages to both options. Under the first option, constraints on salaries and administrative procedures are likely to remain, but the smooth flow of information within the Ministry will be preserved. Under the second option, there will likely be more salary and structure flexibility that will help increase the capacity of the Debt Office, but relationships with Ministry departments–units will likely be negatively affected. With a clearer governance framework provided by a new law, the latter may nevertheless become the preferred option. Noncore business activities currently under the DGCP and Treasury should be phased out or transferred to other units within the Ministry or other institutions like the National Planning Department.42 However, the current arrangements whereby a specific group within the Debt Office is responsible for

42. Noncore business activities include participation in negotiations of multilateral and bilateral loans, supervision of the issuance of domestic bonds by subnational government entities, and involvement in the financial design of infrastructure projects and in the process of privatizing public companies.
monitoring contingent liabilities should be strengthened and given increased authority to request timely information from other government entities responsible for the management of those liabilities.

The new unit should have access to necessary human resources and skills to carry out its functions, and should have the administrative flexibility to act and respond to fast changes and opportunities in the financial market. This requires adjusting the salary level and structure to make it more competitive vis-à-vis the private sector. It is also important to establish and institutionalize a comprehensive training program, including specialized courses, scholarships, and internships in public and private sector institutions in Colombia and abroad. The proposed reforms of the organizational structure will require a new, fully reengineered information and technology system.

The Ministry of Finance should also issue comprehensive regulations and guidelines for debt management and for Debt Office operational procedures. These regulations and guidelines should clearly define responsibilities and internal accountabilities; ensure that adequate checks and balances are maintained; address issues of actual or potential conflicts of interest encountered by Debt Office staff; define mechanisms and procedures for preserving the confidentiality of information and operations of the Debt Office, and establish a code of conduct to guide the behavior of Debt Office staff, consultants, and all other entities or persons rendering services to the Debt Office.

With regard to IT, there are a few important issues that require attention. First, the new structure will require a new business plan to identify user IT requirements prior to engaging in a major upgrading of existing IT systems. A coherent plan is needed for the development of a unified database, analytical software, and market tools that integrate IT information flows among front, middle, and back offices. The improvement of the middle office’s analytical software could proceed immediately, however, because it is relatively independent of the new structure, and significant progress has already been achieved. Three areas need further improvement (a) current VAR-based risk analysis methodologies can be improved by incorporating the concept of budget risk in the modeling, and tools need to be developed for such budget risk quantification and benchmark exercises, (b) tools need to be developed so that external and domestic debt analysis can be integrated; and (c) current tools need increased "automation" to reduce operational risk and training costs for new staff. It is worth emphasizing that, to succeed, improvements in IT will need to be championed by senior management of the Debt Office.

### iv. Deepening the Domestic Debt Markets

To enhance and deepen the functioning of domestic markets, thus facilitating the management of public debt, the Ministry of Finance should draft and submit for Congressional approval a legal amendment to simplify the benchmark for the mun-

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43 The decision to introduce the UNDP database (CIGADE) that centralizes all debt operations is an important step in the right direction.
imum rate of return of pension funds. The benchmark for the minimum rate of return of pension funds should be changed to the lowest nonbinding benchmark of either (a) a real rate of return calculated so as to achieve a specific pension replacement rate, or (b) an average of the current rate of return on the government's medium-term bonds. In addition, the Ministry of Finance should undertake a study to identify the major regulatory and incentive constraints for increasing the efficiency of collective investment vehicles and mutual funds, and to develop an action plan to remove such constraints. The government could also explore and analyze the conditions for establishing a securities-lending backstop facility that, in exchange for cash or securities, lends different securities to an intermediary to support repo and short-selling activities. Finally, the government and the Central Bank should assess the suitability of the current DTF rate calculation methodology and evaluate with the industry the possible introduction of an alternative market reference rate (for example, the London Inter-Bank Operations Rate [LIBOR] type) for secondary market activities.

To successfully develop domestic debt (and capital) markets, the investor base must be expanded. The market needs a strong and diversified group of institutional investors (including pension funds, insurance, mutual funds, and foreign investors) that can generate demand for different segments of the yield curve (short, medium, and long term), and generate a liquid secondary market. Reducing transaction and information costs could facilitate this process (see Box 4 for a brief discussion of alternatives for building benchmarks). One important step toward domestic capital market development is the phasing out of government reliance on captive investors. Currently, nearly 50 percent of new issuing is allocated to a group of captive investors—the so-called inversiones forzosas y convenidas (see Figure 1 in Annex V) for a breakdown of domestic public debt by type of holder). These are basically the public pension fund (at the Social Security Institute) and government entities running cash surpluses that, by regulation, have to be invested in a portfolio of government bonds through direct negotiations with the Treasury. The size and importance of captive sources in government financing have introduced market distortions (segmentation) and have negatively affected the development of the investment and mutual fund industry.

In the case of the pension funds, simplifying complex regulations behind the calculation of the minimum yield on pension fund investments could reduce unnecessary "noise" and reduce information costs. For mutual funds, further market opening for foreign financial companies managing mutual, pension, and investment

45. Recently, the oil company ECOPETROL was allowed to manage its pension reserves through outsourcing to a group of private fund managers (Fiduciarias) that had given an important boost to the mutual fund industry, in particular the medium-term funds (1 to 5 years)
Box 4. Building Benchmark Issues Through Reopening and Buyback Operations

As part of a strategy to build benchmark issues, "reopening" and "buyback" operations can be used to increase the "fungibility" of benchmark instruments by reducing the number of issues outstanding and concentrating remaining issues on fewer benchmark bonds of the desired maturities. Reopening the same type of bond (including same coupon and maturity) over several auctions eliminates the need to always open a new issue, maintains bond issues in their life cycle, and helps build outstanding volume to that desired for the benchmark. Buybacks can be used to eliminate issues that are nonstandard and not very actively traded, thus aiding in the concentration and standardization of outstanding issues.

funds could create competition in the mutual fund industry to diversify and extend portfolio duration. These changes will likely induce consolidation in the industry, which will also reinforce the process of modernizing financial management companies. (See Box 5 for an overview of the international experience with institutional investors and the development of domestic debt markets.)

The government could also promote the rating of asset management companies (and of the funds they administer) by local or international rating agencies, reducing information costs for investors and increasing competition and transparency. While most of the above principles also apply to the insurance funds industry, pro-

Box 5. Growth and Importance of Institutional Investors

Institutional investors, including pension funds, insurance companies, and mutual funds, have experienced rapid growth worldwide over the last 20 years. In the early 1980s, only in a few industrialized countries did institutional investors control assets in excess of 50 percent of GDP. By late 2000 nearly all OECD countries had institutional investors with resources in excess of 50 percent of GDP. Chile and Malaysia, among developing countries, also surpassed the 50 percent benchmark. Private pension fund systems have played an important role in the development of domestic capital markets; in turn, pension funds strengthen the development of insurance companies, which promotes the availability of annuity products. In Chile, for example, life insurance companies already control assets in excess of 10 percent of GDP. Institutional investors can thus play a unique role in intermediating domestic savings and developing capital markets.
moting the development of annuity products (rentas vitalicias) through new regulation (now under preparation) would further promote the development of domestic capital markets.

One important area for improvement relates to the existing relationship of the Debt Office with primary dealers. The system needs to be reformed to introduce liquidity along the entire yield curve and not just at a few points in the longer-term segment, as it currently operates. This would require that the valuation procedure put equal emphasis on key points along the curve. The government should also consider a rotating system by which each dealer is given a combination of off-the-run and on-the-run points, so that pressure is put along the entire curve. This will allow the government to move effectively along the curve depending on expectations and market conditions.

An important issue that needs proper government supervision is the level of risk exposure that key market makers acquire when acting as Primary Dealers (PDs) of the government. In particular, security houses seem to be taking large risks, given the relatively lenient capital adequacy standards and limited enforcement that they currently face. This situation presents a sharp contrast with that of another important group of intermediaries—the banks—which are subject to more demanding capital adequacy and supervision standards. This is important for the financial system as a whole and for the sound operation of the PD system, because a sudden increase in interest rates could conceivably force an important group of PDs to move out of the market-making business, or even to go out of business altogether. Market liquidity and the risk exposure of government would likely deteriorate in such a situation, highlighting the need for joint action by the Debt Office and the securities market regulator.

To support a more active secondary market and facilitate the holding of longer-term instruments, market agents need to be able to access instruments that will promote liquidity and hedge unnecessary risks (such as repos or simultaneas). However, there are constraints on the development of secondary markets, including the lack of standardized and fungible issues. A possible solution to be explored is the introduction of a securities-lending backstop facility that, in exchange for cash or securities, lends different securities to an intermediary. These and similar arrangements have been adopted in several countries (see Box 6). The Colombian government could explore this or other types of solutions to facilitate the development of secondary markets.

The introduction of alternative reference rates to the current DTF may contribute to an improvement of financial market integration and price signaling within

46 Even in highly developed markets like the United States, the liquidity of off-the-run issues is normally poor compared with on-the-run issues. Thus, however, does not guarantee that on-the-run issues keep their benchmark status if, for example, there is a large discrepancy between original and remaining maturities, or if trading becomes thin despite its being an on-the-run issue.
Box 6. The Role of Secondary Market Windows

In relatively underdeveloped markets, liquidity risks are high. In this context, a secondary market window may be opened (possibly with government or Central Bank support) to facilitate market making. Typically, dealers supporting secondary market trading can buy or sell securities through the government-sponsored secondary market window, thus encouraging dealers to provide quotations to the public, maintaining market continuity, and reducing liquidity risks. In the U.K., the Bank of England has operated secondary market windows for several types of instruments to encourage the development of a market for those instruments (for example, gilt-edged and index-linked securities). Examples of developing countries that have introduced similar types of arrangements include Iceland, Malaysia, and Thailand.

financial market segments (for example, bank deposits and lending, money markets, and government bond markets). The alternative reference rate should be transparent and consistent with the activity of the secondary markets to effectively facilitate the pricing of financial assets and liabilities. For example, a group of financial institutions (market makers) has already been working on a proposal to create a Bogotá Inter-Bank Operations Rate (BIBOR), a concept similar to LIBOR. The government jointly with the Central Bank should evaluate and explore alternative solutions. Finally, promoting the development of retail investors could also strengthen capital markets. In general, there are two main avenues to tap this market. (a) the creation of specialized Treasury bond funds (for example, Spain was very successful in promoting specialized government bond funds as close substitutes for bank deposits), and (b) the direct distribution of securities (through, for example, the Internet).

f) Estimated Fiscal Impact

Implementation of reforms for improved debt management, complementing the implementation of a comprehensive reform package, is estimated to yield annual average budgetary savings on interest payments of about US$275 million through 2005 (in constant U.S. dollars), equivalent to an average of about 0.35 percent of annual GDP. Annual average budgetary savings on interest of US$375 million (in constant U.S. dollars), or an average of about 0.45 percent of annual GDP, are projected through 2010. Savings are estimated relative to a no-reforms scenario where the primary balance-to-GDP ratio is kept at the 2001 level. In this scenario the debt-to-GDP ratio would reach at least 80 percent of GDP by 2010. In the base case scenario, which assumes implementation of a fiscal effort sufficient to bring the pri-
mary surplus to the level required to keep the debt-to-GDP ratio on a sustainable path, the debt-to-GDP ratio reaches 57 percent of GDP by 2010 (a 29 percent fall in the debt-to-GDP ratio relative to the no-reforms scenario).

The more comprehensive the structural reforms effectively implemented and the greater the fiscal effort undertaken, the smaller the debt-to-GDP ratio will be by 2010, all else being equal. We assume that the maximum plausible adjustment effort would keep the debt-to-GDP ratio around the 2000 level (say, at about 46 percent of GDP, a 43 percent fall in the debt-to-GDP ratio relative to the no-reforms scenario). If it is assumed that a 1 percent reduction in the debt-to-GDP ratio leads to a fall of 7 basis points in average interest rates, we estimate that the potential reduction in interest rates from introducing increasingly comprehensive reform packages ranges from about 200 to 300 basis points (which translates into average annual savings of between 0.35 and 0.5 percent of GDP).\(^{47}\)

\(^{47}\) This is consistent with a model of the long-run equilibrium spreads estimated by Goldman Sachs for Colombia. Every percentage change in the external debt-to-GDP ratio leads to a compression in spreads of about 7 basis points. Nevertheless, estimating the direct fiscal impact of improved debt management would require a detailed comparison between the proposed new portfolio benchmark and issuing (funding) strategies, and current benchmarks and practices in Colombia. Because no new benchmarks have yet been developed, it is difficult to establish a priori the scope for fiscal savings following improved debt management, subject to newly defined risk limits.
Annex I
Key Elements of Vulnerability of Central
Government Debt

I. Internal Debt

The largest share of internal central government debt consists of Treasury bonds (TES). At the end of 2000, TES issuance accounted for 86 percent of total internal debt. There are four types of TES issuance: fixed-rate bonds, CPI- and UVR-indexed bonds, and USD-indexed bonds. CPI- and UVR-indexed bonds also differ in that the latter type capitalizes the interest payments while the former type does not. The various types of bonds are also available in different combinations of maturities (see Table A.1.1).

Figure A.1.1 shows the outstanding value of these four types of instruments since 1996. The shares of floating and indexed debt instruments grew from 11 percent at the end of 1996 to 42 percent of the outstanding stock of TES by the end of 2001. UVR-indexed bonds remain a very small part of the domestic debt portfolio, since most of the increase in the stock of bonds since 1996 took place in CPI-indexed and USD-indexed bonds. Together with this change in structure of the domestic debt portfolio, exposures to the exchange rate and inflation have increased considerably.

The duration and modified duration of the domestic portfolio have been rising steadily since 1998, but are still low (remaining at around 2). This is the result of

<table>
<thead>
<tr>
<th>Type of Rate</th>
<th>Denomination</th>
<th>Maturity (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed rate</td>
<td>COP</td>
<td>1, 2, 3 and 5</td>
</tr>
<tr>
<td>CPI-floating rate</td>
<td>COP</td>
<td>5, 7 and 10</td>
</tr>
<tr>
<td>(no capitalization of interest)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed rate</td>
<td>UVR* indexed</td>
<td>5 and 7</td>
</tr>
<tr>
<td>(capitalization of interest)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed rate</td>
<td>USD** indexed</td>
<td>2 and 3</td>
</tr>
</tbody>
</table>

*Real Value Units
**US dollar

48 Due to lack of consistent information on public debt other than central government debt, this discussion is centered on the latter. Unless otherwise stated, all references are to gross central government debt. This discussion excludes government liabilities other than debt (for example, contingent or implicit liabilities arising from Social Security or sub-national levels of government), since no comprehensive inventory of all government liabilities exists.
Figure A.1.1. Domestic Central Government Debt by Type of Coupon

TES Bonds

Source: MoF, DGCP

high interest rates, which quickly return to investors (in the form of coupon payments) substantial amounts of their investment. The half-life of the portfolio increased sharply in 1998 to about 4.5, then fell in 1999 and 2000 to 3.5, and again recovered to 4.5 by late 2001 (see Figure A.1.2).

Figure A.1.3 shows the evolution of the domestic debt maturity structure since 1997. At the end of 1997, almost 90 percent of domestic debt would mature within four years. By contrast, at the end of 2001, about 47 percent of total domestic debt is expected to mature over the next four years. This suggests that with a "flattening" of the maturity structure, refinancing risks have improved since 1997. However, there is still an immediate and significant refinancing risk, because 30 percent of the domestic debt portfolio will mature within a year.

49 Duration can also be thought of as a measure of the time that an investor keeps his money invested. For zero coupon bonds, maturity is a straightforward measure, since investor's money is tied to maturity. By contrast, with coupon bonds, maturity is an imperfect measure of investment time since part of the value of the investment is returned in the form of coupon payments before the bond matures.

50 Formally, to conduct a more comprehensive assessment of refinancing risk we would need to identify the main holders of maturing domestic government debt and estimate their propensity to agree to offer refinancing. However, it remains true that refinancing risk is higher than it would be (keeping the identity of bondholders constant) if the debt profile were "flatter."
Figure A.I.2. Half Life and Duration of Domestic Central Government Debt

Source: MoF, DGCP

Figure A.I.3. Maturity of Domestic Central Government Debt

Source: MoF, DGCP
II. External Debt

The evolution of the currency composition of external debt is shown in Figures A.I.4 and A.I.5. At the end of 2001, USD, EUR, and JPY debt account for 77 percent, 17 percent, and 5 percent of total external debt, respectively. The current benchmark portfolio is USD (83 percent), EUR (13 percent), and JPY (4 percent). The increase in the share of EUR-denominated debt and decline of USD debt during 2001 has meant a further departure from the existing benchmark currency composition.

External debt has a larger share of fixed-rate debt than in the case of domestic debt (compare Figures A.I.1 and A.I.6). Fixed-rate debt accounted for about 65 percent of external debt at the end of 2001, with variable and semivariable rates accounting for the rest of the portfolio. The coupon structure of the external debt portfolio has remained relatively stable over time, with perhaps a mild trend against semivariable rates and in favor of variable rates.

In addition, the external portfolio traditionally has had longer duration (around 3.5 years) than the internal portfolio (compare Figures A.I.2 and A.I.7). In addition, the half-life of the external portfolio is also higher and more stable than the half-life of the domestic portfolio.

Together, these characteristics imply a smaller interest rate risk than in the case of domestic debt. Figure A.I.8 shows the evolution of the external debt maturity structure during 1998–2001. Compared with domestic debt, the external debt has

Figure A.I.4. Currency Structure of External Public Debt

![Currency Structure of External Public Debt](image)

*Source: MoF, DGCP*
a relatively smooth maturity structure. As a result, only 11 percent of external debt matures within a year (compared with 30 percent for internal debt). However, relatively more significant external refinancing needs will arise in 2003, when 16 percent of the current external debt will mature. As can be seen in Figure A.18, the proportion of the external portfolio maturing in the one-to-three-year range increased considerably in 2001, relative to the levels of 1997 (36 percent versus 27 percent, respectively). Correspondingly, the share in the portfolio of longer maturities has fallen markedly from the levels of earlier years. External refinancing risk has thus been rising steadily in the last five years.

Figure A.1.5. Currency Structure of External Public Debt

Source: MoF; DGCP
Figure A.I.6. External Central Government Debt by Type of Coupon

![Graph showing External Central Government Debt by Type of Coupon]

Source: MoF; DGCP

Figure A.I.7. Half Life and Duration of External Central Government Debt

![Graph showing Half Life and Duration of External Central Government Debt]

Source: MoF; DGCP
Figure A.I.8. Maturity Structure of External Central Government Debt

Source: MoF, DGCP
Annex II
Analytical Framework for Fiscal Sustainability

I. The Case of Constant Growth and Interest Rates

For a given definition of the public sector, let GDP$_t$ be the economy's gross domestic product (GDP) in period $t$, $D_t$ be the net stock of public sector debt, PS$_t$ the public sector's primary surplus, $X_t$ the amount of seigniorage financing, $g$ the (constant) rate of growth of GDP, and $i$ the (constant) average interest rate on public sector debt. In the standard framework for the analysis of debt sustainability, the increase in debt is a function of the level of debt multiplied by the interest rate, and of the government's primary surplus adjusted for seigniorage financing of the budget. This is expressed as:

$$D_{t+1} - D_t = i D_t - PS_t - X_t$$

For consistency with the analysis conducted in other Chapters, our definition of "government" is the Consolidated Public Sector. Since in Colombia direct Central Bank financing of the fiscal deficit has been phased out and institutional arrangements are such that the independence of the Central Bank is credible, we assume in our projections that the likelihood that the government would resort to inflationary financing of the deficit is negligible. However, the balance of the Central Bank is included above the line (as a government revenue item directly included in the calculation of the primary surplus), as is done in other Chapters. In this case, the increase in the debt stock can be simplified to:

$$D_{t+1} - D_t = i D_t - PS_t$$

Rearranging terms and dividing both sides of the equation by GDP$_{t+1} = (1 + g)GDP_t$, we obtain:

$$\frac{D_{t+1}}{GDP_{t+1}} = \frac{1 + i}{1 + g} \cdot \frac{D_t}{GDP_t} - \frac{1}{1 + g} \cdot \frac{PS_t}{GDP_t}$$

To simplify this expression, debt-to-GDP and primary-surplus-to-GDP ratios are expressed in lower case:

$$d_{t+1} = \frac{1 + i}{1 + g} \cdot d_t - \frac{1}{1 + g} \cdot ps_t$$

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This difference equation describes the behavior of the debt-to-GDP ratio given constant interest and GDP growth rates, and given a sequence over time of primary surpluses. It can be shown that if:

\[ \lim_{t \to \infty} \left( \frac{1 + g}{1 + i} \right)^{t-t_0} d_t = 0 \]

holds, then the debt-to-GDP ratio is nonexplosive. Applying this condition to the difference equation given above, yields:

\[ d_t = \left( \frac{d}{1 + i} \right) \sum_{s=0}^{\infty} \left( \frac{1 + g}{1 + i} \right)^{t-s} p_t \]

This states that to avoid a nonexplosive debt-to-GDP ratio, the public sector must generate a sequence of primary surpluses (relative to GDP) such that the net present value of the sequence is worth at least as much as the debt-to-GDP ratio at time \( t \). If we further assume that future primary surplus-to-GDP ratios are constant, and making use of established results on the summation of sequences, it can be shown that:

\[ ps = (1 - g)d_t \]

This expression can be interpreted as saying that a stable debt-to-GDP ratio is obtained when the ratio of the primary surplus to GDP is equal to the difference between the interest rate and the economy’s rate of growth, multiplied by the current debt-to-GDP ratio.

\[ a) \text{ Relaxing the Assumptions: Time-Varying Growth and Interest Rates} \]

The constant interest and growth rates assumption is restrictive. Assume instead that interest and growth rates vary until period \( T \) and remain constant thereafter. The difference equation previously derived to describe the behavior of the debt-to-GDP ratio over time can be generalized to:

\[ d_{t+1} = \frac{1 + i_{t+1}}{1 + g_t} d_t - \frac{1}{1 + g_t} p_t \]

A solution to this equation can be found by imposing a modified boundary condition to account for time-varying interest and growth rates. It can be shown after some rearrangement that

\[ d_t = \left( \frac{1}{1 + i_t} \right) \sum_{t=0}^{\infty} R_s p_t \text{ where } R_{s,T} = \prod_{i=s}^{T} \frac{1 + g_i}{1 + i_i} \]

52. This discussion is based on Debt Sustainability in Latin America, Deutsche Bank, Global Markets Research, December 2000. For a technical discussion of debt and deficit financing issues, including of the government budget constraint under time-varying interest rates, the reader may also refer to Section 3.4 in Lectures on Macroeconomics, by Blanchard and Fischer, MIT Press, 1989
By assumption, after period $T$, $\frac{1 + g}{1 + i}$ remains constant. Thus,

$$d_t = \left( \frac{1}{1 + i} \right) \sum_{v=t}^{T-1} R_{t,v} pS_v + R_{t,T-1} \left( \frac{1}{1 + i} \right) \sum_{v=T}^{\infty} \left( \frac{1 + g}{1 + i} \right)^{v-(T-1)} pS_v$$

This implies that:

$$pS^p = \frac{d_t}{\left( \frac{1}{1 + i} \right) \sum_{v=t}^{T-1} R_{t,v} + R_{t,T-1} \left( \frac{1 + g}{1 + i} \right) (t - g)}$$

This expression yields the permanent primary surplus-to-GDP ratio that is needed to ensure the sustainability of public finances, under the assumption that interest and growth rates are allowed to vary until period $T$. Interest rates are assumed to remain constant thereafter.

The permanent primary surplus-to-GDP ratio calculated above can be compared with recent (historical) primary surpluses, to estimate the fiscal effort required to ensure the sustainability of public finances. However, if important cyclical or noise components are present in historical primary surpluses, it may be necessary to first filter out these components before calculating the size of the fiscal effort (if any) required to restore fiscal solvency.\(^{53}\)

II. Incorporating Implicit Liabilities in the Analysis

In Colombia, as in other countries, the public sector carries various types of liabilities that are not explicitly incorporated into measures of public sector debt. The analytical framework described above can be extended to estimate the permanent primary surplus that is required to maintain a country’s fiscal solvency, taking implicit liabilities into account. Let $pS_t^{SS}$ and $pS_t^{NSS}$ be the public sector’s primary surplus (relative to GDP) with and without the projected flows associated with implicit liabilities, respectively. The value of the stock of implicit liabilities can be calculated as follows:\(^{53}\)

Let,

$$d_{t+1} = \frac{1 + i}{1 + g} d_t - \frac{1}{1 + g} pS_t^{NSS} - \frac{1}{1 + g} pS_t^{SS}$$

---

\(^{53}\). For a discussion on this subject, see “Cómo Armar el Rompecabezas Fiscal,” by Talvi and Végh, Inter-American Development Bank, 2000.
Imposing boundary conditions, it can be shown that:

\[ d_i = \left( \frac{1}{1+i} \right) \sum_{v=1}^{\infty} \left( \frac{1+g}{1+i} \right)^{v-i} \left( p_s^{ySS} + p_s^{ySS} \right) \]

Letting \( pl_i \) be the net present value of the reduction in pension system and other balances, relative to current balances:

\[ pl_i = -\left( \frac{1}{1+r} \right) \sum_{v=1}^{\infty} \left( \frac{1+g}{1+r} \right)^{v-i} \left( p_s^{ySS} - p_s^{ySS} \right) \]

Then,

\[ d_i + pl_i = \left( \frac{1}{1+r} \right) \sum_{v=1}^{\infty} \left( \frac{1+g}{1+r} \right)^{v-i} p_s^y \]

From this equation, we can derive an expression for the constant primary balance required to keep the debt-to-GDP ratio along a stable path. In our calculations, this expression is also generalized to the case where growth and interest rates are allowed to vary over time. Just as before, these results can be compared with historical primary balances to estimate the magnitude of the fiscal adjustment required to ensure the sustainability of public finances.
Annex III
External Liquidity and Fiscal Vulnerability Issues in Colombia—A Contrast with the Argentine Case

The recent crisis in Argentina was partly caused by persistent fiscal imbalances, with repeated attempts at fiscal adjustment having been delayed or altogether derailed by domestic politics. The rigid monetary system that Argentina had until recently, led to a substantially overvalued real exchange rate and thus to external trade imbalances which, coupled with a deteriorating external financial environment and persistent strength of the U.S. dollar in international markets, helped precipitate a fiscal financing crisis that ultimately led to the largest sovereign bankruptcy in history.

This Annex briefly explores key differences and similarities between Colombia and Argentina in three aspects where vulnerabilities may arise (a) the capacity of each country to generate external liquidity, (b) the capacity of their respective public sectors to command the necessary resources to service their debt (which includes the resources needed to purchase foreign exchange reserves and service external debt), and (c) what the public sector does with the resources at its disposal and its consequences for growth and sustainability.

I. Colombia’s External Liquidity Position is More Comfortable than Argentina’s

A key difference between Colombia and Argentina is the relative importance of the external trading sector in overall economic activity. In the last five years, total exports and imports of goods and services averaged about 37 percent of GDP in Colombia, compared with only 29 percent of GDP in Argentina. Besides a relatively small contribution to overall economic activity, Argentina’s external trading sector has also tended to generate greater external imbalances (current account deficits) than has been the case in Colombia. The average current account deficit in the last five years in Argentina amounted to 3 percent of GDP, versus an average deficit of 2.3 percent of GDP in Colombia. Another key distinguishing feature is Argentina’s high dependence on external resources to finance economic activity, with long-term capital inflows averaging about 8 percent of Argentina’s GDP in the last five years; by contrast, Colombia’s long-term external financing needs averaged about 2.5 percent of GDP during the same period. Short-term financing is also much more important in Argentina, with a 20 percent average participation of short-term debt in total external debt stocks since 1996, versus 9 percent in Colombia.54

54. Differences in need for external financing between these two countries cannot be explained by the relative scarcity or abundance of domestic savings. Gross national savings averaged 13.7 percent of GDP in Argentina, compared with 14.1 percent of GDP in Colombia, in the last five years.
The picture that emerges is one where Colombia’s higher propensity to trade and to stay relatively closer to balance in the external current accounts, is associated with lower long- and short-term external financing needs.\textsuperscript{55} By contrast, Argentina’s smaller trading sector and persistent current account imbalances have been associated with large external financing needs, including a high propensity to maintain comparatively large stocks of short-term debt. These features have a bearing on each country’s overall capacity to accumulate foreign exchange reserves relative to their respective need to acquire external liabilities (including public sector liabilities), with consequences that carry over to various indicators of solvency and the external liquidity of the public sector. A few of these indicators have been selected for discussion below.

Figure A.III.1 compares the evolution of the ratio of foreign exchange reserves to the stock of public external debt in each country. As expected, international reserves cover a higher proportion of public external debt in Colombia than in Argentina. Clearly, there was a marked deterioration of this ratio in Colombia through 1999, when the ratio began to stabilize and improve. By contrast, Argentina’s more precarious position did not improve over the same period, and instead deteriorated further in 2001.

Other indicators confirm that Colombia’s external liquidity conditions have been systematically more favorable than Argentina’s. Despite a persistent deterioration

\textbf{Figure A.III.1. International Reserves and Public External Debt Stocks}

![Graph showing COL and ARG Reserves/Debt Ratios over years 1996 to 2001]

\textit{Source: WB Staff calculations}

\textsuperscript{55} We note but do not discuss the potential impact that Colombia’s more flexible exchange rate system may have had on the country’s relatively sound external performance.
since 1996, Colombia's exports still cover a higher percentage of public external debt stocks than is the case in Argentina, suggesting that the export sector does indeed play a key role in making available foreign exchange resources to the public sector, possibly reducing (although only indirectly) the need to subsequently acquire external liabilities (see Figure A.III.2).

Colombia's comparatively favorable external liquidity conditions also become apparent by inspection of a few debt service ratios. Colombia's external public debt service to international reserves ratio has remained broadly stable in the last few years; by contrast, Argentina's public debt service to international reserves ratio deteriorated very rapidly beginning in 1999, reaching nearly 100 percent in 2001 (see Figure A.III.3). The ratio of external public debt service to total exports tells a similar story, with Colombia maintaining relative stability and Argentina showing a marked deterioration since 1999 (Figure A.III.4).

We may conclude that, on balance, Colombia's capacity to generate international liquidity is relatively comfortable compared to Argentina's, including with particular reference to historical external public debt and debt-service levels. However, having a relatively satisfactory level of foreign reserves does not guarantee that a particular sector of the economy (in this case the public sector) necessarily commands the resources to purchase foreign reserves and service its debt, both foreign and domestic.

The discussion now turns to the nature of selected aspects of the relationship between the public sector and the rest of the economy, and more specifically to the revenue-generating capacity of the public sector relative to the size of its liabilities.

**Figure A.III.2. Total Exports and Public External Debt Stocks**

![Graph showing COL and ARG exports to debt ratios from 1996 to 2001.]

*Source: WB Staff calculations*
Figure A.III.3. Public External Debt Service and Total International Reserves

Source: WB Staff calculations

Figure A.III.4. Public External Debt Service and Total Exports

Source: WB Staff calculations
II. Similar Public Revenue and Expenditure Trends in Colombia and Argentina

Despite the differences already discussed in capacity to generate foreign exchange, the public sectors in Colombia and Argentina are displaying similar trends (and imbalances), which result in growing vulnerability and raise sustainability issues. For example, in both countries, interest and total debt service payments represent a growing proportion of government expenditures. Moreover, when measured against public sector revenues (for example, tax revenues), interest payments loom as an increasing burden on government finances in both Colombia and Argentina (see Figures A.III.5 and A.III.6). This is important insofar as it indicates that servicing a growing public sector debt also requires increasing the amount of resources available to the public sector on a recurrent basis.

It is also worth noting that at these levels of commitment of public revenues to interest payments (25 percent of tax revenues are used to pay interest on existing debts), Argentina had already entered into a serious fiscal crisis. The stock of total public sector debt (on a gross basis) in Argentina and Colombia, relative to the revenue-generating capacity of the public sector, was also at similar levels by the end of 2001, following a sustained deterioration in Colombia during the late 1990s (see Figure A.III.7). Furthermore, total gross public debt in both countries is approaching similar levels relative to the size of their economies, with a relatively faster rate of increase in Colombia than in Argentina in the last few years (see Figure A.III.8).

In both countries, the underlying cause of growing total debt stocks has been a large and persistent fiscal deficit, fueled primarily by increasing public current expenditures. Colombia’s fiscal deficit averaged 4 percent of GDP during 1997–2001, while Argentina’s averaged 3 percent of GDP over the same period (see Figure A.III.9). Current public expenditures in Colombia rose from under 22 percent in 1997 to about 24 percent of GDP in 2001, and in Argentina from over 21 percent in 1997 to about 24 percent of GDP in 2001. Current public expenditures in both countries increased as a result of higher debt service costs and an expansion in other types of current expenditures (for example, salaries and transfers).

Efforts by both countries to restore fiscal balance by increasing public revenues have been moderately successful (see Figure A.III.10), but such efforts have thus far been insufficient to match the pace of growth in public expenditures. Furthermore, in the case of Colombia, total public sector revenues at about 29 percent of GDP are already higher than in Argentina (and higher than in many other countries in the region), suggesting that there is already a limited upside to the fiscal effort that can be carried out on the revenue side in Colombia. More specifically, both in Argentina and Colombia total tax revenues already amount to about 19 percent of GDP. This leads us to a discussion of the quality of fiscal adjustment and its implications for growth and fiscal sustainability.
Figure A.III.5. Public Interest Payments and Tax Revenues

Source: WB Staff calculations

Figure A.III.6. Public Interest Payments and Total Revenues

Source: WB Staff calculations
Figure A.III.7. Public Debt Stocks and Total Revenues

![Graph showing public debt stocks and total revenues for COL and ARG from 1996 to 2001.]

Source: WB Staff calculations

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Figure A.III.8. Gross Public Debt and GDP

![Graph showing percentage of external portfolio from 1997 to 2001, with benchmark.]

Source: WB Staff calculations
Figure A.III.9. Consolidated Public Sector Balances

Source: WB Staff calculations.

Figure A.III.10. Total Public Sector Revenues

Source: WB Staff calculations.
III. Fiscal Adjustment in a Dynamic Context

Attempts at further increasing public revenues by raising taxes may turn out to be counterproductive in the context of weakening private investment and high domestic uncertainty. Private investment has fallen steadily in Colombia, basically halving from levels of 14 to 15 percent of GDP in earlier years, to about 8 percent in 2000. Colombian private investment performance is currently weaker than it has been in Argentina, where private investment has also fallen from earlier levels of about 18 percent to 14 percent of GDP more recently. Since in Colombia public investment has also been falling as a proportion of GDP (and of public sector expenditures), and given that the public sector displays a high propensity to use revenues to finance current expenditures, it may be argued that in the absence of comprehensive public expenditure reform, further increasing the resources available to the public sector could further weaken overall investment performance in Colombia.

In this connection it is worth noting that weakening investment performance also feeds back into an analysis of sustainability and vulnerability of public finances. A lower propensity to invest economywide (which is associated with higher public sector participation in the economy) implies slower GDP growth in the long run, thus increasing fiscal risks by reducing the prospective tax base. Moreover, slower GDP growth would also put upward pressure on real interest rates, as public debt stocks would become more important relative to the size of the economy and thus of domestic savings in the long term (compared with a higher GDP growth scenario). Both slower long-term GDP growth and higher real interest rates have a negative impact on the sustainability of fiscal accounts. This suggests that the degree of success of measures to improve fiscal sustainability in Colombia (for example, by raising the public sector primary balance on a permanent basis) is not invariant to the quality of public expenditure, the manner in which public revenues are adjusted, and overall public sector participation in the economy.

56. Public investment in Argentina has had a limited downside, since it amounts to only 10 to 15 percent of GDP. However, it is worth noting that given the small investment component of public expenditures in Argentina, basically all recent increases in public revenues have been used to finance current expenditures.

57. Given the public sector's high propensity to consume the resources at its disposal, higher public sector participation in the economy may also be associated with a fall in national savings, which in turn reduces the availability of internal resources and increases dependence on foreign capital to finance growth.
Annex IV
Debt Management Strategy and Portfolio Benchmarking

I. Background

Debt benchmarking, which attempts to identify the optimal debt portfolio structure and funding strategies, is the analytical foundation for sovereign debt management. The basis for debt benchmarking in Colombia today is the cost-risk tradeoff analysis known as Value-at-Risk (VaR) analysis. Colombia is one of only a few developing countries where VaR modeling is being integrated into day-to-day debt management decisions. This Annex assesses the current benchmarking methods used by the Dirección General de Crédito Público (DGCP), and related debt management issues. It also provides recommendations for further analytical improvements so that the consistency of debt benchmarking is improved and further incorporates debt sustainability analysis.

II. An Overview of Current Methodology

Benchmarking in Colombia consists of cost–risk tradeoff analysis across different debt structures and funding strategies, each of which has an implied VaR. The optimal debt structure and funding strategy is chosen to minimize the VaR.

Specifically, VaR is calculated as the difference, discounted by an appropriate discount yield curve, between debt service costs in a risky scenario and under an expected scenario. Under the expected scenario, the variables that determine debt service flows exhibit the behavior “normally” expected by DGCP. The risky scenario can be projected either as a specific scenario thought to be risky, or as a scenario following a certain stochastic process. The discount curve is used to calculate the present value of the cash flows in both the expected and risk scenarios. The VaR associated with one underlying variable is the difference between the present value of debt service under the expected value of the underlying variable, and the “risk scenario” of the variable.58

For example, to calculate the VaR due to interest rate movements, it is assumed that the interest rate follows a geometric Brownian motion process given by $dS = \ldots$

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58 The analysis can be generalized to the case of several underlying variables. For example, the VaR of a portfolio of 2 underlying variables is equal to

$$\sqrt{w_1^2\sigma_1^2 + w_2^2\sigma_2^2 - \frac{1}{2}\rho w_1 w_2 \sigma_1 \sigma_2}$$
\[ \mu dz + \sigma dz, \text{ where } dz \text{ is the change in the interest rate variable, } z \text{ is a random drawing from a standardized normal distribution, } \mu dz \text{ is the (infinitesimal) change in time, } \mu \text{ is the average change of } S, \text{ and } \sigma \text{ is the standard deviation of } S. \]

Therefore, the value of the interest rate variable in the "risk scenario" under 95 percent confidence level is given by:

\[ S(t) = S_0 e^{\left( \mu - \frac{1}{2} \sigma^2 \right) t + \sigma \sigma \sqrt{t}} \]  
\[ = S_0 e^{\mu r} e^{-\frac{1}{2} \sigma^2 (t+1) 645 \sigma \sqrt{t}} \]  
\[ = E(S_t) e^{-\frac{1}{2} \sigma^2 (t+1) 645 \sigma \sqrt{t}} \]

It follows that the VaR at time \( t \) due to the movement of interest rates is calculated as the discounted value of the debt service under risky scenario \( S(t) \), minus the debt service under the expected scenario \( E(S_t) \). When implemented, \( S(t) \) is calculated using the equation above. \( E(S_t) \) is chosen as what the authorities believe is the most likely market rate at time \( t \).

III. Assessment

A few issues arise regarding the way this methodology is applied in Colombia, mainly relating to the definition and calculation of the expected scenario. First, the definition of debt risk is not coordinated between DGCP and the unit in charge of macroeconomic programming. The DGCP relies on an internal risk benchmark, which is calculated as the debt service under an expected market scenario. The risk is then defined as the deviation of the debt services under alternative scenarios from the benchmark debt service. Subsequently, funding strategies are chosen so that risks can be minimized. By contrast, the macroeconomic programming unit views risks in terms of fiscal sustainability. As a result, a funding strategy that the DGCP deems not risky, can in fact be quite risky from a macroeconomic programming point of view, and vice-versa. Second, there are problems in the calculation of the risky scenario. Equation (3) is used by the DGCP, with \( E(S_t) \) taken as exogenous (based on the DGCP's views on the market). There is some inconsistency in such a calculation: if geometric Brownian motion for the variable is assumed, equation (1) should be used directly to calculate \( S(t) \). Third, analysis needs to be based on the same assumptions used by both the DGCP and macroeconomic programming. Currently, each unit has its own set of assumptions.

59 When a forward market exists, the forward rate is used as the approximation for \( E(S_t) \).
IV. Recommendations

It is recommended that a unified view on debt risks be developed by the DGCP and the macroeconomic programming unit. Ultimately both units should be concerned with budget risk, that is, the magnitude of the risk that debt service can bring to the budget. The macroeconomic programming unit can conduct an analysis of the government’s balance sheet, in particular, of revenue and expenditure patterns. Based on such analysis, a maximum “budget-at-risk” (max-BaR) can be derived, which can be defined as the maximum tolerable risk (the amount of debt service) that the budget can sustain. The DGCP can then use this max-BaR as a risk benchmark—the DGCP should choose only funding strategies and portfolios that imply smaller BaRs than the max-BaR.

A three-step approach is recommended for conducting a unified benchmarking analysis which combines sustainability and vulnerability analysis.

STEP 1: Derivation of the Efficient Portfolio Set

Given the government’s primary budget forecasts and, hence, borrowing requirements for the next few years (for instance, 5, 10, or 15 years), sequential steps are followed to identify an optimal benchmark portfolio. At this stage, the borrowing (issuing) program is assumed to be time-invariant over the next few years, and the efficient portfolio set five years from now is derived over various combinations of borrowing programs. To guarantee the feasibility and optimality of the benchmark portfolio, the current sovereign debt structure should be taken as an initial condition, and official primary budget deficit forecasts should be used as inputs to compute the yearly borrowing requirements. The efficient portfolio set can then be obtained by conducting simulations over the future evolution of interest rate term structures. To simulate future term structures, either a historical method (bootstrapping) or simulation (Monte Carlo) method calibrated by actual data, could be used.

STEP 2: Derivation of Feasible Portfolio Set from Exogenous Medium-Term Targets

In this step, medium-term target duration, currency composition, max-BaR, and the shape of debt profile for both external and domestic debts, are exogenously established by conducting macro, financial, and budget analyses. Ultimately, the Ministry of Finance should establish medium-term specific targets that will be supplied as inputs to identify an optimal benchmark portfolio, from the efficient portfolio set derived in Step 1. Given the medium-term targets, a feasible efficient portfolio set will be identified by the maximum tolerable 95 percent BaR.

STEP 3: Identification of Optimal Benchmark Portfolio within Feasible Set

The third step is to identify an optimal benchmark portfolio from the feasible set. Given the feasible efficient portfolio set, a portfolio which minimizes the gap with
the medium-term targets set in Step 2 above will be chosen as the benchmark portfolio.

There is also a need to separate portfolio benchmarking and issuing program (or funding strategies) benchmarking. As has been mentioned, the aim of debt portfolio benchmarking is to identify the optimal debt portfolio with a structure that provides an optimal cost-risk tradeoff, consistent with a country's economic goals. The risks here should include refinancing risk, budget risk, and other types of risk, in addition to the typically discussed interest rate and exchange rate risks. Issuing program benchmarking aims at identifying the optimal path to reach the portfolio benchmark, taking as the starting point the current debt portfolio structure. Currently, these two benchmarking exercises are not properly differentiated.

In standard portfolio benchmarking, each possible debt portfolio (for example, defined by a maturity structure) is examined for its cost-risk behavior under different risk scenarios over many years. The structure of each debt portfolio is static over time. The issue here is to find a static debt portfolio that performs best in the expected economic environment. The objective of issuing program (funding) benchmarking is to identify an optimal path of issuing programs to reach (from the current debt portfolio) the portfolio benchmark. It deals with practical issues such as how quickly one can reach the portfolio benchmark and what is the depth of debt markets and its implication for debt issuing. Each path of issuing programs is examined for its implied costs and risks.

Essentially, what the DGCP currently does is to try to accomplish portfolio benchmarking and issue program benchmarking simultaneously. Following the DGCP approach, the structure of a debt portfolio is defined by the issuing programs. A path of issuing programs over several years determines a debt portfolio whose structure will change over time. The cost-risk tradeoff of such debt portfolios will be analyzed under different scenarios and the one with the best cost-risk combination is then chosen as the benchmark. But the chosen portfolio is neither a benchmark portfolio nor a benchmark-issuing program in the conventional sense. Instead, the DGCP should carry out two rounds of cost-risk tradeoff analysis, one for portfolio benchmarking and the other for funding benchmarking. The objectives of these two types of analysis are different and should not continue to be confused.
Annex V
Development of Debt Markets

In the last decade Colombia has undergone a series of important institutional changes in domestic debt markets. These included the privatization and internationalization of banking, the creation of a public debt market, and the reform of Social Security that led to the creation of private pension funds. In this context it is possible to point to various major issues that have characterized the development of debt markets in Colombia: (a) the rapid development of the public debt market; (b) the relatively unsuccessful development of private financing through capital markets both in stock markets and over-the-counter; (c) the instability in the recent past of the financial sector; and (d) the impact of fiscal and monetary policy, and of institutional reform.

Regarding the public debt market, profound and systematic changes occurred throughout the 1990s. In 1993, the government created Treasury bonds (TES), conceived as a tool for internal debt financing and as an instrument for the development of capital markets. In 1995, an auction system for TES was launched. In 1997, with the introduction of the “market makers” program, a series of important institutional innovations started in debt markets, including the designation on merit of a group of financial institutions to provide primary and secondary liquidity to TES issuance, the standardization of the TES, increased transparency in the auction process through a pre-announcement of financing needs, set rules for auction pricing, and the introduction of electronic transactions at the Central Bank and the stock markets.

These reforms, combined with the government’s growing financing needs, contributed to an increase in the outstanding stock of public debt in primary and secondary markets. From 1997 to 2000, the volume of Treasury bonds traded over-the-

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60 Governments often designate as primary dealers a number of intermediaries with an obligation to assist in the development of markets, often acting as market makers. Having a “market makers” program facilitates the transition away from captive sources of financing to a market-based system. Eligibility criteria for being a primary dealer usually include financial capacity, management and technical skills, market presence, and willingness to cooperate with the authorities (for example, providing information).

61 A variety of debt instruments may allow debt managers to satisfy the needs of many investors. However, the availability of too many products can also produce market fragmentation, that is, for a given potential level of market activity, active trading of any one product may not be viable. International experience has shown that the benefits of product standardization far outweigh any benefits from diversification. In Brazil, more than 250 different types of federal securities are reported to exist, but only about 30 are deemed to be “relatively active” and 10 are regarded as “liquid.” In Korea, only six types of domestic government securities are known to be issued, but until recently Treasury bonds issued on different dates were treated as separate issues, thus causing market fragmentation (Developing Government Bond Markets: A Handbook, 2001, World Bank and IMF).
counter increased from COP19,400 billion (or 16 percent of the 1997 GDP) to COP87,800 billion (or 51 percent of the 2000 GDP). During this period the volume of daily transactions multiplied fourfold. Despite these significant changes, the major holder of domestic central government debt remains the public sector itself, with about 50 percent of the outstanding stock in the hands of public sector entities (mainly the Social Security pension fund) (see Figure A.V.1). Successful development of private debt markets requires a much more diversified investor base (see Box A.V.1 for a description of the Spanish experience promoting investment funds).

The limited size and liquidity and the high risk of Colombian debt markets continue to impose major constraints for efficient debt financing of the public sector. Colombia lags behind countries with similar and sometimes lower levels of economic development. In addition, for similar degrees of risk as measured by price-standard deviations, Colombia offers relatively higher returns than Brazil, Chile, and Mexico, for example.

From 1998 to 2000 Colombia faced serious shocks to its financial system. As aggregate consumption contracted, financial institutions that focused on the consumption credit market suffered. The housing mortgage market also has been adversely affected by the deteriorating economic environment. In this environment,

**Figure A.V.1 Holders of Central Government Domestic Debt***

*TES Bonds as of 2001.
Source: MoF, DGCP.*
Box A.V.1. The Spanish Experience with Specialized Investment Funds

Spain was very successful in promoting specialized government bond funds as close substitutes for bank deposits. In the early stages of development, the Spanish government nurtured constructive relationships with banks and persuaded them that income lost from lending spreads on deposits would be more than offset by gains in the form of fee income earned through managing investment funds. A joint public–private publicity campaign was launched to elicit interest in new investment vehicles. Favorable tax treatment in contrast to deposit accounts, also made these investment funds attractive to retail investors. In addition, under a special agreement with the Spanish Treasury, privately managed, specialized government bond funds (called *FondTesoro*) were introduced in 1990. These specialized bond funds were important in promoting liquidity and depth in secondary government bond markets.

the Constant Purchasing Power Unit (UPAC) system, a tool designed to guarantee the value of savings channelled to the housing sector, came under pressure through a combination of rising interest rates, a widening maturity gap between savings and loans, and the collapse of real estate prices.
The Financial Sector

This Chapter was written by John Pollner.

I. Background

The Colombian financial crisis began in 1998, although financial system weakness was already evident starting in 1996, after the credit boom during the first half of the 90s. Credit performance of all borrowers was severely affected, and falling real estate values, in particularly squeezed mortgage debtors. Local and regional governments also contributed to debt default and high indebtedness, further weakening bank portfolios. The credit boom came to an end in early 1996 as a result of a slowing down of gross domestic product (GDP) growth, reflecting domestic political uncertainty, weakening international confidence, and a tightening of credit policy in an effort to dampen domestic demand growth. Growing market concerns about the sustainability of the large fiscal and external deficits resulted in the emergence of significant exchange rate pressures. These accelerated in 1998 in response to the turmoil in the international capital markets. As in other Latin American countries, the increase in country risk and the deteriorating international environment led to a substantial increase in the yields of Colombian international bond issues followed by the loss of Colombia's investment grade in 1999. In turn, the efforts by authorities to stabilize the exchange rate led to a sharp increase in real interest rates, and an abrupt contraction of real lending flows. At the same time, real GDP growth decelerated abruptly in 1998, and turned negative during 1999.

Debt restructuring programs of the private corporate sector and sub-national governments, therefore, were crucial as part of the government's economic emergency program adopted in 1998 which included, among other things, funding the deposit insurance fund (Fondo de Garantías de Instituciones Financieras, FOGAFIN) in order to compensate depositors of failed banks and finance workout schemes for intervened banks and financial institutions. The fiscal cost was in part financed by
a tax applied to all financial system transactions. FOGAFIN also established a capitalization credit line for private financial institutions, provided that such institutions took corrective measures to improve their financial health. To avoid fiscal losses, the credit lines were lent to bank shareholders who purchased FOGAFIN bonds and added these to bank assets so as to increase net capital. Since the bonds were low risk-weighted assets, this also improved balance sheet solvency though without a positive cash flow effect. Prior to these adjustments, loan loss provisioning requirements were increased to first determine the actual capital gap.

Foreign exchange exposure was not a major issue in Colombia, since banks were well hedged in terms of matching the currency of their deposits and assets. However, the dollar loan portfolio generated credit risks in borrowers that had only domestic currency incomes, a factor that affected repayment capacity and loan performance following the rapid depreciation of the Colombian peso. The situation of public and intervened financial institutions was by far the worst of the system, most of them being deeply decapitalized or outright insolvent, with much higher loan delinquency ratios and lower liquidity levels than private banks. The rate of deterioration of the portfolios of public banks had been much higher than that of private institutions and, unlike them, continued during 1999. The cooperatives and the savings and loan institutions (CAVs) also experienced substantially more severe difficulties than private banks due to the acute deterioration of consumer loans and mortgages, and a Constitutional Court ruling which required them to compensate borrowers for past years of payments due to a change in an interest rate indexing procedure which was ruled invalid.

As lending to the private sector halted during the crisis, banks and financial institutions purchased more government securities to fill their balance sheets. Government securities on bank balance sheets increased its share from about 10 percent of assets before the crisis to almost 30 percent currently, a phenomenon which was also consistent with the increase of government indebtedness to meet expenses, given the economic slowdown and decline in tax revenues. Bank earnings were negative during 1998–2000, only to be reversed with minimal positive net income in 2001 (see Table 1). Banking solvency ratios showed the greatest decline during 1999 at 9 percent year end, and rose thereafter, reaching 14 percent in 2001.

The financial crisis was also manifested in the level of nonperforming loans in the banking system, which rose from approximately 7 percent in early 1998 to a peak of 20 percent by end 1999. With the tightening of prudential regulations, loan loss provisions began increasing, from 28 percent in mid-1998, reaching 51 percent of the total non performing portfolio in mid-2001.

<table>
<thead>
<tr>
<th>Table 1. Financial System Return on Assets (percent)</th>
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<tr>
<td>1997</td>
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<tr>
<td>12</td>
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Source: Superintendencia Bancaria
II. The Financial Crisis Management Strategy

Starting in November 1998, with the issuance of a financial emergency decree that provided an initial policy framework, the Colombian authorities took a number of important steps to address financial sector distress. The decree contained measures to alleviate pressures on mortgage debtors, increase protection of depositors in financial cooperatives, clarify the extent of the future safety net in that sector, and assist—through FOGAFIN credit lines—in the recapitalization of viable financial intermediaries and the liquidation of bank assets.

The restructuring of the savings and loan banks (Corporaciones de Ahorro y Vivienda, CAVs) was a crucial element of the program because these institutions were the most insolvent with over 20 percent of their loan portfolio non-performing due to borrower defaults caused by interest rate risks and falling real estate values used as collateral. To deal with the CAV problem, the government issued a number of measures, including inducing mergers of CAVs with financial groups based on capital shortfalls, enforcing capital adequacy, and provisioning rules while providing capitalization assistance contingent on owners contributing fresh capital, developing an interest rate hedging instrument, and preparing the ground for the establishment of a new mortgage securitization agency.

Additionally, the government took proactive steps using an innovative combination of policy measures to quickly shield the financial system from a potential collapse, which in the end was successfully averted. These measures included:

- **INTERVENTION AND CLOSURE OF FINANCIAL INSTITUTIONS.** The Banking Superintendency intervened 10 institutions that were to be liquidated, and FOGAFIN took over three to be restructured and resold to the private sector in the immediate future.

- **A DEBTOR RELIEF PROGRAM.** The government launched a debtor relief program that included (a) refinancing at preferential interest rates to homeowners who maintained a good payment record but whose standing balance on indexed housing loans went up more than 20 percent in nominal terms, (b) refinancing for housing borrowers who had arrears for three months or less on their mortgage obligation, (c) mortgage payment relief for low-income homeowners that lost their jobs.

- **A RECAPITALIZATION PLAN.** The government announced a recapitalization plan under which the government extended credit lines through the deposit insurance agency, FOGAFIN, to enable financial institutions to write off impaired assets. Under one of these programs, credit lines were lent to the shareholders, who purchased bonds issued by FOGAFIN and capitalized their banks with them. This consequently did not imply cash disbursements for the government. The cash flows from FOGAFIN to the beneficiary institutions and the shareholders, thus reflected only the differential between the interest rate paid on the loan provided by FOGAFIN and the bond that was issued.
Another program started in 2001 for mortgage banks, also provided for credit lines directly to the banks as well as to shareholders.

- **The Reformed Financial Sector Law:** A new law was passed by Congress in mid-1999, the main provisions of which were:
  - An increase in the minimum capital of financial institutions and raising the risk weighted capital ratio to 9 percent
  - The strengthening of procedures for the timely detection of troubled institutions and the introduction of "prompt corrective action" triggers by the Superintendency
  - The introduction of time limits for different procedures undertaken by the Superintendency, such as the decision on whether to liquidate or close an institution, intervention without liquidation, and liquidation proper
  - The tightening of clauses under which a financial institution may be intervened
  - New powers to FOGAFIN to expedite mergers and acquisitions, using other banks as trustees to manage credit portfolios, transferring assets and liabilities of the troubled bank to another (using the initial carving out of good and bad banks' assets and liabilities), making loans to financial institutions and purchasing assets to facilitate these transactions, and promoting securitization of portfolios to expedite asset transfers. A modification to the banking law, in process of being approved, would also provide powers to the Superintendency of Banks to authorize asset and liability transfers as part of financial institution improvement/recovery plans.

- **Lender of Last Resort Facilities:** The Central Bank increased the amount of repo transactions and eased access to the rediscount facility in order to provide liquid resources to those financial institutions that suffered withdrawals.

### III. Restructuring and Recapitalization of the State-Owned and Private Banks

The government's strategy with respect to the state-owned banks was meant to isolate them from the rest of the financial system in order to restructure or sell them under controlled conditions while avoiding an additional factor of potential contagion to the already weak private banks. Public banks were formally "officialized," meaning that the management oversight and ownership stake were taken over directly by FOGAFIN with a view to clean up the balance sheets, recapitalize the banks, and sell them or liquidate them. The Caja Agraria was closed and a new Banco Agrario created out of the Colvalores Leasing Company which was part of the Banco de Desarrollo Empresarial; following a reform in the statutory mandate of the institution. Although the assumption that the remaining banks could be sold in one or two years for a multiple of what they could be sold at present was probably realistic if economic and market conditions were favorable, the potential further deter-
oration of the loan portfolio under less favorable conditions and the operating costs of keeping deeply troubled banks open, created some risks. Moreover, for banks that had been experiencing severe management difficulties and weak control systems (which was often the case for public banks), it could be particularly difficult to redress ingrained habits and instill a new management culture under such uncertain conditions and governance.

The fact that the rate of deterioration of the portfolios of public banks had been much higher than that of private banks, suggests that their management and debt repayment cultures in public bank clients adversely affected their capacity to manage loan portfolios effectively under difficult market conditions. The postponement of a prompt ex ante regularization of their condition resulted in sizable further loan deterioration and large operating losses derived from oversized staffing and infrastructure, low efficiency, and poor loan management. This created difficulties to privatize the banks promptly and increased pressures to keep them open. Under subsequent FOAGFIN oversight and intensive supervision by the Superintendency of Banks, these institutions recovered substantially after downsizing, and generated positive returns by 2001. Nevertheless, a review of the experience might consider whether it was optimal to keep the banks open as institutions or whether it might have been preferable to have considered at the outset, the sale of their potentially good assets and deposits to sound financial institutions (and if needed, with a government risk-sharing agreement with the purchasing institution), while transferring all unviable assets to a liquidation company and recognizing sooner the eventual fiscal liability.

a) FOAGFIN’s Crisis Response Instruments

FOAGFIN’s operations in coordination with the Superintendency of Banks managed to isolate the weakest banks from the rest of the financial system, and thus prevent contagion. Those banks which were intervened underwent heavily scrutinized improvement programs with FOAGFIN’s capitalization support, and in about half the cases for the state-owned banks, the strategy was to continue their operations and eventually sell them off. FOAGFIN’s financial instruments included: (a) the purchase by FOAGFIN of stock issued by an institution that was unable to recapitalize, (b) long-term repo operations for the purchase and repurchase of credit portfolios, (c) credit lines funded by bonds to financial entities under rehabilitation programs or to facilitate mergers or acquisitions, and (d) a capital guarantee which was treated as capital in the recipient entity (which reflected a contingent liability for FOAGFIN whereby it had an obligation to inject true capital if the bank became illiquid).

The resolution process, particularly for the state-owned banks, has been somewhat arduous: more than three years after intervention, the final resolution status of many of these banks is not clear, and as the time draws out, the more costly option of outright dissolution looms larger. While the government has successfully been
able to gradually reduce and sell off the balance sheets and physical infrastructure of these banks, its investment in this process may need to continue for some time to achieve its end target of privatization or extinction. However, the “officialization” of these institutions also implicitly means that FOGAFIN stands behind all their liabilities despite the requirement for rehabilitation and eventual sale or disposal of assets. This role might therefore reduce some of the incentives for a prompt resolution of these banks, particularly if remaining management and staff feel that the State will fund them until a suitable buyer of remaining performing assets is identified. As shown further below, the liability base of such banks could have significant fiscal impact if the sale or liquidation of their assets does not materialize.

In its support of private banks, fewer risks remain. However, though the experience has been generally favorable, if additional banks were not to repay the capitalization credit lines to FOGAFIN, then FOGAFIN would take on the share ownership which was meant to be financed by the credit line. However, FOGAFIN would need to continue paying the interest on the bonds used to fund the credit line. This would hypothetically result in a negative cash flow for FOGAFIN until the entity was sold or liquidated. Fortunately to date, only one bank has not repaid promptly.

Table 2 shows the support of FOGAFIN’s capitalization program to restore technical solvency of state-owned banks following the intervention and officialization of these banks.

At end 2000, after the ongoing disposition of assets and deposits of the intervened state-owned banks, Col$13,197 billion in assets and Col$8,165 billion in deposits remained on the balance sheets, amounting to 8 percent of GDP and 5 percent of GDP, respectively. While FOGAFIN still intends to dispose of these assets through market mechanisms and absorption by the private sector, it remains unclear as to whether, in the end, a large portion of depositors’ compensation may need to be assumed by the State as a fiscal outlay or additional financial support to FOGAFIN.

Table 2. Capitalization Support Provided to State-Owned Banks, 1998–2001

<table>
<thead>
<tr>
<th>Bank</th>
<th>Amount (Col$ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH</td>
<td>1,546</td>
</tr>
<tr>
<td>Banestadio</td>
<td>1,240</td>
</tr>
<tr>
<td>Bancafé</td>
<td>1,137</td>
</tr>
<tr>
<td>Granahorrar</td>
<td>332</td>
</tr>
<tr>
<td>IFI</td>
<td>400</td>
</tr>
<tr>
<td>Banco Agrario</td>
<td>150</td>
</tr>
<tr>
<td>FES</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,850</strong></td>
</tr>
</tbody>
</table>

1. Includes CISA BCH
2. Includes CISA Bancafé

Source: FOGAFIN
Payments for deposit insurance of all intervened private financial institutions since the start of the crisis have amounted to Col$73.46 billion, equivalent to under 0.5 percent of the government's revenue base. The assets and liabilities of the private intervened institutions since 1998, before any liquidations or deposit payouts, amounted to Col$1,106 billion and Col$1,520 billion, respectively. The liabilities (including all deposits) of such institutions represented 1 percent of the average GDP over that period. Table 3 shows the funding provided under the FOGAFIN support program (that is, capitalization credits provided to private banks) for the private banks that entered into the capitalization program.

To date, government funding for FOGAFIN has provided it financial sustainability, although maintenance of this sustainability depends in large part on the performance of the credits it has extended under the capitalization and other support programs. Nevertheless, FOGAFIN is partially hedged against private banks, given that it has a large stock of bond liabilities used to fund its credit lines, without any transfer of cash (see Table 4).

b) The Development of Regulatory and Supervisory Strategies

Swift action by the Superintendent of Banks was taken and will need to be continued to enforce proper loan classification and provisioning requirements, including reducing the overreliance of banks on collateral property as a substitute for cash provisions, particularly given depressed real estate values. When capital deficiencies are detected, financial institutions should be given short deadlines to comply, if needed, with FOGAFIN support. The joint monitoring and supervision of bank Improvement Plans by FOGAFIN and the Banking Superintendency has been effective to prevent unforeseen deterioration of such institutions. Those that do not comply should be immediately closed or intervened to ensure that only banks with

<table>
<thead>
<tr>
<th>Bank</th>
<th>Amount (Col$ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colpatria</td>
<td>212</td>
</tr>
<tr>
<td>Superior</td>
<td>94</td>
</tr>
<tr>
<td>Crédito</td>
<td>60</td>
</tr>
<tr>
<td>Interbanco</td>
<td>43</td>
</tr>
<tr>
<td>Unión Colombiano</td>
<td>28</td>
</tr>
<tr>
<td>Cofinorte</td>
<td>20</td>
</tr>
<tr>
<td>Coletfinanciera</td>
<td>28</td>
</tr>
<tr>
<td>Multifinanciera</td>
<td>3</td>
</tr>
<tr>
<td>Credivever</td>
<td>2</td>
</tr>
<tr>
<td>Confinanciera</td>
<td>3</td>
</tr>
<tr>
<td>Megabanco</td>
<td>286</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>779</strong></td>
</tr>
</tbody>
</table>

*Source* FOGAFIN
Table 4. FOCAFON Balance Sheet as at end 2000 and end 2001 (Col$ billions)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Col$ billions</th>
<th>Liabilities and Equity</th>
<th>Col$ billions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td>2001</td>
<td>2000</td>
</tr>
<tr>
<td>Banking support operations</td>
<td>1,941</td>
<td>2,207</td>
<td>Bonds issued</td>
</tr>
<tr>
<td>Investments and repos</td>
<td>844</td>
<td>1,580</td>
<td>CAF credit line</td>
</tr>
<tr>
<td>Government payables and capitalizations</td>
<td>4,308</td>
<td>4,047</td>
<td>Other liabilities</td>
</tr>
<tr>
<td>Granahorros portfolio</td>
<td>413</td>
<td>374</td>
<td>Total liabilities</td>
</tr>
<tr>
<td>Other</td>
<td>90</td>
<td>22</td>
<td>Net equity</td>
</tr>
<tr>
<td>Total assets</td>
<td>7,596</td>
<td>8,230</td>
<td>Total liabilities &amp; equity</td>
</tr>
</tbody>
</table>

Source: FOGAFON

sufficient capital and capacity to extend credit populate the financial system. Capitalization support should be limited to situations meant to avoid systemic problems and to institutions with sufficiently good prospects for solvency.

The Superintendency has upgraded its comprehensive risk management system (based on CAMEL indicators'), but also added modules for supervising financial groups (consolidated supervision) to determine consolidated solvency positions, and evaluating market risks. The government recently approved a decree that will weight specific market risks (interest rate, foreign exchange, maturity) requiring an allocation of risk-weighted capital. This will likely reduce the current risk-weighted capital ratios of banks by a couple of percentage points, although as a whole it will likely not push any additional bank into insolvency. The Superintendency is also successfully implementing a prompt corrective actions regime with associated matrixes of sanctions to be applied against banks exceeding prudential limits. Management performance risk is also being carefully evaluated with a view to setting weights for management-related factors in assessing the overall stability of banking institutions. Additional reforms being undertaken include directives for banks to develop their internal value-at-risk models in line with the upcoming reforms in regulation and supervision as proposed by Basle.

Colombia also has some unique characteristics due to the impact of the drug trade and guerilla violence that, while not having directly affected the recent financial instability, bear some mention. These factors impact the financial sector via the laundering of illicit funds, which are not only generated from illegal trade but also can be destabilizing to financial institutions depending on what actions (regulatory, enforcement, criminal) are taken by the authorities. The government has, however, taken commendable diagnostic measures to begin tracking and encumbering such illicit monetary assets and developing and approving an anti-money-laundering legal framework. Through the screening of money transfers, deposits, and withdrawals

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1. Capital/Assets/Management/Earnings/Liquidity, an international prudential and regulatory diagnostic tool for assessing financial soundness of banks.
that are deemed out of proportion to corresponding business enterprises, the tracking of illicit flows has been more systematically developed. This has also been supported through the use of technology to map, both geographically and organizationally, the links among various business concerns and their potential correlation with subversive activity or drug trafficking. Because such measures require the cooperation of all financial institutions, some of which may be under threat by the very clients who generate laundered funds, the road ahead to perfecting such monitoring tools will be challenging. However, with the cross-referencing of various financial system sources and industry links within the country, such initiatives will be able to continue progressing in the identification of laundered funds within the banking system.

IV. Fiscal and Economic Costs in Relation to Financial Sector Restructuring

To implement the financial sector emergency measures and ensure that FOGAFIN had sufficient resources to implement them via prompt payment to depositors, financial engineering schemes, credit support, and capitalization measures, the government allocated Col$5 trillion in net fiscal funding, representing 4 percent of GDP and 25 percent of the central government revenue base. The government also allocated Col$600 million directly to FOGAFIN to build up its reserves. To finance additional costs of the overall financial institutions emergency support program, a financial transactions tax of 0.2 percent (applied to all transaction flows initiated by banks and financial institutions) was implemented, which raised Col$1.3 trillion. Since 1998, the total cash resources directly sourced or administered by FOGAFIN, which have been provided to support financial institutions, has amounted to Col$1.9 trillion, equivalent to 8 percent of the 2000 government revenue base and 1.1 percent of GDP. Total support including noncash resources (that is, FOGAFIN securities) has reached Col$8.7 trillion, of which support to state-owned banks represents 73 percent of that amount (see Table 5). After considering all government cash and debt outlays net of (i) financial tax proceeds (paid by the private sector), (ii) recoveries from asset liquidations, (iii) repayments of government loans, and (iv) funds used to capitalize FOGAFIN (net of losses), the total estimated fiscal costs for financial system support represented almost 4 percent of GDP.

Since the crisis began in 1998 a number of financial institutions were liquidated or began the process of liquidation after other alternatives were considered unfeasible. The cumulative asset value of those liquidated institutions was approximately Col$560 billion, or 0.6 percent of average GDP over the period.

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2 By 1998 FOGAFIN had used up some Col$650 million in own funds and incurred an additional debt of Col$500 million, in other words, it had reached a capital deficit situation.
Table 5. Total FOAGFIN Support to Financial Entities 1998–2002
(Co$ millions)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Cash</th>
<th>Bonds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep Insurance Funds</td>
<td>283,599</td>
<td>1,575,310</td>
<td>1,858,909</td>
</tr>
<tr>
<td>Econ Emergency Funds</td>
<td>184,865</td>
<td>320,601</td>
<td>505,465</td>
</tr>
<tr>
<td><strong>Public Sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Bank Fund</td>
<td>0</td>
<td>4,784,012</td>
<td>4,784,012</td>
</tr>
<tr>
<td>Dep. Insurance Funds</td>
<td>642,322</td>
<td>0</td>
<td>642,322</td>
</tr>
<tr>
<td>Econ Emergency Funds</td>
<td>779,998</td>
<td>133,027</td>
<td>913,025</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,890,784</td>
<td>6,812,950</td>
<td>8,703,733</td>
</tr>
</tbody>
</table>

*Source* FOAGFIN

Although some of the above contingent fiscal risks were inevitable given the urgency of the measures taken to avert an all-out financial sector crisis, the government had already, in other programs, taken action to limit fiscal budgetary contingent liabilities. For example, central government guarantees, whether for debt payment of third parties in the public sector, risks associated with public investment cash flows, or unpredictable revenue streams from productive public enterprises, the government’s potential obligations were budgeted according to the probable expected values of realizing such guarantees. The government had thus already explicitly taken into account actuarial principles of event occurrence to require probability-adjusted budgeting to hedge such contingent obligations and prefund them.³

a) **The Corporate Sector**

The corporate sector was also a key component of the financial sector rescue program since it addressed the resolution of debtor problems. It also benefited from emergency measures by way of Law 550 of 1999, which streamlined debt restructuring procedures among debtors and creditors and avoided lengthy judicial processes, which in the past had drawn out the eventual settlement and agreement on corporate rehabilitation and debt restructuring plans. The previous *Concordato* system involved judicial decisions and usually took years for a final settlement to

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³ In a similar initiative, the government is considering the development of an insurance-based product to transfer government risk to the market to hedge against losses to government property, which may occur due to natural catastrophes, such as earthquakes. Such an initiative would complement the government’s quasi-risk-management program already established under the calamity fund budget, although using more innovative insurance methods and possible securitization of insurance risk (see Natural Disaster Management Chapter by Pollner, J.).
take place. *Concordato* negotiations generally resulted in creditors pushing companies overly quickly toward liquidation. The new restructuring agreement gives votes to each creditor based on claims at stake, but requires all creditors to vote on a consensus approach.

With the new extrajudicial debt restructuring agreements, all stakeholders (financial institutions, commercial creditors, tax authority, employees, suppliers, customers, and so forth) are required to vote on a common restructuring plan. However, each creditor weights its voting share by the value of its claims at stake. Based on the data as of end 2001, 586 companies had applied for debt restructuring agreements, with just under 100,000 employees affected. The asset value of these companies amounted to 6 percent of GDP. An additional 29 companies are scheduled for sale. Under the prior *Concordato* (judicial) system, since 1998, 322 companies were involved in restructuring negotiations, with total assets estimated at 1.3 percent of GDP. For those companies not considered solvent under both the *Concordato* and the new debt-restructuring program, there have been 574 liquidations since 1998, with assets equivalent to 1.5 percent of GDP (see Table 6). These data reflect the fact that the total affected in the corporate sector in terms of assets incapacitated since 1998 reached almost 10 percent of GDP (average GDP over those years).

In summary, it should be pointed out that the government’s rapid response and policy approach was instrumental in averting a systemic financial collapse given the macroeconomic, regional, and global environments. The prompt introduction of a new legal framework for banking capital adequacy, portfolio concentration, and consolidated supervision of financial groups was critical for early diagnosis of the problems. At the onset of the crisis, the establishment of progressively stringent prompt corrective actions for banks facing possible insolvency prevented what might have been fiscal outlays in multiples of what was actually disbursed. The fast implementation of bank capitalization schemes coupled with incentives for risk sharing by owners and more modern procedures for the prompt exit or merger of weak banks in the system was crucial to avoid the proliferation of “zombie” institutions that would have only postponed more serious problems raising the overall cost of the crisis. Therefore, the government’s record in tackling this precarious situation was commendable. The following recommendations are meant to reinforce the policies already taken, and to sustain the progress achieved.

### Table 6. Assets as Percent of GDP of Companies/Corporations in Distress (percent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>6</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: Superintendencia de Sociedades
b) Pending Policy and Institutional Reforms—The Banking Sector

While innovative policy tools and procedures were initiated and rapidly deployed during the financial crisis, the evolution of these processes still requires additional incentives and policy measures to ensure a proper and final resolution. The process has not yet been completed in terms of assuring a sustainable and stable condition for a number of banking institutions, and risks remain including:

- The dependence on an uncertain economic recovery to achieve adequate bank capitalization and returns, in particular for the recapitalized private banks and CAVs, some of which continue to remain highly vulnerable to macroeconomic shocks;
- The risk that shareholders will not be able to fully recapitalize banks if a recovery does not materialize, thus requiring a potential second round of government support;
- The latent currency devaluation risk which could further damage debtor repayment capacity and thus portfolio quality, requiring additional infusions of capital in the banking system to avoid bank insolvencies;
- The banking sector's dependence on government securities, which, while providing needed balance sheet liquidity, also raises the risk of increased exposure to an uncertain fiscal sector,
- The risk of the inability to privatize the remaining public or officialized banks with large ensuing contingent fiscal liabilities for both the State and FOGAFIN.

A new law of Financial Adjustment (Ley de Ajuste Financiero, Modificaciones a la Carta Organica), recently approved by the lower house of Congress, will address some of the gaps to fully implement the financial resolution policies and supporting mechanisms for carving out assets and liabilities of banks. Some of the key gaps requiring additional specification to permit the conclusion of the processes initiated, however, would involve:

- Improvements and increased flexibility in the banking resolution measures used to restructure or dispose of weak banks using market agents and instruments. While the prior reforms of the banking law permitted such mechanisms, the good bank/bad bank approach facilitated by securitizations of portfolios held in trust, was effectively not used. To avoid the languishing of financial institutions under the State's umbrella, if privatizations do not materialize, increased incentives such as forced auctions should be applied, to allow a more prompt carving out of good assets with matching deposits from intervened institutions.\(^4\)

\(^4\) A good example is the mechanism under Article 35 BIS of Argentina's Banking Law. See "Resolving Bank Failures in Argentina," de la Torre, Augusto (2000).
Given the recent developments and the establishment of the legal basis for asset securitization in Colombia, this mechanism should be exploited to transfer asset-based securities overcollateralized by underlying credit portfolios, to market participants under auction procedures. Such tools would avoid lengthy due diligence audits and provide a more liquid instrument with which to share risks between the government and the private sector. The establishment of trustees for this purpose would also be required in order to limit liability to banks assuming these portfolios, which should reflect a multiple of the face value of the security issued by the trust. Any remaining asset gap to match transferred deposit liabilities would be filled by a State/FOGAFIN security yielding market rates.

- **Reducing and Extinguishing Potential Fiscal Liabilities**: To improve the prompt privatization or liquidation of financial institutions considered long term insolvent, and to wind down weak institutions that have no earnings prospects while compensating depositors, additional options for the liquidation or asset sale procedures should be considered using a multibank portfolio approach managed competitively by firms. Time-bound performance measures and compensation fees should be applied, with rotation of liquidators to provide incentives for achieving maximum returns in stipulated time periods. Definition of time-bound limits for the disposition (sale or liquidation) of intervened banks should be set, particularly for banks where investments have already been made in recapitalization and improvement of their financial condition. The **Central de Inversiones, S.A.** (CISA), the designated asset management agency for the government has successfully recovered almost one third of assets taken on, and regularized another third to reach performing status, however, its operational and legal requirements to maximize liquidation value while minimizing time elapsed, sometimes generates differing objectives which should be ranked and given priority within defined policy targets. Particular attention should be focused on the State-owned banks (Bancafé, Granahorrar, Banco del Estado, **Fundación para la Educación Superior, Financiera [FES], and Instituto de Fomento Industrial [IFI])** and two private banks currently intervened and under FOGAFIN's watch. Failing successful liquidation or sale of assets in the foreseeable future, the **Government should include in its medium term budget plan, the fiscal amortization and payment of any remaining or potential fiscal contingent liabilities and obligations to the officialized banks and FOGAFIN (to protect its liquidity needs), generated under the bank restructuring and support schemes.**

- While banking prudential regulations are strict and include additional provisions for market risks in conformance with Basel standards, completion of these best practices should include the implementation of a matrix of prompt corrective actions associated with a schedule of sanctions and penalties, based on the quantification, weighting and incorporation of deficient corporate management and sub-optimal risk management practices as key triggers for invoking corrective measures and penalties. These should be included in the already
developed schedule of penalties by the Banking Superintendency for exceedance of prudential limits. To support the long term implementation of these practices, the Superintendency should be provided with resources to strengthen its supervision procedures, provide staff training, upgrade its knowledge of risk management analysis and modernize its systems for evaluating and monitoring banking risk.

- In terms of managing the debtor dimension which is linked to economic reactivation, while at the same time addressing the banking-financial sector issues, continued attention to the corporate sector will be required in order to:
  - Prevent deterioration of companies as a main future strategy by using information tools capturing corporate data, to establish early warning indicators and detect structural weaknesses ex ante;
  - Increase the efficiency in implementing restructuring agreements, and implement electronic tribunal modalities online to expedite decisions among debtor companies and their creditors, and
  - Reform the bankruptcy law to remove obstacles to restructuring and final liquidation of corporate assets to permit smooth exit, restructuring, and liquidation mechanisms.

- To ensure the prudential management of non-credit institutions, the next key priority is the reform of solvency standards and consolidation of the insurance sector, which is currently overdimensioned (in terms of number of players given market size), with 50 insurance companies in the industry. Priority should be given to upgrading insurance industry regulations, including the proposed adoption of actuarially sound solvency margins particularly to ensure more adequate technical reserve provisioning for both health insurance and general insurance risk exposures, presently not well captured under current norms. The upgrading of regulations and guidelines for the trust industry will also be required, particularly with the advent of new products to be managed, such as asset securitizations.

V. Reform of Second-Tier Public Banking Institutions

In 2000 the government issued an executive decree to begin the process of merging the second-tier banks. However, opposition to the decree generated a court case, which culminated in Colombia’s Constitutional Court ruling that for the mergers to take place, a new law was needed because each state bank had been established under a specific law and charter.

a) Characteristics of Government Banks in Relation to a Merger Proposal

Of the banks discussed, Financiera Energetica Nacional (FEN), the energy sector bank, has the largest outstanding loan portfolio, followed closely by the Banco de
Comercio Exterior de Colombia (BANCOLDEX), the export bank. The next largest is the Instituto de Fomento Industrial (IFI), followed by the Fondo para el Financiamiento del Sector Agropecuario (FINAGRO) and then Financiera de Desarrollo Territorial (FINDETER). The total second-tier lending portfolio in Colombia is approximately Col$4.5 trillion, or US$2.0 billion. In terms of operating efficiency (staff costs over income), the most costly of the banks are FINDETER (10 percent ratio) and IFI (9 percent ratio). The other banks hover closer to 2 percent on this indicator.

BANCOLDEX, the most commercially successful of the second-tier State banks, is legally a commercial bank, unlike most of the other banks. Its current equity is approximately $500 million. If the State banks were merged, including BANCOLDEX, they would represent from 20 percent to 25 percent of the entire banking system, which could raise the issue of concentration under government ownership. The advantage of an aggregated new bank, however, would be its common treasury function, which could imply funding efficiencies, although a disadvantage of this could be that the government might forcibly place its bonds in such a bank’s treasury portfolio.

FEN, the energy sector bank, is certainly a candidate for being merged given that it is operating at a loss due to failing regional utilities that have received subsidies in the form of State guarantees. Its portfolio is not growing, and this bank is becoming obsolete. A merger of FEN would entail transferring a passive portfolio for eventual collection, but no new anticipated lending.

IFI, the national development bank that in the past offered both first- and second-tier loans, and is now solely a second-tier institution, represents the major problem in the merger proposal given that it has a substantial capital gap due to serious defaults generated from its prior first-tier portfolio. IFI requires a substantial capitalization, and the assumption that a merger with the other banks would provide this is highly problematic since it would only create a new bank that was highly fragile, but represented a significant portion of the financial system. IFI estimates that its gross current liquidation cost (that is, asset-liability gap if liquidated) would be Col$700 billion.

FINAGRO, the agricultural-agroindustry second-tier bank, has the most obvious financial subsidy in its funding base, since the entire banking system is forced to purchase FINAGRO securities at rates well below the commercial bank deposit rates, presumably for FINAGRO to direct credit to the agricultural sector. FINAGRO, however, has been successful in reorienting its end products, given changing financial circumstances and institutional financial structures. For example, in the past FINAGRO lent through specialized agricultural banks, many of which no longer exist. Therefore FINAGRO had to tailor its products to the commercial banking system in order to survive. Some such products have included guarantee instruments versus direct loans. An additional product developed by FINAGRO was the pooled community loan (crédito asociativo). This was lent via first-tier banks, for example to a growers’ association, and the loan was guaranteed by a claim on the association’s sales revenues from contracts already entered into.
FINDETER, which lends to municipal governments for public infrastructure, is considered too politicized by many observers. While FINDETER would like to access capital market funding through, for example, securitized bonds backed by their portfolio, its current delicate financial state and its prospects for being merged (while opposed by the management) would put such initiatives on hold.

**b) Pending Policy and Institutional Reforms—Second-Tier State Banks**

Ironically, the bank with the best prospects of surviving on its own commercially without many problems is BANCODEX, the export bank. This bank, however, is also the one best suited to being the management center of a new institution composed of merged banks, because it is the least politicized, most profitable, and best managed, with the least government interference. However, an ill-designed merger would likely deplete much of its surplus capital in order to keep the other acquired lines of business solvent, particularly those of IFI. The following reform parameters should therefore be considered:

- A key issue to resolve initially is how to fund the equity gap of IFI. Even considering the surplus capital of banks like BANCODEX, this would be grossly insufficient to cover the approximately US$0.3 billion needed to make IFI minimally solvent. Therefore a successful merger proposal would imply the need for injection of capital by the government, funded via long-term instruments such as a bond issues or multilateral support. Some efficiencies in staffing, while not approaching anywhere close to IFI's capital gap, could be achieved by merging the funding—treasury functions and back office and accounting tasks into a common office.
- The financial—legal structure of the new bank could also entail different processes and options. The simplest but least desirable approach would be a straight merger of all the banks. A more promising option would be for a new law to have the charters of each bank expire and establish one government holding company for various rediscount lines of business, which would operate as separate trusts to avoid the mixing of unrelated portfolios. Such a structure would permit the rationalization of costs and management, and the contracting of independent restructuring expertise to downsize the aggregate portfolio size of the second-tier operations. This could be accomplished by first defining a reduced target of first-tier clientele and sector(s), followed by the separation of each bank's portfolio into "good" and "bad" assets prior to merger, so that nonperforming portfolios could be dealt with and disposed of while simultaneously winding down operations with first-tier intermediaries in highest default. A key precondition, as already identified, would be to eliminate and wind down first-tier lending (for example, the IFI case) as a product line, given the high risks to the government and the potential for engaging in deposit taking.
• A more radical though increasingly accepted reform of the State banking sector would be eliminating state-owned banking and substituting it with budgetary resources for funding technical and investment support for the targeted sectors, such as agriculture. The rationale for this approach is that State banking institutions should, first, not put depositor funding sources at risk, and if not funded by deposits (that is, donor funds), these would imply government liabilities anyway. State banking institutions also pose large liabilities to the government if they are operating at a loss or are technically insolvent. The budgetary approach avoids any government contingent liabilities from banking operations and ensures that investment resources or technical resources are channeled in conjunction with existing private credit programs (or provide more security to such programs) by extending direct government assistance in sectors with potential productive capacity. Essentially, it makes little sense for the government to lend to noncreditworthy subjects, nor does it follow that the government should lend to creditworthy subjects who can be serviced by the private sector.

• A portfolio audit of all the banks should be conducted prior to determining the market asset values and liabilities in each institution. Only once the actual aggregate capital gap of the various banks can be determined more precisely, could a viable financial structure and realistic downsizing strategy emerge.

VI. Capital Market Development and the Public Debt Market

Accelerating the development to deepen the markets for long-term debt and securitized assets and derivatives, and promoting an ordered development of the large institutional players in such markets—including insurance companies, mutual funds, and pension funds—constitutes an important alternative mechanism to facilitate the absorption of risks by market participants. The development of the market for corporate stocks and securities will lessen the reliance on banking intermediation, thereby reducing debt leverage and allowing macroeconomic and financial shocks to be directly absorbed by investors rather than debtors or financial intermediaries.

A comprehensive strategy for capital markets and financial intermediaries should be developed. At present, there exists an excessive fragmentation in Colombia’s financial markets. Capitalization of the stock market amounts to only 13 percent of GDP, one of the lowest for the more developed economies of the region. The integration of the three stock exchanges in Colombia will help to increase market liquidity. The new securities law, now under discussion in the Congress will also help reduce obstacles into the issuance of securities by companies and provide incentives for capital market activity, such as providing the legal basis for developing securitized transactions, one of which has been recently implemented. To facilitate securitization, a standardized mortgage instrument needs to be created. The recent launching of a securitization firm now provides the legal and institutional mechanism to jump-
start the securitized asset market, which should help promote longer-term securities backed by credit or other asset portfolios.

The government has continued to progressively and successfully develop the basis for a capital market, particularly through its government securities market. The institutionalization of market-making agents in the financial sector and the regular schedule of auctions implemented by the government has succeeded in creating a liquid and deep capital market in government paper. More recently, the government implemented short-term issues of bills and notes and longer-term bonds, so as to complete the maturities available on the government debt yield curve while providing a full range of risk-free benchmarks to support private market securities pricing. The addition of issues of short-term maturities (60 days to 180 days) will also help set the zero risk benchmark of the yield curve for short-term corporate paper. At the subsovereign level, the Bogotá District government recently began to issue municipal bonds on the fixed-income market, backed solely by the credit of the municipality-district.

To date, therefore, the government debt market has been instrumental in generating both primary and secondary capital market activity in the fixed-income sector. Within the existing range of maturities, government treasury instruments now cover the yield curve from short-term up to 12-year maturities. The share of dollar-denominated securities represents 10 percent of the total, and inflation-indexed securities represent 22 percent. Institutional investors including banks, pension funds, and corporations all invest in government Treasury securities. The success and liquidity of this market are commendable. However, with the increasing need for government debt financing, the success of this market may have started to crowd out private financing by absorbing the available demand in the domestic capital market. The government securities market currently amounts to Col$33.4 trillion (US$15 billion). This amounts to about 20 percent of GDP. 5 In addition, over the last three years the banking sector has increased its share of asset holdings of government securities from 10 percent to 30 percent. While this reflected an aversion to extending credit, it nevertheless shows that the government debt market takes up a large part of the capacity for financial investments in the private sector. Given the fiscal stance of the government, this high exposure represents a relatively high risk.

Pending Policy and Institutional Reforms—Capital Markets. The government may need to reassess its domestic debt financing strategy both for fiscally sustainable considerations (given that the domestic interest rate is substantially higher than external rates) and in terms of its effect on the development of the private capital market. The following should be considered in the reform strategy:

- Access to the fixed-income market by nonsovereign issuers should be further encouraged in order to diversify funding sources. With the institutions now set up for asset securitizations in Colombia, encouragement should be given

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5 Year 2000 figure used because this is the latest available full-year figure.
to deepening the market for securitized mortgage instruments once the terms of mortgage loan contracts become more standardized.

- In terms of the private market both for fixed-income and equity issues, the new securities law should be approved without delay in order to implement transparency principles in the reporting of corporate financial information as the basis for securities issuance. The passage of the law will only start the reform process, however. Following passage, the key medium-term challenges to effect institutional reforms in the area of capital market development will necessitate the following:
  - Implementation of streamlined regulations to facilitate efficient securities issuance procedures to allow firms to take advantage of capital market pricing opportunities. Ground rules need to be set for the preregistration of companies to qualify them for securities issuance and have company prospectuses prepared in advance. The existing lengthy legal procedural requirements to comply with issuance steps would thus be substantially removed.
  - The capacity of the Superintendency of Securities needs to be substantially fortified to provide it with the skills to detect and investigate cases of market fraud, manipulation, or insider trading. Prompt administrative justice procedures need to be fully implemented to efficiently address indemnification of losses suffered by investors.
  - Accounting and financial reporting norms required internationally for the issuance of securities to provide reliable investor information need to be implemented. This, along with the corporate governance requirements of the new securities law will be key to instilling market confidence and increasing both the demand and supply of private securities (equity and fixed income).
  - Market crisis contingency plans need to be developed in the event of market disorder or breakdown, particularly at the incipient stage of new product launches. The authorities should develop procedures for the orderly closing or managing of markets if and when disorder sets in, due either to exogenous factors or to factors related to market manipulation at the domestic level.

**The Pension Sector** The transfer of all workers from the public pension system to private pension funds should constitute a primary reform objective of the government (see Pension Reform Chapter). If such a reform cannot be undertaken in the immediate future, measures should be introduced to limit the scope for back-and-forth switching between the public and private pension funds and restrict the benefits of the public pension plan. It becomes particularly critical to migrate the pension system to the private sector given the growing and unsustainable pension liabilities of the public sector (see Table 7).

Under the public pension system, numerous regimes exist. Besides the territorial–regional regimes, most of which have been mismanaged and are currently
unsustainable from a financial–actuarial viewpoint, there exist a number of specialized
regimes for distinct professions in the public sector (the military, energy companies, and
others), which offer higher benefits to affiliates. The government plan is to begin
dissolving these and rolling them into one common public pension regime with equal ben-
efits for all. In addition, there still exist seven national level cajas de pension, which were
allowed to remain under transitional arrangements during the last wave of pension
reforms (Ley 100). These funds, while not having significantly different benefits than
the main public pension social security scheme (prima media) are managed by separate
institutions for particular groups (public employees, communications companies, Con-
gress, and others) and, with the exception of the fund for Congressional members
(FONPRECON), none are open to new affiliates; thus most of these funds are in their
wind-down phase. One of the largest funds, Caja Nacional de Previsión Social (Government
Employees Pension Fund, CAJANAL), has had an account established, the Fondo
de Pensiones Públicas (FOPEP), to better account for and fund upcoming liabilities and
to incorporate the pension accounts of any other public sector entity.

Despite the apparent proliferation of funds at the national level, the critical chal-

Table 7. Public Pension System Liabilities

<table>
<thead>
<tr>
<th>Government Level</th>
<th>Percent of GDP</th>
<th>Liability Value (in 2000 Col$ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>131</td>
<td>244,413</td>
</tr>
<tr>
<td>Regional-territorial</td>
<td>38</td>
<td>71,105</td>
</tr>
<tr>
<td>Total</td>
<td>169</td>
<td>315,518</td>
</tr>
</tbody>
</table>

*Source* Dirección de Seguridad Social, Ministerio de Hacienda y Crédito Público

To redress this situation, the government recently instituted a territorial pension
reform that sets up FONPET, a territorial pension account in which all territorial
pension liabilities are to be aggregated and funded. While the central government
allocates some funds to FONPET, the reform expects the territorial level govern-
ments to adjust their fiscal policies and to be held accountable for funding their pension
schemes. Any funding gap on the part of territorial (departmental or municipal)
governments would be deducted from the earmarked transfers provided by the
national government to the territories. Table 8 outlines the current fiscal funding
provided by the territorial and national governments to FONPET.

To reduce the future cost of fiscal outlays to fund the public pension schemes, a
number of reforms are being proposed, including:

- Increasing the contribution rate (salary based) from 12.5 percent to 14 per-
  cent, with an additional 2 percent phase-in, during later years.
- Reducing the share of administrative and insurance expenses from 3.5 percent
to 2.5 percent. While this provision is directed at the private pension sector in
Table 8. Estimated Fiscal Funding of Territorial Pension Obligations
(Col$ billions)

<table>
<thead>
<tr>
<th></th>
<th>2000-05 Payments</th>
<th>As percent of 2000 GDP</th>
<th>As percent of 2000 Government Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Fiscal Contribution</td>
<td>1,490</td>
<td>0.9</td>
<td>6.4</td>
</tr>
<tr>
<td>Territorial Funding</td>
<td>3,784</td>
<td>2.2</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Dirección de Seguridad Social, Ministerio de Hacienda y Crédito Público (Ministry of Finance)

order to reduce its administrative charges, it would affect the public system as well.

- In terms of benefits, reducing the pension amount from the current 65 percent to 85 percent of salary, to a level that would start below 65 percent
- In terms of benefit accrual, the months of work and years of age required to obtain full benefits would both be increased.

Some aspects of draft reform legislation, however, are less progressive and should be reconsidered with urgency. These include the provisions for (a) forcing all public sector employees to switch to the old social security pension system regardless of to which system they are currently affiliated, (b) reducing the accrued benefits on recognition bonds for those affiliates wishing to transfer to the private system, (c) charging Administradora de Fondos de Pensiones (Pension Fund Managers, AFPs) a fee to set up a fund to finance the minimum pension guarantee, and (d) reducing AFP commissions by regulation.

Pending Policy and Institutional Reforms—Pension Sector While the share of the national public pension scheme is the largest, from an actuarial point of view, the territorial pension funds are much more insolvent and thus require critical action. The Ministry of Finance has already made significant efforts to obtain the requisite employment history information to use as the basis for calculating the actuarially fair value of the pension liabilities at the territorial level. However, a number of institutional reforms are required in the effort to regulate and enforce the transition from an essentially insolvent territorial scheme to a funded one. The critical steps in the second generation of pension reforms therefore include:

- Consolidation of the various public pension regimes, including the specialized regimes, the national cajas, and the territorial (departmental, municipal, and sectoral) cajas, the latter falling under FONPET. A sustained institutional effort in the regulation and control of the operation of the consolidated funds and assuring consistency in the accumulation of benefits.
- To adequately determine the funding needs of FONPET, all municipal and other autonomous entities need to be reviewed and analyzed to determine
what type of pension structures, funding, and benefit rights are currently in force.

- Invoking judicial procedures to reverse benefits offered under illegally established pension regimes, an exercise that would generate substantial fiscal savings but may risk counterlawsuits with regard to “acquired rights” arguments.
- Strong coordination between the social security and central budget units in the government to assure accountability from departmental and municipal governments and to withhold, when necessary, portions of the territorial transfers when territorial level governments are not funding their actuarially calculated obligations.

In terms of the reform proposals affecting the private pension system, some current proposals presumably meant to fill the liability gap in the public system would nevertheless be severely detrimental to the private system and to any possibility of developing the private capital markets in Colombia. In particular, the following considerations should be addressed with a view to putting in place a reform which addresses the fiscal problems of the public system without sacrificing the integrity of the private pension system and its key role in the domestic capital market and in assuring fully funded pension schemes:

- Any proposal to force public sector employees to be affiliated with the social security system reflects unwarranted state interference in artificially raising the funding (temporarily) of that system, and also constitutes a dramatic reversal of policies aimed at private sector development from both the affiliate and the AFP points of view. This provision should thus be eliminated entirely because in the long term it would generate larger fiscal problems, given the eventual need for the social security system to pay out those new pensions (with high benefits), which have been forced in.
- Similarly, any reduction in accrued benefits allowed in recognition bonds issued (meant for transfer to the private system) will only force more affiliates back to the public system and generate larger pension liabilities for the government in the future. Any such provision, therefore, is not recommended.
- The funding of the minimum pension guarantee should first establish an equalization of terms under which affiliates from either system can invoke the minimum pension, given that currently the conditions under the public system are much less stringent in terms of weeks of contributions made compared to the private pension system. Again, as above, such disincentives to the private sector will only encourage affiliates to return to the public system and increase fiscal liabilities dramatically.
- The proposal to force reductions in AFP commissions appears artificially designed with the purpose of financing the minimum guarantee fund without taking into account the market’s cost structure or comparative private pension commissions in other countries with similar affiliate populations.
Thus, a reexamination of the proposed pension reforms should aim to transfer more affiliates to the private system (to reduce future fiscal liabilities) rather than to temporarily postpone the funding gap in the public system by channeling affiliates in the private sector AFPs to the public system. Implementation of any such policies would risk increasing the fiscal deficit bubble dramatically in the long term, while weakening the entire private pension structure and the prospects for developing any significant capital market in Colombia.

VII. Conclusion

Colombia’s pending reforms, needed to assure future financial sector growth and stability, tend to integrate a number of interlinked subsectoral issues. In particular, the resolution of banking system weaknesses is also connected to the development of capital markets and instruments to help progress toward finality in this area. In turn, both the capital markets and financial systemic management issues have impacts on fiscal resources and the use of government debt. The fiscal dimension becomes even more critical in light of the state of public pension structures, which are in need of immediate reform. In light of these factors, the reform of the Colombian financial sector in all its aspects requires the simultaneous coordinated efforts of the relevant regulatory and supervisory agencies in the banking, capital markets, and pension sectors.
Pension Reform

This Chapter was written by Hermann von Gersdorff.

I. Executive Summary

The current condition of Colombia’s pension system constitutes a major risk to fiscal sustainability over the medium and long term. The public pension system is technically insolvent and the yearly imbalances of the public sector worker regimes are increasing. The estimated net value of pension system liabilities amounted to about 200 percent of GDP in 2000—up from an estimate of about 150 percent of GDP in 1997. Moreover, the Treasury’s transfers to finance the deficits for public sector worker regimes increased from about 0.8 percent of GDP in 1991 to 1.3 percent of GDP in 1995, and to 2.3 percent of GDP in 2000. The causes of the current pension system insolvency and liquidity problems include generous pension benefits, pension benefit guarantees, perverse incentives for reserve management, and recent Constitutional Court rulings expanding pension benefits. These causes are rooted in the slow pace of reform and the large number of workers exempted from the reform. This has resulted in pension expenditures still growing at a fast rate, particularly the pension expenditures for public sector workers.

To confront the problems of a financially bankrupt and fragmented defined benefit (DB) pension regime, Colombia undertook a first generation of reforms of the Social Security System (enacted by Law 100 of 1993). The main elements of the reform included (a) introduction of a mixed defined benefit (DB) and defined contribution (DC) pension system—workers could choose between the DB regime run by ISS or the DC regime run by the Administradora de Fondos de Pensiones (private pension fund managers, AFPs); (b) increases in contribution rates paid by all active workers (that is, all public sector workers would now contribute), and reduction of pension benefits for younger workers; (c) insolvent pension funds for public sector
workers at the national and regional level would be closed and pension payments would be taken over by the Public Pensions Fund (FOPEP) and specialized regional entities; (d) introduction of explicit redistribution through additional contributions to support pension benefit programs for the poor; and (e) government recognition of pension rights accrued until 1994 through "pension recognition bonds"—that is, the government would assume the repayment of the corresponding implicit pension debt (IPD). The law, however, exempted the pension funds for Empresa Colombiana de Petróleos (ECOPETROL, with 6,000 members), teachers (300,000 members), the armed and police forces (200,000 members but only half with pension rights), and members of Congress. Furthermore, the law allowed for an extended transition to the new system, not scheduled to be completed until 2014.

One of the major government objectives for defining a second generation of pension reform is to reduce Colombia’s IPD. New entrants will at least not increase the current IPD as a result of the reform process. The reform proposals maintain the current situation of concurrent defined benefit and defined compensation regimes, deepen the reform envisioned in Law 100 of 1993, and strengthen the pension system, including reforming at least one of the exempted pension regimes. The reform program will seek to harmonize or introduce a single set of unified pension rights and obligations for all new entrants, while increasing coverage of and improving services to all participants.

Key actions in the government’s pension reform program include undertaking technical work and the preparation of legislation to fund the minimum pension guarantees through an insurance scheme; and closing entry into any pension fund except the Instituto de Seguros Sociales (Institute of Social Security, ISS) and AFPs. The reform also envisages, among other things, a deadline for a final switch of current members of the system between regimes, and increased eligibility requirements in terms of age and number of contributions for a minimum pension guarantee. To deepen the reform envisioned in Law 100 of 1993 and strengthen the pension system, the government’s reform program should include (a) centralizing the administration and control of transfers of public pension regimes into a single agency, (b) improving the databases required for the recognition and recertification of pensions, (c) prefunding new accrual rights to extraordinary benefits, and (d) creating a Unified Registry of Contributors (URC). In addition, the reform of the exempted regimes—for example, the armed forces—should include key features such as (a) individual pension savings accounts, (b) a close link between contributions and benefits, and (c) the application of the new regime to all new entrants.

All of the reforms mentioned above will have a positive impact on the financial situation of the public pension system and on the required transfers from the government Treasury in the medium to long term—that is, in 8 to 20 years. The only reforms that will have an impact in the short term are those that accelerate the tran-

1. The implicit pension debt is the value of all pension rights accrued by workers plus the net present value of all pensions already granted
sitton—that is, apply the new pension system to most of those that are still under the rules of the old pension system until 2014, and to those that are in the exempted regimes, like teachers and the workers of ECOPETROL.

II. Introduction

Colombia's social insurance system has been beset by all the ills of publicly managed, defined benefit, pay-as-you-go (PAYG) pension schemes that are encountered in other developing and Organization for Economic Cooperation and Development (OECD) countries. For over 50 years Colombia's pension system has been characterized by uneven contributions and benefits across different pension regimes, low coverage, very little funding of pension liabilities, and rising fiscal transfers to cover cash deficits.

Colombia started a pension plan for central government workers in 1946 with the creation of the Caja Nacional de Previsión Social (Government Employees Pension Fund, CAJANAL). Subsequently, other national pension funds and cajas were created for central government employees working in specialized agencies or professions to create more generous pension regimes. Regional governments, departments, and municipalities started additional cajas and pension funds. Another segment of the public sector pension system is comprised of state-owned enterprise funds established by public sector enterprises for their workers with different contributions and benefits. Mandatory old age insurance for private sector workers was formalized in 1967 through the Instituto de Seguros Sociales (Institute of Social Security, ISS), which was already providing other services. In 1993, Colombia's fragmented pension system comprised three categories of pension institutions for public sector workers: (a) CAJANAL, (b) 55 other national pension funds and cajas, and (c) close to 1,000 regional pension funds and cajas. Another group of pension institutions comprised decentralized government and public enterprise pension funds. ISS and some funds in private enterprises covered private sector workers.

The pension system was based on social insurance principles. Originally established as partially funded regimes, the pension systems' reserves were rapidly drawn down due to generous benefit eligibility conditions coupled with high evasion of contributions. The financial pressure on the pension system, however, is not yet due to an aging population, since Colombia is still a demographically young country. In addition, the system covered only about 35 percent of the economically active population.

In 1993 Colombia undertook a major reform of the Social Security System. Among other reforms, it introduced a privately managed defined contribution regime with defined contribution (DC) and individual capitalization, and reformed and scaled down its public defined benefit pension regime by reducing somewhat preferential treatment for individual groups, raising the retirement age, and tightening eligibility conditions. The new, tighter rules and eligibility conditions are being phased in very slowly. Therefore, there is still a strong incentive, particularly for
older workers, to remain in the defined benefit regime. Moreover, various groups of workers, such as workers in the oil sector, teachers, and members of the armed forces, kept their own pension regimes, which they will continue to do even after completion of the 1993 reform in 2014.

The somewhat limited extent of these reforms, however, reflects the political difficulties of passing a radical pension reform in Colombia. The DC regime was originally meant to replace the existing DB regime. However, due to the resistance of trade unions, the social insurance bureaucracy, and other groups, the DC regime was offered only as an alternative to the existing DB regime, and there is no obligation for new labor force entrants to join the DC regime.

The government of Colombia is planning to deepen the 1993 pension reform to respond to the increasing liabilities and deficiencies of the current system. There is a comprehensive reform proposal and also a draft law before Congress that attempts a more limited reform. This Chapter will focus mainly on the reform of the old age pension system, and will only briefly touch on disability, both common and occupational, and survivorship pensions. Another important issue that is neither analyzed in the required depth nor resolved is the financing of the pension liabilities that have already been accrued. This Chapter describes Colombia's pension system, identifies the fiscal requirements of the current system, and concludes with some proposals for reforming the system.

III. Colombia's Pension System

a) The 1993 Pension Reform

Although there were a large number of funds and regimes and inequality in benefits in the pension system, there was also low coverage. In 1993 only 35 percent of the economically active population of 14.3 million were part of the system. ISS had 3.5 million active members and 265,000 pensioners. Some 1.1 million public sector employees were provided for by the government.

Benefits provided by the old system varied widely among different regimes and were generous on average, but even more so for public sector employees. Retirement ages were 50 for women and 55 for men in the public sector, and 55 for women and 60 for men in the private sector. Pensions relative to wages during the last year of work life were mostly 75 percent for the public sector and 45 to 90 percent for private sector employees with as little as 10 years of contributions to the pension system. However, many different special pension regimes provided more generous conditions than those described above, such as early retirement and replacement rates well in excess of 100 percent of wages. In CAJANAL alone there were 17 different pension regimes in 1993.

Colombia's defined benefit pension system was de facto a pay-as-you-go (PAYG) scheme, the reserves for which were close to zero. CAJANAL's reserves actually were
zero because contributions for public sector employees generally were zero. Contributions to ISS were 6.5 percent of wages until 1993, when they were increased to 8 percent of wages. ISS reserves of COP650,000 million covered only a small fraction of its pension liabilities. The pension regimes for public sector workers already had a cash deficit, and in the absence of reserves the central government was forced to make yearly transfers to the public pension regimes of about 1 percent of GDP. Having had to finance the public pensions for years, and the upcoming need to finance ISS pensions, combined with all the other problems of the pension system, led the government to initiate a pension reform that resulted in Law 100 of 1993.

b) Law 100 of 1993

The main elements of Law 100 are:

- A significant increase in contribution rates paid by all active workers (public sector workers now contribute) and reduction of pension benefits for younger workers.
- Introduction of a mixed defined benefit and defined contribution pension system. All workers can choose between the DB regime run by ISS and a DC regime run by private pension fund managers (AFPs).
- Mandated closure of pension funds for public sector workers at the national and regional level and payment of the pensions to be taken over by the FOPEP and specialized regional entities.
- Explicit redistribution through additional contributions for a program to support pension benefits for the poor.
- Government recognition of pension rights accrued until 1994 through pension recognition bonds, implying government repayment of the corresponding IPD.
- Regulation and supervision of ISS and AFPs by the Superintendency of Banks
- Regulation of the transition to the reformed pension system and of the exceptions to the general pension system.

Participation in one of the regimes is mandatory for workers. Workers who do not express a preference are automatically enrolled in the DB regime. However, workers are permitted to switch back and forth between the public and the private regimes every three years. In contrast to most other reforms in Latin America, the generous pension benefits of the old pension system were kept for women age 35 and older and men age 40 and older or with 15 years of service in 1994. Only the young and those joining an AFP submit immediately to the new pension parameters. The continuation of low retirement ages and generous benefits results in a high fiscal cost, creates incentives for corruption and fraud, and introduces a strong bias against the DC regime (for example, women joining an AFP can retire only at age 60 instead of 57).
The new contribution rates amount to 10 percent of wages. Workers also pay 3.5 percent of wages to cover the premium for disability and survivors’ insurance. In the private system about 1.87 percent is for insurance and 1.62 percent is for the AFPs’ management fees. All members who earn more than four times the minimum wage must contribute an additional 1 percent of their wage as a solidarity tax (that is, a tax used to subsidize the contributions of some poor workers). This revenue is supposed to be matched by budget transfers and used to subsidize the contributions of targeted poor groups in an attempt to extend the coverage of the system. Entitlement to contribution subsidies, however, is not automatic, but is determined on a case-by-case basis. The beneficiaries of the subsidies are required to join the regime managed by a nonprofit organization. Only ISS qualifies as a nonprofit organization, and the 200,000 beneficiaries have joined ISS.

While the Law 100 reforms reduced overall net pension liabilities, it increased some of the costs of the pension system. For example, it increased the cost of the minimum pension, increased the cost of higher pensions by changing indexation, and increased nonsalary labor costs substantially (see Table 1). The increase in labor costs, particularly, reduced or even eliminated the benefits normally associated with pension reform of reducing the perception of the tax element in pension contributions. In light of Colombia’s high nonsalary labor costs, the reform will most likely not result in better incentives to participate in the pension system, or increase the willingness to join the formal system. Figure 1 shows that accounting just for payroll taxes for social services, Colombia has the third-highest contribution rates in Latin America—lower than those of only two countries with more mature systems and older populations. However, the increase of contribution rates for all, and higher retirement ages for younger cohorts decreed by Law 100, were financially very effective; they reduced the IPD for 1994–2025 by about 37.6 percent of GDP.

### Table 1. Colombia: Total Labor Costs (as percent of wage)

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation payments</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Retroactive separation payments</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Vacations</td>
<td>6.7</td>
<td>6.7</td>
</tr>
<tr>
<td>13th month’s salary</td>
<td>8.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Pensions (worker)</td>
<td>2.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Pensions (employer)</td>
<td>4.3</td>
<td>10.1</td>
</tr>
<tr>
<td>Health (worker)</td>
<td>2.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Health (employer)</td>
<td>6.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Training (SENA)</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Family Welfare (ICBF)</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Compensation Funds</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>FSOPEN</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ARP</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52.6</td>
<td>64.6 (+1)</td>
</tr>
</tbody>
</table>
The minimum pension is equal to the minimum wage at the moment the pension is granted. It is adjusted either by the consumer price index or the change in the minimum wage, whichever is larger. The minimum wage is very high in Colombia. In 1994, it was about 72 percent of the average salary in the seven largest cities. Workers in the transition regime require only 10 years of contributions to be eligible for the minimum pension; low-wage workers have a very strong incentive not to contribute afterward. Younger workers in the DB regime need to contribute 20 years, and members of the DC regime are required to contribute for at least 22 years, to be eligible for a minimum pension. The government would pay the minimum pension once the pensioner in the DC regime runs out of funds for his or her pension, and the government guarantees the availability of funds in the DB regime.

To reduce the likelihood of having to pay the minimum pension in the DC regime, Law 100 introduced a minimum rate of return requirement for pension funds. The law mandated that the minimum rate of return be tied to market returns. This is being implemented through a minimum rate that is determined as a combination of the performance of a synthetic reference portfolio and the average performance of the AFPs. Otherwise, the regulations for the investment of the pension funds' assets are less stringent in Colombia than in other countries.

The institutional setup for the transition of the reform is complex and will last until 2014. All public sector workers changing jobs and new entrants to the labor market are required to join either ISS or an AFP, but have the chance to switch to...
ISS or an AFP every three years. Public sector workers may remain members in the pension fund to which they belonged before the 1993 pension reform. However, if the fund is insolvent it has to be liquidated and the workers have to affiliate with ISS or an AFP. If the public sector worker joins ISS he or she will be able to retire under its old regime if he or she retires before April 2014. If the worker joins an AFP he or she is immediately subject to the new pension system. Only solvent funds are supposed to retain their active members until the last pensioner dies. Funds declared insolvent may try to constitute reserves to reach solvency and continue managing the regime for their members, but new members are not allowed to join. The pension funds for the armed and police forces, teachers, and oil workers (ECOPETROL) were exempted from the requirements of Law 100.

c) Current Structure of the Pension System

As a result of Law 100 the pension system has the following regimes and entities:

- ISS manages the new DB regime and the transition regime for men who were older than 40 or women who were older than 35 or had more than 15 years of service in April 1994 and chose to join ISS or to stay in ISS. ISS has about 4.5 million members, but only about 2 million are contributing. About 200,000 are public sector workers and 200,000 are beneficiaries of the subsidy to contributions.
- The six AFPs manage the DC regime. As of January 2001, AFPs had 4 million members, of whom 168 million came from ISS, 73,000 came from public sector worker pension funds, and the rest were new members of the pension system. However, only 1.6 million were actually contributing.
- All pension funds for public sector workers that have not been declared insolvent continue to manage their regime for their active members who have not switched to ISS or an AFP, and continue paying the pensions of their retirees. Funds declared insolvent may not continue managing active members, and just pay pensions until they are liquidated and the payment of pensions is taken over by a specialized entity. These funds have about 467,000 active members and about 334,000 pensioners.
- The funds for ECOPETROL (6,000 members), teachers (300,000 members), and armed and police forces (200,000 members, but only half with pension rights) were exempted from Law 100.

d) Evolution of Coverage

Based on the membership and labor force figures in Table 2, the coverage of the pension system in Colombia is in the middle range of Latin America, as can be seen in Figures 2 and 3. In terms of pension coverage, of the population over age 60 (which constitutes 6.5 percent of the total population), 30 percent receive a pension (that
Table 2. Labor Force Statistics as of January 2001

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>41.4 million</td>
</tr>
<tr>
<td>Working-age population</td>
<td>31.5 million</td>
</tr>
<tr>
<td>Employed</td>
<td>16.49 million</td>
</tr>
<tr>
<td>Economically active</td>
<td>19.73 million</td>
</tr>
<tr>
<td>Unemployed</td>
<td>3.24 million</td>
</tr>
</tbody>
</table>

is, about 2 percent of the total population). In addition, Colombia has a support scheme for the elderly poor that are not entitled to a pension. This support is given through a small program (about 0.05 percent of GDP), REVIVIR, a program established by Law 100 in 1993 and with beneficiaries identified by the municipalities, and many even smaller programs run by municipalities. The REVIVIR program pays up to 50 percent of the minimum wage to poor elderly who are older than age 65 (age 50 if handicapped). Between 1997 and 1999 REVIVIR had about 90,000 beneficiaries out of a pool of about 320,000 potential beneficiaries.

e) Instituto de Seguros Sociales

The 420,000 pensioners of ISS are only about 20 percent more than the number of pensioners from the public sector; however, Colombia devotes almost 70 percent of pension expenditures to public sector employees compared to a typical 20 percent in developed economies. In 1998, Colombia spent 4.5 percent of GDP on pensions, of which only 1.38 percent was expended by ISS. This is clear evidence of the generosity of the regimes for public sector workers. Part of the explanation is that, controlling for education and experience, Colombia consistently has the highest public sector wage premium among Latin American countries, typically between 15 and 20 percent.

To equalize contribution rates between the DB and DC regimes, the contribution rate for the DB regime was raised from 6.5 percent in 1993 to 13.5 percent of wages. This implied a strong increase of revenues for the DB regime. Of the 13.5 percent of worker salaries that ISS receives, it allocates 10 percentage points to old age insurance and 2.3 percentage points to disability and survivorship insurance. The remaining 1.2 percentage points are for its own expenses. Any surplus from the 1.2 percent is to be deposited into ISS reserves.

Total assets under ISS management amounted to about US$2.4 billion in July 1997, which was more than twice the amount of funds managed by the AFPs. In 2000, ISS reserves grew to about US$2.8 billion, equivalent to about 3.1 percent of GDP, and the reserves of the AFPs grew to US$4.3 billion. The year 2000 is likely to have been the last year in which ISS reserves grew. This is because, after several years of surpluses as a result of the pension reform, an increase in the number and size of pensions is resulting once again in ISS deficits. The reserves of the DB regime are supposed to be managed by competitive trust companies and have to meet min-
Figure 2. Pension Benefit Recipients as Percentage of Elderly Population, 1980–99
Figure 3. Contributors to Publicly Mandated Social Security as Percentage of Economically Active Population, 1980–99
imum rate-of-return requirements. Since no regulations have been issued for the minimum rate-of-return guarantee, this provision is not applied and, consequently, the reserves are not invested in a diversified portfolio.

During the last few years the new pensions granted by ISS have been much higher than the old pensions. This has led to an increase in the average pension from 1.53 minimum wages in 1997 to 1.67 in 2000. The explanation could be that the new retirees have contributed longer than previous retirees, that the changes in the indexation of the pension base are starting to have an impact, or that the process of granting pension benefits has changed. This is happening while there are still 44,000 men and 39,000 women that will retire with less than 1,000 weeks of contributions, the requirement for the younger cohorts of workers.

f) Private Pension Fund Managers

The main risks for the government's Treasury arising from the DC regime and the individual accounts are the generous minimum pension guarantee and the option of switching back to ISS. Workers will switch back to ISS if the pension they get there is higher than the one they would get from their savings and, therefore, they would necessarily get a subsidized pension. By definition, if the capital accumulated by the worker is not enough to buy an annuity equal to the pension provided by ISS, ISS will be subsidizing the pension of this worker. The switchback option has to be eliminated—at least the option of returning to ISS—because it is a large contingent liability and because the government is already providing a minimum pension guarantee. Although the problem is clear, it is very difficult to obtain a reliable estimate of the cost of this switching option. Similarly, while it is simple to estimate the cost of the minimum pension guarantee for an individual worker, the total cost of the minimum pension guarantee is difficult to estimate and very sensitive to the model and the assumptions. For example, even when there is agreement about the number of contributions made over the worker's life, the distribution of these contributions has an important impact on the cost of the guarantee.

g) Transition Regimes

All female public sector workers older than 35 years of age and all male public sector workers older than 40 years of age or with more than 15 years of service can retire under their old pension regime. This right was granted until 2014 because it was assumed that by then all of these workers would have retired. In 1995, there were about 935,000 government employees in Colombia, (excluding those employed in municipalities that are not department capitals), of which 483,000, or 52 percent, were members of the unreformed pension funds. By 1999 public sector employment had grown to 1,194,000, and there were still 467,000 active workers in the unreformed pension funds for public sector workers. The number of pensioners from these funds had grown to 334,000 in 1999.
None of the national pension regimes—which number around 55—is allowed to receive new members. However, it appears that the number of members in these regimes is not falling as fast as the number of new pensioners and the number of workers transferring out of the regimes would indicate. This could lead to a transition problem. In 2014, there could be public sector workers that might receive drastically reduced pension benefits just because they get to retire a month after their colleagues. The perception of an inequity could lead to the introduction of a new transition to phase in the new parameters for this group of workers at an even later date. It would be fair and necessary to revise the transition and phase it in so that it is completed by 2014 at the latest for all workers in the transition.

Among the public pension regimes that continue to operate are CAJANAL and FONPRECON. CAJANAL has 17 different regimes for public sector employees. The initial reform target was that all CAJANAL functions would have been taken over by ISS in 1995. However, ISS declared itself incapable of absorbing them. CAJANAL has assumed an important role in the transition by assisting in the calculation and recognition of pensions for public sector workers. However, this role and the fact that it is still collecting contributions for its active members are at odds with the legislation. The pension liability for current pensioners of CAJANAL is about 14 percent of GDP. FONPRECON is for members and employees of Congress. This regime was supposed to be closed to new entrants by Law 100, but it is still accepting new members and has exempted itself from several of the rules that apply to the pension system. Most noticeably, FONPRECON has exempted itself from the maximum pension limit that is equal to 20 minimum wages (about US$2,400). The pension liability for current pensioners of FONPRECON is about 0.9 percent of GDP.

In 1996 about 250,000 active workers and pensioners belonged to the system of territorial pension regimes, which provide generous benefits with minimal or no contributions. Just a few territorial pension regimes have active members anymore; now they just recognize and pay pensions. They have many data problems, and it may prove difficult to establish the work history of their members. To issue the pension recognition bonds for the previous members of these regimes, the work history needs to be reliable. Very little is known of the aggregate pension expenditures and obligations of these regimes. However, the average pension of regimes which were liquidated and transferred to ISS (111,000 workers) and to the Fondo de Pensiones Territoriales (National Fund for Regional Pensions, FONPET) (62,000) was 3.4 minimum wages in 1996—equivalent to more than twice the average ISS pension.

The Superintendency of Pensions is supervising the liquidation of insolvent territorial regimes. Of the 1,050 regional funds and cajas counted, only about 252 are properly established funds; the rest were just accounts kept in the regional entity. Of these, 79 are under liquidation and their assets and liabilities are being transferred to a regional entity that will carry out the payment of pensions and pension recognition bonds. All territorial regimes are insolvent; only the ones of Antioquia and the University of Cauca have declared themselves solvent and are allowed to operate. There is no deadline to liquidate the insolvent regional funds and cajas.
The central government has been rightly reluctant to intervene in the almost 1,000 regional pension funds. They have taken this position to reduce the probability of having to assume the funds' liabilities. However, because these funds are insolvent, the government is at risk of assuming these liabilities anyway. In the meantime, these funds are not properly winding down their activities, are not providing the information about the labor history of their members, are granting many unjustified pensions, and are not accumulating adequate reserves to cover their liabilities. A number of specialized funds have been set up to cover the outstanding liabilities, but they are still very small. The supervisors are aware of many problems but do not have the authority to act on this information; they just note the status of things. It is necessary to designate an individual or institution with the authority over these funds to stop the growth of pension liabilities and diminish the potential burden on the government's budget.

To ensure that the territorial entities would be in a position to pay their pensions and redeem the pension recognition bonds, FONPET was created at the end of 1999. It will be funded by contributions from the territorial entities (including privatization proceeds and share of specific taxes and revenue) and by a share of the transfers of the national government to these territorial entities, lottery income, privatization proceeds, and other sources of funds.

h) Exempted Regimes

In Colombia there are over 300,000 public sector teachers, equivalent to 26 percent of public employees (see Table 3). Of these, about 258,000 are in the teachers pension regime and the remainder are members of municipal regimes. The powerful teachers union has won favorable conditions both in terms of salary and pensions that go beyond the already favorable conditions (relative to Latin America) of public sector employees, and managed to keep their regime exempt from Law 1000. The usual justification for the exemption of teachers from the 1993 reform is that the more generous pensions are compensation for lower salaries. However, there is no evidence of a wage penalty for teachers. After adjusting for work hours, public sector teachers earn more (about 25 percent more) than other comparable private sector professionals.

The benefits of the public teacher regime vary depending on the age of the teacher. Teachers that are now under age 39—112,932, or 37 percent of the total—qualify

<table>
<thead>
<tr>
<th>Table 3. Exempted Regimes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Workers</strong></td>
</tr>
<tr>
<td>Public Teachers</td>
</tr>
<tr>
<td>Armed Forces &amp; Police</td>
</tr>
<tr>
<td>ECOPETROL</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
for a retirement pension at age 55 for females and 60 for males, and can continue to work and draw a salary together with the pension. At age 65 they can draw an old-age pension that is calculated based on the salary of the last year. The replacement rate is 75 percent of this salary. Teachers age 39 to 48—125,592, or 42 percent of the total—will be able to draw a "grace pension" at age 50, and a retirement pension at age 55, while receiving their salary if they continue to work. At age 65 they get an old-age pension. Teachers age 49 to 65—64,701, or 21 percent of the total—get the same benefits as the previous group. During 1999 about 26,000 of these teachers received two pensions in addition to their salary. Forty thousand received a grace pension and 34,790 received a retirement pension in addition to their salary.

Members of the armed and police forces regime contribute 8 percent of their salary without a contribution by the employer (the government). Police officers at the managerial level contribute only 6 percent (see Table 4). Pension benefits go from 50 percent of the salary base after 20 years of work to 95 percent of the salary base. The salary base, in addition to the salary, includes other nonsalary income.

In 1999, ECOPETROL was required to start building a reserve to cover its pension liabilities. Thanks to high oil prices during 2000, ECOPETROL deposited COP2.7 billion, equivalent to about US$1.4 billion. It is expected that by 2007, ECOPETROL will have covered 70 percent of its pension liability. The question remains whether instead of diverting resources, which would otherwise go to the national Treasury, workers should make a contribution out of their salaries to finance their generous benefits.

i) Collective Agreements

Different sources of pension liabilities for the government are the collective or labor agreements in the public enterprises. These agreements grant additional or complementary benefits to the workers of the enterprise, as is the case with ISS workers. The 25,000 regular ISS workers (there are 20,000 additional workers with a different contract and not the same rights) have negotiated a labor agreement that provides them with extraordinary pension benefits. In summary, through these benefits they can retire five years earlier than regular workers and receive a pension equal to their last salary. Currently, ISS spends as much on its active workers as on the pen-

<table>
<thead>
<tr>
<th></th>
<th>Worker (percent)</th>
<th>Employer (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Worker</td>
<td>3.375</td>
<td>10.125</td>
</tr>
<tr>
<td>Armed Forces &amp; Police</td>
<td>8.0</td>
<td>0</td>
</tr>
<tr>
<td>Police-Managers</td>
<td>6.0</td>
<td>0</td>
</tr>
<tr>
<td>Teachers</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>ECOPETROL</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
sion benefits of its own retired workers. It is problematic that ISS is financing these benefits through revenue from the contributions of all workers instead of income generated by ISS itself. In addition, ISS is not prefunding the liabilities it is accruing with active workers. ISS’s pension liabilities are valued at about US$2 billion, with no relief in sight because the collective agreement requires that every time a public agency negotiates a more favorable agreement, this new agreement becomes retroactively valid for ISS workers. The burden of benefit payments became so large that it endangered ISS’s ability to operate and pay salaries. To avoid a crisis, workers agreed to a temporary reduction in benefits in October 2001.

The government as owner of the public enterprises is responsible for the liabilities of the enterprises toward their employees if the enterprises cannot pay them. The liabilities arising out of all the different collective agreements have not been fully estimated, but are about US$10 billion.

f) Pension Recognition Bonds

Colombia has been experiencing problems calculating and issuing recognition bonds for past contributions. In contrast to other Latin American countries that have reformed their pension systems, Colombia is faced with a special difficulty due to its extremely fragmented system for public sector employees and the fiscal decentralization of the country. Unlike Chile, which unified the different systems under an umbrella organization, Colombia has kept all of its different public pension institutions, with the result that no one institution is solely responsible for issuing all the bonds. While those bonds for which the central government is responsible are being issued without major delays, the regional governments are still not fully complying with their obligation to issue bonds for affiliates switching from regional public sector funds to the new DC regime. Problems also arise with the recognition bonds of regional pension funds that are due to workers who switch to the public ISS system as more and more regional public funds are closed. The option of switching back and forth between the public and private systems will further complicate management of recognition bonds. The bonds are cashed in and the proceeds go to the public system when affiliates that switched first from the public to the private system return to the public regime again.

IV. Fiscal Requirements of the Current System

a) The Model

The model used in this Chapter to evaluate the state of the pension system and the impact of the reforms was built by the Departamento Nacional de Planeación (National Department of Planning, DNP). It is an actuarial/financial model where macroeconomic variables are exogenous. It covers the following entities: (a) ISS, (b) AFPs, (c)
funds for public sector workers at the national level, (d) funds for public sector workers at the regional level, (e) the teachers fund, and (f) the regime for armed and police forces. The time horizon of the model is 2000–50, and it does not include financing of deficits and the interest cost of the government’s debt issued to cover the deficits.

A key issue concerning the information sources is that the information about the members of the pension funds for public sector workers does not come from the accounts and records of the funds themselves, but has been drawn from the Household Survey and from the Ministry of Finance.

A key assumption is that there is no new entry into the DB regime. The assumption is less drastic than it appears in the reform scenario because the minimum requirement of the new parameters for new members is that contributions and benefits are actuarially balanced; that is, that they do not increase the liabilities of the system. In the no-reform scenario it leads to an underestimation of net pension liabilities. Other important assumptions are that coverage remains constant, GDP grows at 4.5 percent, the discount rate is 4.5 percent, private wages grow at 1 percent, and the return on investments is 6 percent, all in real terms.

The ISS actuarial unit has also produced a model, but it covers only ISS and not the other regimes. The results of the ISS model are more optimistic than the results of the DNP model in the sense that they show a lower IPD, and financial flows of ISS improve faster in response to changes in parameters. This Chapter will use only the DNP model because it is more comprehensive than the ISS model.

b) Pension Liabilities

The fiscal requirements and future cash flows due to pension reform are difficult to estimate in Colombia because cost projections are complicated by the fact that affiliates may switch between the new and the old systems. In addition, the data for many of the regional pension funds have not been processed and it is not clear who will have to cover their unfunded liabilities, and data for funds for public sector workers at the national level are still incomplete.

The fragmentation of the pension system results in an inability to track contributors and pensioners. This inability to track all the information could be driving the increase in pension liabilities because new liabilities are being discovered, and the large number of regimes makes it easy to create new unjustified liabilities. Net debt position of the pension system was estimated at 140 percent of GDP in 1997, and now it is estimated at almost two times GDP (see Table 5). Defaulting at least partially on these liabilities is not only socially and politically difficult, but also unconstitutional; Art. 350 of the Constitution states “public social spending will have priority over any other spending.”

Exceptions, lack of adjustments, extension of regimes, imbalance of benefits, implicit guarantees, weak incentives for reserve management, incentive bias toward short-term cash flows, minimum pensions, and recent court rulings expanding benefits have all led to growing pension liabilities.
Table 5. Pension Liabilities, by Regime

<table>
<thead>
<tr>
<th>Entity</th>
<th>Percentage of GDP</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISS</td>
<td>65.0</td>
<td>2000</td>
</tr>
<tr>
<td>Teachers</td>
<td>19.0</td>
<td>2000</td>
</tr>
<tr>
<td>Armed forces &amp; police</td>
<td>39.0</td>
<td>2000</td>
</tr>
<tr>
<td>CAJANAL (only pensions)</td>
<td>14.0</td>
<td>1999</td>
</tr>
<tr>
<td>Communications</td>
<td>3.2</td>
<td>1997</td>
</tr>
<tr>
<td>Ports</td>
<td>3.0</td>
<td>1998</td>
</tr>
<tr>
<td>ECOPETROL</td>
<td>2.4</td>
<td>1997</td>
</tr>
<tr>
<td>ISS as employer</td>
<td>2.2</td>
<td>1999</td>
</tr>
<tr>
<td>Railroads (only pensions)</td>
<td>1.6</td>
<td>1999</td>
</tr>
<tr>
<td>Congress (only pensions)</td>
<td>0.9</td>
<td>1999</td>
</tr>
<tr>
<td>Others</td>
<td>6.4</td>
<td>1999</td>
</tr>
<tr>
<td>Regional*</td>
<td>31.0</td>
<td>1998</td>
</tr>
<tr>
<td>Regional universities</td>
<td>2.8</td>
<td>1999</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>198.0</strong></td>
<td><strong>2000</strong></td>
</tr>
</tbody>
</table>

* Includes estimate of pension bonds liability

The national Treasury has been funding the deficits of the regimes for public sector workers for a long time, but the pace is growing (see Table 6). In 1991 the transfers were 0.84 percent of GDP, and during 2000 they increased to 2.26 percent of GDP.

The switch option between the parallel regimes frustrates efforts to quantify transition costs, raises the operational costs of both regimes, retards development of the private pillar, and renders the public pillar vulnerable to strategic abuse. Even after the 1993 reform, the parameters of the PAYG pillar remain overly generous. Vesting requirements, the benefit formula, and the minimum pension guarantee in the PAYG pillar have not been adjusted to corresponding parameters in the DC pillar.

Figure 4 clearly makes the point that the Colombian pension system is not sustainable in its current form. The financing requirements of all DB regimes will grow for at least the next 20 years. Without reform the annual financing requirements will reach 6 percent of GDP by 2020. The most immediate problem arises from the old regimes for public sector workers, and is compounded by the problems of the fund for teachers. In the longer term, ISS grows to become the largest problem.

Table 6. National Government Pension Payments (as percent of GDP)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.84</td>
<td>0.94</td>
<td>1.01</td>
<td>1.16</td>
<td>1.34</td>
<td>1.62</td>
<td>1.66</td>
<td>1.80</td>
<td>2.04</td>
<td>2.26</td>
</tr>
</tbody>
</table>
Figure 4. Current Deficit of the Pension System by Component (as percent of GDP)
V. Reform Requirements

a) Overall Strategy

Colombia's IPD is at the high end of the international experience and similar to that of countries with mature populations and almost universal pension system coverage (see Table 7). As in those countries, the main source of problems has been the defined benefit regime. Among developing countries, Colombia's IPD is comparable to that of Eastern European countries that have much older populations than Colombia (see Table 8).

Almost all countries with high IPD have taken or are taking action to reduce it. Even developed countries like Italy have taken radical action instead of a slow approach. Italy moved toward individual pension accounts and cut its IPD from more than six times GDP to its current level of about three times GDP. The options for reducing the IPD are basically three: increase revenue, reduce benefits, and take fiscal actions. However, the possible combinations of these options are multiple, and no country has replicated the reform of another country. A guiding principle in most of these reforms has been that at least the new cohorts entering the pension system will be actuarially balanced and, therefore, they will not be the source of additional pension liabilities. The inclusion of the younger cohorts in addition to the new cohorts in the pension system reform also helps to reduce the IPD. Experience has shown that reductions often are not permanent, and reforms also now include an element of automatic adjustment of benefits to changes in economic and/or demographic conditions. Individual savings accounts have this feature, and in different forms are being introduced in all reforming countries.

Colombia's new pension reform requires three elements: (a) reform of the pension system itself; (b) identification of financing options for the accumulated liabilities; and (c) additional reforms that make the pension reform more acceptable and sustainable, so that it involves more than just a cut in benefits. The following proposals concentrate on the first element. The contribution to the second element—financing options—is limited to proposals to reduce the liabilities toward active

Table 7. Estimates of Implicit Pension Debt and General Government Debt, Selected OECD Countries (percent of GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>OECD</th>
<th>IMF</th>
<th>General Gross Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>121</td>
<td>94</td>
<td>96</td>
</tr>
<tr>
<td>France</td>
<td>216</td>
<td>265</td>
<td>48</td>
</tr>
<tr>
<td>Italy</td>
<td>242</td>
<td>357</td>
<td>129</td>
</tr>
<tr>
<td>Japan</td>
<td>162</td>
<td>166</td>
<td>83</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>156</td>
<td>117</td>
<td>46</td>
</tr>
<tr>
<td>United States</td>
<td>113</td>
<td>106</td>
<td>69</td>
</tr>
<tr>
<td>West Germany</td>
<td>157</td>
<td>221</td>
<td>50</td>
</tr>
</tbody>
</table>
Table 8. Implicit Pension Debt Estimates, and Pension and Public Debt Data (percent of GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>IPD</th>
<th>Public Debits</th>
<th>Pension Reserves</th>
<th>Pension Expenditure</th>
<th>4 Percent</th>
<th>5 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td></td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>330</td>
<td>275</td>
</tr>
<tr>
<td>Costa Rica</td>
<td></td>
<td>25</td>
<td>6</td>
<td>2</td>
<td>121</td>
<td>97</td>
</tr>
<tr>
<td>Croatia</td>
<td></td>
<td>9</td>
<td>0</td>
<td>11</td>
<td>201</td>
<td>175</td>
</tr>
<tr>
<td>Ecuador</td>
<td></td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>63</td>
<td>51</td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
<td>25</td>
<td>10</td>
<td>0</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>Kyrgyz Rep.</td>
<td></td>
<td>38</td>
<td>0</td>
<td>7</td>
<td>185</td>
<td>154</td>
</tr>
<tr>
<td>Lithuania</td>
<td></td>
<td>38</td>
<td>0</td>
<td>7</td>
<td>155</td>
<td>134</td>
</tr>
<tr>
<td>Malta</td>
<td></td>
<td>38</td>
<td>0</td>
<td>5</td>
<td>234</td>
<td>194</td>
</tr>
<tr>
<td>Mauritius</td>
<td></td>
<td>35</td>
<td>0</td>
<td>3</td>
<td>47</td>
<td>42</td>
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<tr>
<td>Moldova</td>
<td></td>
<td>35</td>
<td>0</td>
<td>8</td>
<td>159</td>
<td>136</td>
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<tr>
<td>Morocco</td>
<td></td>
<td>70</td>
<td>0</td>
<td>2</td>
<td>32</td>
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<td>Nicaragua</td>
<td></td>
<td>53</td>
<td>0</td>
<td>3</td>
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<td>104</td>
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<td>Philippines</td>
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<td>42</td>
<td>0</td>
<td>12</td>
<td>261</td>
<td>220</td>
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<tr>
<td>Romania</td>
<td></td>
<td>42</td>
<td>0</td>
<td>6</td>
<td>256</td>
<td>214</td>
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<td>Senegal</td>
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<td>42</td>
<td>0</td>
<td>1</td>
<td>107</td>
<td>81</td>
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<td>Turkey</td>
<td></td>
<td>45</td>
<td>0</td>
<td>2</td>
<td>75</td>
<td>65</td>
</tr>
<tr>
<td>Ukraine</td>
<td></td>
<td>19</td>
<td>0</td>
<td>5</td>
<td>146</td>
<td>123</td>
</tr>
<tr>
<td>Uruguay</td>
<td></td>
<td>19</td>
<td>0</td>
<td>14</td>
<td>222</td>
<td>193</td>
</tr>
</tbody>
</table>

* Not included

Source: Author's calculations. Public debt figures from Government Finance Statistics Yearbook (IMF 1999)

... workers by, for example, reducing the length of the period during which the worker receives his or her benefits. The only recommendation regarding the third element—additional reforms—is to redirect the additional contribution of workers earning more than four minimum wages from the current subsidy to contributions to the support of the very poor old.

b) Reform Options

The reform proposed in this Chapter is along the lines of the current dialogue in Colombia, but is different and goes beyond the reform proposed by the draft law before Congress. It maintains the current situation of concurrent DB and DC regimes, and aims to address the fiscal problem and to be fair to all parties.

There has been a convergence in the reform proposals of different parties, and several of these proposals satisfy the target of not creating additional net pension liabilities by the new cohorts entering the pension system. There is agreement on closing entry to all regimes except to ISS, AFPs, and the armed forces to improve the
equity of the pension system and to lower the long-term deficits of the system. In addition, some proposals result in very low liabilities for those cohorts that are fully subject to the reforms.

An example of such a proposal is a reform that changes the current system by introducing retirement ages of 60 for women and 65 for men, a replacement rate of 50 percent after 1,300 weeks of contributions, and increasing the contribution rate by 1 percentage point. To explore whether such a system is in balance, a simulation with a cohort of 1,000 representative women and 1,000 representative men is run to check whether the reserves of such a system last until the last member of this cohort dies. Figure 5 shows that a system with these or similar parameters is balanced in the long run; that is, the reserves are drained about the time the last member of this cohort dies. This reform proposal is not only balanced for future generations, but if implemented together with an acceleration of the transition of Law 100, it could reduce the IPD by 40 to 50 percent of GDP.

The reduction in the IPD is borne mostly by the younger generations. In a simulation of the impact of the reform, together with an acceleration of the transition that leaves untouched men that in April 1994 were age 50 or older and women that were age 45 or older, that introduces a faster transition for men age 42 to 49 and women age 36 to 44, and fully introduces the reformed system for those men age 41 and women age 35 or younger, the impact on the IPD of ISS and the national pension funds for public sector workers is the following:

- As expected, the IPD for workers that are not touched by the reform remains constant at 58 percent of GDP.
- For workers that are subjected only gradually to the reform, the IPD drops by almost half, from about 19.5 percent to 10 percent of GDP.
- For workers that are fully subject to the reform, the IPD drops from about 41 percent of GDP to 4 percent of GDP.

Leaving older workers and pensioners untouched by the reform also has the effect of delaying any major improvement in the flows of the pension system. The impact on the flows becomes significant about only eight years after the reform. Only then will a critical mass of workers be in a position where they continue to contribute to the system instead of collecting benefits.

Changing the transition as defined by Law 100 is a critical element of the new reform. Almost all the short-term impact of the reform on the flows of the system will result from an acceleration of the transition. In addition, because most of the beneficiaries of overly generous benefits are in this transition, the acceleration of the transition not only has a significant impact on the liabilities of the system, but also contributes to the fairness of the pension system.

Colombia’s pension system has very large fiscal problems and needs all the revenue it can collect to address them. However, the proposed increase in the contribution rate is problematic. This Chapter has shown that Colombia already has one
of the highest social security contribution rates in Latin America, and already has nonsalary labor costs of 66 percent of the salary. While it could be argued that an additional percentage point would not have a significant impact when the totals are already so high, there are strong indications that the trend to informality is growing. Therefore, there is a risk that additional labor taxes might actually reduce total revenue and further reduce the number of contributors and coverage. It would be worthwhile to explore the option of raising revenue through fiscal measures, including an increase in the value added tax.

There are many different parametric reforms that can achieve the same objective of eliminating the creation of new liabilities while reducing existing liabilities, without imposing unacceptable hardship on pension system members. Table 9 presents examples of what would happen to the implicit pension debt of ISS if some parameters were changed one at a time.

From these examples it becomes clear that the biggest reductions can be achieved by increasing the retirement age. An increase of one year in the retirement age during 2002 reduces ISS debt by almost 12 percent of GDP, but doing it in five years still has a large impact. The timing of the reform becomes critical for the decision of increasing the number of weeks of contributions required to retire. For ISS a smaller but fast increase achieves the same impact as a much larger increase three or five years later.

c) Specific Reforms

IPD reduction is not the only objective of the reform. One of the main objectives of the pension reform is to unify workers’ pension rights and obligations, regardless of the regime they are under. This objective is certainly achievable for new workers. However, this is more difficult for those workers that are currently under a transition regime, or are or will be in an exempted regime. By 2014, the problem could have been resolved for those in a transition regime, but not for the other cases.

Table 9. Impact of Individual Parameter Changes on the ISS Deficit

<table>
<thead>
<tr>
<th>Reform</th>
<th>IPD as Percent of GDP</th>
<th>IPD Reduction as Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current ISS IPD</td>
<td>64.97</td>
<td>0</td>
</tr>
<tr>
<td>Increase age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year in 2002</td>
<td>53.02</td>
<td>11.95</td>
</tr>
<tr>
<td>1 year in 2007</td>
<td>55.78</td>
<td>9.22</td>
</tr>
<tr>
<td>Increase number of weekly contributions to.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 in 2002</td>
<td>63.2</td>
<td>1.77</td>
</tr>
<tr>
<td>per year up to 150</td>
<td>63.87</td>
<td>1.1</td>
</tr>
<tr>
<td>30 per year up to 300</td>
<td>63.27</td>
<td>1.7</td>
</tr>
<tr>
<td>Reduce replacement rate at 1,000 weeks of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>contribution by 1 percentage point</td>
<td>63.35</td>
<td>1.62</td>
</tr>
<tr>
<td>Increase contribution by 1 percentage point</td>
<td>62.96</td>
<td>2.01</td>
</tr>
</tbody>
</table>
To respect the acquired rights of workers and make the system fairer, a promising approach would be for all workers in these regimes to start paying an additional contribution into an individual savings account for the additional benefits they will receive. This additional contribution would be equivalent to the actuarially fair contribution required for a new entrant to the regime to get the additional benefits of the regime. Workers who retire under their current regime would transfer the funds in their individual accounts to the entity that pays their pension. In this way their acquired pension rights are respected, but there is a cost to early retirement or a higher pension. Workers could choose to continue to work and to retire under the new general regime instead of their special regime. In this case the worker could use the funds he or she saved for an increased pension, for withdrawals until he or she reaches the pension age required by the new regime, or could even receive part of it as a lump sum. Workers (particularly younger ones) could also choose not to make the additional contribution and just be members of the general pension regime.

A similar approach could be followed for collective agreements. Based on Law 100, regulations could be issued that require establishing funded trusts for all future benefits by all public enterprises, with extraordinary pension benefits arising out of collective agreements. Parties could still freely negotiate the agreements, but enterprises would have to deposit the actuarially required funds in an external trust and finance them out of the current budget. The right of workers to negotiate labor agreements or collective agreements would be untouched; however, the actual cost of the demands for higher pension benefits would become more explicit, and managers of public enterprises would have to immediately face the consequences of their decisions instead of leaving the problem to future managers or to the government’s Treasury.

As noted, the level of Minimum Pension Guarantee is high and the guarantee is costly. Although difficult to estimate, expected liabilities arising from it could be about 5 percent of GDP just for the capitalized regime. In ISS the average salary of its members is somewhat higher than in the AFPs, but required contribution periods are shorter. Liabilities arising out of the guarantee in ISS could be similar, and the total cost of this guarantee could reach 10 percent of GDP. Changes to the guarantee are constrained by a Constitutional Court ruling. However, the law reforming the pension system should try to find language acceptable to the Court that allows for a minimum pension that is equal to the minimum wage when granted, but is indexed to the consumer price index afterward. This would reduce the cost of the guarantee, but would also address the distortion that the current ruling creates in the market for annuities. In the DC system when a worker retires he or she buys an annuity. For workers with pensions close to the minimum wage there is a high risk for the insurance company. If during the life of the annuity the minimum wage were increased above the value of the annuity, the insurance company would have to increase the value of the annuity. It is not clear what the outcome of this situation would be, but insurance companies will certainly charge for this risk, resulting in lower pensions for workers. The same risk of an unexpected increase in the minimum pension exists for
disability and survivorship pensions. This risk increases insurance premia, and some estimates of this increase explain about a third of the premium by this risk.

If a change in the Minimum Pension Guarantee is not possible, eligibility requirements, both in terms of age and number of contributions, should be increased. Requirements should be the same in the defined benefit and the capitalized regimes. In the DB regime they need not be the same as for a regular pension because the guarantee represents an added benefit for which additional requirements are justified. For example, if a noncontributive benefit for those older than 67 years of age is instituted, the requirement for the minimum pension could be 67 years of age. In this way, if the worker ends up not qualifying for even a pension, he or she could qualify immediately for old-age assistance.

The additional 1-percentage-point contribution to subsidize contributions of the poor is not achieving its objectives. Some childcare providers (madres comunitarias) may be a positive exception. However, the subsidy scheme is not leading to a substantial increase in the probability of subsidy beneficiaries receiving a pension. Pension coverage in terms of the number of old people receiving a pension is more important than the number of contributors. Therefore, the additional contribution should be devoted to finance the old-age assistance mentioned above. Another alternative is that the additional contribution be used to finance the minimum pension. The contributions of the madres comunitarias should be paid either by the community or by the Instituto Colombiano de Bienestar Familiar (ICBF).

As mentioned, the institutional requirements for the implementation of Law 100 are complex. For example, the law envisioned that the insolvent national and territorial public pension funds (cajas) that were not transformed into a pension administrator would send their affiliates to ISS, and pensions would be paid by FOPEP, FONPET, and territorial funds. Only 2 national funds and 12 regional funds have already been liquidated, and only 5 more at the national level will be liquidated in the near future. This is creating the potential for further increases in liabilities. Slow progress in building and documenting the work history of members of old regimes, and reduced capacity to adequately control recognition of new pensions granted under all the different regimes, potentially increases liabilities.

Although the unification of the pension system will address many of the problems, in the meantime, a Social Security Department in the Ministry of Finance has been created to defend the interests of the government Treasury during the process to avoid waste and fraud, and to accelerate implementation of the previous reform and, eventually, the next reform. The new Department has expanded ongoing control efforts as evidenced by the number of inspections and number and amount of contested pensions. The Department should have sufficient authority and resources to build and secure databases required for recognition and recertification of pensions in national and territorial funds (cajas). The work of the Department would be facilitated if the discussion of the budget of an entity with a pension fund (caja) were linked to the satisfactory provision of information required to build work histories and the database for the recognition of pensions.
Evasion of contributions and underreporting of income are growing problems in the pension system that have been worsened by the economic downturn. This is an important problem for ISS, but also affects the government through the minimum pension it has to pay for pensioners of the DC regime. If workers do not contribute enough, even high returns will not be enough to avoid this liability. In addition, other social services like health are affected and place demands on government resources. The most direct solutions to this problem are (a) improved tax administration, because the main force behind evasion is the attempt to avoid paying taxes; and (b) labor reform. However, other effective measures could be taken in the meantime. For example, the creation of a URC would improve the possibility of controls not only by allowing consistency checks, but also by forcing the different entities to improve their own databases. The URC could also pave the way for more efficient means to collect contributions. The international trend now is increased use of the Internet and electronic payment that allows the interested parties to directly control the collection instead of building large, centralized, costly agencies that lack the incentives to do adequate enforcement.

Continuing to have a pension system that includes a DB regime run by ISS will require ISS to become a more dynamic and efficient organization. The mismanagement and the problems in the health branch are affecting ISS’s pension administration through a worsening of image, loss of members, and diversion of scarce management capacity, and may lead to illegal cross-subsidies in addition to the current bias in the allocation of ISS’s fixed costs. Ensuring the survival of the DB regime under ISS will require separating the four branches of ISS into four separate and independent businesses. The four separate businesses would be (a) health provision, (b) health insurance, (c) workers’ compensation, and (d) pensions. Only more specialized entities will be able to compete with the private sector and provide the services that the members of the social security system deserve and pay for. Further deterioration of ISS services will lead to a further decline in coverage.

d) Fiscal Impact of Pension Reform

Figure 6 presents the impact of only one of the many different ways in which the pension system can be reformed. The impact on flows is large and the reduction of the IPD is about 50 percent of GDP. However, if the pension reform is comprehensive, the figure could be underestimating the impact of the reform because it shows only the impact of the changes in parameters. The figure does not account for the impact of changes on incentives, administration, and controls.

e) Pension Reform in 2002 Draft Law

The draft law introduced to Congress in early 2002 includes some valuable elements that go in the right direction. Under many scenarios the new parameters could balance the system for new entrants to the pension system. The draft law addresses a sig-
significant fraction of the pension problem. To complement this, the government plans to address in a separate reform the problems in the exempted and special regimes with a large fiscal impact in the short and medium term. Over the long run, 40 years, the pension system is likely to be more sustainable. The improvement will come at the cost of higher labor market distortions unless the government adopts the planned labor reform, and will affect workers’ choice between the private and public pension scheme. Therefore, an additional pension reform will be required in the near future.

The government’s reading of the draft law is that the Minimum Pension Guarantee Fund that will be created will cover the minimum pensions arising from old age, disability, and survivorship contingencies. That is, the government will cover the difference between the workers’ funds and insurance coverage and the minimum pension level. Approval of this is very important because it removes the political risk caused by the level of the minimum pension from the calculation of insurance premiums and annuities. This should increase the lower pensions, reduce the insurance premium, and improve the soundness of the insurance industry.

The fiscal impact of the draft law is likely to be positive during the next 10 years. The improvement in the fiscal situation during the next two decades relies mostly
on the increase in contribution rates and on diverting workers to ISS. The increase in contribution rates provides new funds to ISS and other defined benefit schemes, and reduces the government liabilities arising from the Minimum Pension Guarantee. The impact could reach 0.1 percent of GDP per year during the next 15 years. However, the higher labor taxes could increase unemployment, reduce coverage, and affect revenues if not complemented by labor market reform. The draft law also implements the Old Age Poor Fund (OAPF) created by Law 100, but this will be a slow process because it will be subject to availability of funds and the sources identified by the law are small. In terms of fiscal impact it should be negligible unless the courts transform this benefit into an entitlement.

**CONTENT OF THE DRAFT LAW. Changes before 2014:**

- Contributions increase by 1 percentage point when the law is approved, followed by increases of 0.25 percent per year during 2005–08. Increased contributions of workers in AFPs fund a newly created Minimum Pension Guarantee Fund that will be managed by the Treasury. Increased contributions of workers in ISS fund payment of ongoing benefits.
  - **Comment:** This will have a positive fiscal impact but there will be increased labor market distortions. An ongoing policy of high pension benefits even for new entrants to the labor force makes the higher contributions necessary to balance the system for new entrants. Deeper cuts in benefits would allow lower contributions. Unless the draft law is revised to make clear that there will be a minimum pension guarantee for workers contributing to the private pension even in the event that the Minimum Pension Guarantee Fund manages to run out of funds, this will create a new bias against the privately managed pension system because low-income workers will prefer to join ISS to have the guarantee that is offered in ISS in any case.

- The maximum charge for the AFP management fee and survivorship and disability insurance is reduced from 3.5 percent of salary to 2.5 percent. The 1 percent difference goes to the Minimum Pension Guarantee Fund.
  - **Comment:** This provision reduces fiscal liability arising from the minimum pension guarantee, although there are expenses associated with this revenue. However, it endangers the commercial viability of the private pension fund managers because the potential reduction in insurance premiums arising from changes to the survivorship and disability insurance should be about 0.6 percent of salaries and will take time to materialize. The pension fund managers will face losses until they achieve the efficiency gains and the premiums fall to their new level. It also amounts to higher labor taxes for workers in AFPs because the potential reduction in fees and insurance premium have already been captured by the government and will not go to the worker's account.
• Access to benefits from survivorship and disability insurance now requires also having contributed 200 weeks during the last 5 years, in addition to the current 26 weeks during the last year.
  • Comment: This is an important action that helps address the weakness of current legislation.

• OAPF implementation is to provide income to those over age 65 that do not have a source of income. The benefit is to be about 40 percent of minimum wage, and about 500,000 beneficiaries are expected.
  • Comment: In strict terms this is not a pension issue but an old age poverty alleviation or social assistance measure. The level of new expenditures will depend on how OAPF is set up, how fast it becomes operational, qualification criteria, and benefit levels. There is the risk of creating a new entitlement in Colombia; until now there has been no right to this assistance, and the small assistance programs were restricted to the availability of transfers from the Treasury and of local funds. International experience shows that this kind of program tends to have explosive growth. There is no good reason why the new expenditures should be financed out of labor taxes instead of general revenue. Implementation of the OAPF should be subject to the availability of resources in the Treasury and not subject to the introduction, increase, or earmarking of labor taxes.

• Pensions will be taxed but at a lower rate than salaries to take into account that they will not be able to claim any tax deductions. After 5 years revenue from these taxes will help fund OAPF.
  • Comment: This is the correct action, but revenue from these taxes should not be earmarked to OAPF.

• An additional 1 percent contribution is extracted from those with income of 20 minimum wages or higher. Revenue from this contribution is earmarked for OAPF.
  • Comment: This is an additional labor tax that will further promote underreporting of labor income and evasion through, for example, consulting contracts.

• From the 4 percent contribution to compensation funds, 1 percent is diverted to OAPF.
  • Comment: It is positive that existing labor taxes are being reviewed and found to be in excess of what is needed to fund the activities for which they are earmarked. However, instead of using this reallocation to fund new expenditures, it would be better to cut labor taxes or use them to avoid increases in other labor taxes like pension contributions.

• Formula and parameters of pension recognition bonds for those who join or joined AFPs are equalized to the bonds for those who join ISS. In addition, pension recognition bonds for workers with salaries above 10 minimum wages will be calculated using a cap of 10 minimum wages.
• Comment: Reduces government liabilities arising from the bonds. However, it reduces the benefit of joining the privately managed pension regime for an important segment of the market of AFPs.

• Switching between AFPs and ISS is allowed only during the first 10 years after first employment. Current workers that have 8 or more years in the labor force will be able to switch one time during the two years after passage of the law.

• Comment: This is an important action that limits government liabilities and reduces arbitrage among systems. It would have been more positive if frequency of changes had not been increased and the period during which switching is permitted were shorter.

• New civil servants may only join ISS if they just joined the labor force or come from private employment, even if they already have an AFP account.

• Comment: The requirement sets a bad precedent in terms of directing workers to pension regimes, and again reduces the market of the private system. Already workers with subsidized contributions may only join ISS, and civil servants have to enroll in the Fondo Nacional del Ahorro for their severance payment accounts. The only objective of this requirement is to improve cash flow of ISS and reduce the size of the transfers required in the near term.

Changes in and after 2014:

• The retirement age increases to 63 for men and 58 for women in 2014. In 2020 retirement ages increase to 65 and 60.

• Comment: This is an important and correct action that helps the sustainability of the system. Introduction is slow and there is the risk that the increase of two years could be contested. A gradual and faster introduction would be an improvement.

• Number of weekly contributions required to retire and to have access to retirement in ISS increases by 35 weeks per year during 2014–18 and by 40 weeks during 2019–20, to a total of 1,250. The replacement rate remains at 65 percent of the average salary of the last 10 years.

• Comment: This is an important and correct action that helps the sustainability of the system. The impact of the reform is limited by introduction in the distant future. Another concern is that it seems to reconfirm the policy of high benefits even if it requires high contributions.

• Workers who reach retirement age but do not comply with the new requirement of weeks of contributions and have more than 1,000 weeks of contributions will receive a reimbursement equal to their contributions with a real rate of return of 4 percent. Workers with less than 1,000 weeks receive the contributions they made without rate of return.

• Comment: Reimbursement in monthly installments is a better alternative to limit the number of workers that receive a lump sum and then benefit from OAPF.

• The right to a minimum pension in the AFPs is acquired with 1,350 weeks of contributions and the retirement age.
VI. Conclusion

The government is carrying out a number of actions and even presented a new draft pension law for discussion in Congress in early 2002. For example, the URC is operating and it includes all ISS contributors, the national pension information system is in place and includes the pensions of about 400 pension funds, all pensions of eight public pension funds at the national level are being paid by the single agency, and a consolidated estimate of all pension liabilities is updated quarterly. However, even if the draft law is passed, the outstanding agenda in the area of pension reform is large. It requires (a) alignment of the vesting and minimum benefit parameters between the two pension regimes, (b) indexing minimum pension guarantees to inflation instead of the minimum wage, (c) phased integration of special pension regimes (starting with the pension plan for teachers) into a single national system, (d) completion of the phasing out of insolvent institutions, (e) calculating and issuing of pension recognition bonds, (f) regulatory adjustments to improve the efficiency of the private pension fund management industry, and (g) measures to limit the subsidy to the retirement accounts of lower-income workers. Most likely not all elements of the draft law will be passed by Congress, and the outstanding agenda will need to include some other crucial reforms like eliminating the option to switch between systems every three years, and very likely measures to restore the balance in worker’s choice between the public and the privately managed pension scheme will be required.

An immediate action plan on pension reform for the first year of a new government should include the following:

- The new Social Security Department in the Ministry of Finance should keep the pension liabilities information gathering and control activities ongoing and institutionalized. The Department should have an adequate structure and sufficient authority and resources to expand and more efficiently carry out the ongoing information and control activities, including building and securing databases required for recognition and recertification of pensions in national and territorial funds (cajas), monitoring capitalization plans of pension funds and FONPET, monitoring membership of pension funds, issuing general procedures and norms for recognition of pensions, and issuing norms to implement Law 100. In particular the Department should ensure that ongoing control efforts, like in FONCOLPUERTOS (the pension fund of port workers), are expanded.
- The government should link discussion of the budgets of national and territorial public pension funds (cajas) and entities responsible for their liabilities
to provision of information required to build work histories and databases for recognition of pensions.

- Deadlines should be defined for the liquidation of all insolvent regional pension funds and for the transfer of all remaining national public pension regimes into a single entity.

- Pension Revisions Law should be approved that will allow for the suspension of pensions granted illegally, even during ongoing court proceedings.

- A national pension information system should be created that includes information about the regime, years of service, entity, and so forth, for each pension granted.

- Regulations should be issued to require the establishment of funded trusts for all future benefits by all public enterprises, with extraordinary pension benefits arising out of collective agreements; parties could still freely negotiate the agreements, but enterprises would have to deposit the actuarially required funds in an external trust and finance them out of the current budget.

- At least one of the exempted regimes should be reformed in a way that at least brings it closer to the general pension regime, particularly by establishing individual savings accounts and a close link between contributions and benefits, reducing the flow of required transfers in the medium term, and eliminating them over the long term. Benefits should be equivalent to those in the regimes managed by ISS and the AFPs, and any benefits above those should be funded by additional contributions that are actuarially fair at least for new entrants.

- The government should prepare an updated comprehensive pension reform proposal that includes the results of ongoing consensus-building efforts and fully considers the availability of new data.
Housing Finance

This Chapter was written by Loic Chiquier.

I. Executive Summary

Despite several important policy and regulatory measures taken by the government of Colombia, the mortgage lending industry has not yet been restored to soundness. This could soon lead to further severe impacts on the financial system, the construction sector, labor markets, economic growth, and the social protection of households.

The ex-savings and loan institutions remain highly vulnerable to both market and credit risks, particularly due to a contaminating culture of nonpayment. Immediate priorities are facilitating the issuance of mortgage securities and restoring mortgage collateral strength, while introducing consumer protection regulations.

II. Genesis and Evolution of a Crisis

Since 1972, specialized savings and loan corporations, called Corporaciones de Ahorro y Vivienda (CAV), had dominated construction and mortgage markets, with the privilege of providing more affordable mortgage loans and attractive savings denominated in a constant purchasing power index (UPAC). Only since 1990 have commercial banks been allowed to compete by providing mortgage loans, and only since 1993 have they been allowed to provide UPAC-remunerated deposits. This liberalization has increased the cost of CAV funds, because UPAC-savings became less attractive than other products, such as CDs.¹ The UPAC formula has been changed several times to reflect that reality. Since 1994, it has been linked to Deposit Rate

¹ Consequently, savings accounts in UPACs declined from 73 percent of total deposits in 1993 to 32 percent in 1998
Index (DTF) rates (average cost of 90-to-180-day term deposits in the market), and in 1999 it equaled 0.74 DTF.

On top of that, there was a boom in poorly designed credit products between 1995 and 1997, when the level of nonperforming loans was already rising and housing prices started to decline for upper segments. A steady deterioration of the portfolio was visible before the brutal interest rate shock in 1998. Some amortization schemes permitted an excessive capitalization of interests for the benefit of temporary payment relief. As the nominal outstanding debt grew, CAVs also faced growing liquidity issues. When market real rates jumped to unbearable levels in 1998, both nominal and real mortgage rates reflected this rise with no moderation, as margins were also steep, with very adverse impacts on credit repayments. This was amplified by rising unemployment—20 percent—and the bursting of the housing price bubble. The CAV industry faced a severe solvency and liquidity crisis. Even higher levels of nonperforming loans—30 to 40 percent—were recorded as loans to developers. The impact was dramatic on insolvent households and financial institutions, and on the rapidly declining construction industry, with negative impact on low-qualified labor markets. The wealth and social protection of households was equally affected.

III. Government Packages of Reforms

In 1999 the Constitutional Court reacted to this situation by ruling that the drift of UPAC from its initial purpose (constant purchasing power index) was illegal, and that UPAC portfolios should be converted into inflation-based Unidad de Valor Real (UVR), at a fixed real rate (that is, no capitalization of interest in real terms). By the end of 1999, the residential mortgage debt represented a large proportion—31 percent—of the total credit of the banking system, and was largely concentrated on the CAVs.

The government then passed Housing Law 546, on 23 December 1999, which converted the existing mortgage debt and accordingly wrote off part of the debt (about US$1.2 billion, or 15 percent of the overall debt) funded by taxed financial institutions. The Housing Law introduced broader reforms of the whole housing finance system, including:

- The conversion of CAVs into banks regulated and supervised as such

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2. In real terms, 40 percent between 1994 and 1999 for units exceeding $64,000 in Bogotá. Market values of social housing units depreciated less.

3. Some schemes allowed debtors to pay 10 percent out of a 35 percent nominal rate. The resulting capitalization expanded mortgage debt, but subsequent debt repayments had to increase accordingly, later rising to unbearable levels.


5. Except for a few transitory measures for which a three-year grace period was granted to make arrangements.
• The standardization of mortgage loans into a few eligible UVR-denominated schemes, excluding any further capitalization of interests
• A new social housing policy accompanied by various upfront and tax-related subsidies, and the requirement that banks dedicate at least a quarter of their mortgage production for social housing (Vivienda de Interés Social, VIS) loans
• New secondary mortgage market instruments and institutions (mostly securitization agencies and mortgage bonds).

Because the first package of relief measures designed in 1998 produced no visible progress, the government more actively pursued its housing finance policy by improving prudential regulations of mortgage markets, and creating the following special support tools:

• Purchase from restructured banks of nonperforming loans
• Recapitalization credit lines
• A special fund against market risks
• A guarantee fund for social mortgage securities
• Income tax exemptions for borrowers, lenders, and investors, complemented by upfront subsidies for social housing.

But the main challenges ahead remain:

• Preventing further deterioration of primary mortgage markets
• Developing the long-awaited capital market funding of mortgage markets
• Improving the housing finance infrastructure, starting with real collateral
• Developing a nondistorting, targeted, and efficient social housing policy (a subject not treated in this Chapter).

IV. Main Sectoral Issues

a) A Contaminating Deterioration of the Mortgage Portfolio

The mortgage market remains concentrated at 95 percent in seven banks, where mortgage loans represent the majority of their assets, which increases their vulnerability. The largest mortgage lenders are Davivienda and Granahorrar, followed by Conavi.

The UVR conversion was expected to improve the portfolio quality, and in the following weeks the average nonperforming loan ratio for mortgage loans fell from 20 percent to 12 percent. But this level has since returned and stabilized at the high level of 21.8 percent, as illustrated in Figure 1.

6 After being transferred to productive assets from the liquidated Banco Credito Hipotecario (BCH) (1.5 trillion peso mortgages)
Three years after the crisis, the mortgage industry has not exited the tunnel. The main reasons are:

- A continuing economic recession.
- Further expectations of State bailouts, aggravated by further rulings of the Constitutional Court that have capped mortgage credit rates; and several measures in favor of borrowers against the lenders have fueled a culture of nonpayment among households.
- Delays in restructuring two public banks (Bancafe and Granahorrar), which are capitalized and refinanced through the Fondo de Garantías de Instituciones Financieras (FOGAFIN) or through its asset management company (CISA) by purchasing the defaulted mortgage loans. The hemorrhaging of housing loans turning into trouble has slowed down, but not stopped. Privatization and/or the portfolio resale are recommended. CISA needs to improve its policy of servicing banks in order to improve mortgage debt recovery.

A new and recent negative trend is the apparent contamination of private banks by the nonpayment culture (a consistent story across banks, including Davivienda), as illustrated in Figure 2, which shows rising default loans (the persistent economic recession—with an 18 percent unemployment rate—cannot itself explain this rise).

b) A Contracting Mortgage Stock and Production of New Loans

Outstanding mortgage debt remained stable in real terms after 1997, before starting to contract after 1999. Before the UVR conversion, the mortgage stock was about 17 trillion pesos, compared to a reduced amount of 12.5 trillion pesos by November 2001. This means a sharp contraction expressed as a percentage of GDP from 11 percent to 5.5 percent in four years. The contraction is less of a problem than the collapsed new production, except that it also implies a loss of banking profitability and less potential for secondary mortgage markets. The contraction is due to the joint effects of:

- The amortization process of the UVR-denominated stock; most loans have a residual maturity of less than seven years.
- A rundown production of new loans, because of a constrained housing demand in a recession economy, collateral fear of lenders fueled by Court rulings, a limited credit affordability due to high market rates and noncompetitive margins, and liquidity constraints of the ex-CAV banks (see Table 1).  

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7 D- and E-classified loans (more than six months late) for a total amount of 2.57 trillion pesos
8 Mostly due to nonperforming loans, weaker collateral, market risks, expensive origination, and servicing functions.
Table 1. Recent Evolution of Mortgage Lending

<table>
<thead>
<tr>
<th>Yearly Production Credit (Thousand Billion Pesos)</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage loans</td>
<td>1.39</td>
<td>0.69</td>
<td>0.78</td>
</tr>
<tr>
<td>Total loans</td>
<td>36.73</td>
<td>37.3</td>
<td>38.16</td>
</tr>
<tr>
<td>Proportion mortgage (percent)</td>
<td>3.8</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Mortgage percent GDP</td>
<td>0.93</td>
<td>0.34</td>
<td>0.34</td>
</tr>
<tr>
<td>Evolution mortgage (percent)</td>
<td>-50</td>
<td></td>
<td>+13</td>
</tr>
</tbody>
</table>

On the positive side, the contraction has permitted the more intensive provisioning of bad loans, and helped to restore the liquidity and capitalization of distressed CAVs converted into banks. Housing market prices have also adjusted to the new economic condition, but urban prices depreciated in real deflated terms in 2001, with some adverse impacts on the wealth and social protection of households. If the situation were to last longer, the construction sector and economic growth would be further affected.

The renewed development of residential mortgage markets is needed because the real estate sector is showing some recent encouraging signs (higher number of construction licenses and real estate transactions during the second half of 2001). A mortgage production level of 0.34 percent of GDP is insufficient to finance the revival of the construction sector. The major impediment ahead is the increased systemic risk related to mortgage markets because of a growing culture of nonpayments.

c) Legal, Regulatory, and Institutional Environments

Pursuant to the Housing Law and reacting to the past abuses of capitalized mortgage interests, further rulings of the Constitutional Court have weakened housing as collateral for the lending institutions in the present judiciary system by:

- Forbidding out-of-court foreclosure proceedings by fear of unprotected households versus predatory banks
- Granting rights to borrowers of mortgage debt restructuring, open for two months at the beginning of every year, in case of repayment difficulties according to "objective" conditions, as determined by the Banking Superintendency (Superintendencia Bancaria)
- Capping the credit interest rate of mortgage loans at the “lowest” of comparable market rates (to be periodically adjusted by the Central Bank Council).

These rulings have fueled legitimate fears on the part of banks and dampened their interest in resuming any significant production of housing loans. The high lending margins have not significantly declined because of the resulting perceived credit risk. In turn, it is also likely to increase the costs of market mobilization of resources through mortgage securities.
Home ownership as a protection against poverty and as a worthy form of collateral has been hurt, as have building activities. The overreaction of the Court has produced effects that actually run contrary to its protective goals. The government should urgently take measures to protect mortgage holders against predatory lending behaviors and restore a sounder balance among judges, lenders, and borrowers. A national information campaign may be useful to announce a consistent package of measures.

Debt restructuring should be limited to cases of an unpredictable loss of borrower income followed by some restored credit solvency. Bad faith borrowers should expect no bailout, but enforced foreclosure. Alternatives to foreclosure are to be explored, but not to the detriment of a foreclosure made unpractical through the judiciary process. Revised and acceptable forms of out-of-court foreclosure procedures should be worked out by the government in order to fully respect the rights of borrowers, and should be implemented with an adequate training program.

The system of a capped interest rate for mortgage loans preferably would be revised in a manner compatible with Constitutional provisions to avoid predatory practices, but without necessarily being determined as of the lowest of other market rates. At least the adjusted level of the cap should not produce any retroactive effects on the existing portfolio.

New regulations should be explained to better inform mortgage consumers about their rights and duties, including the importance of the mortgage pledge, the delivery of simple, standardized, and comparative summary features of loan proposals, and some common contractual features. It could be developed through a formal regulation (like in the United States) or through a self-regulatory code of conduct between lenders and borrowers (like in Europe). Lenders may even commit to fully exploring alternative solutions before moving to foreclosure proceedings, provided borrowers signal early any unexpected problem in ability to pay.

Another destabilizing source of volatility in credit repayments comes from the current definition of the UVR index, which needs adjusting. It currently derives from the latest monthly inflation rate, and should be derived from the inflation cumulated for the last year, in order to reduce the very strong seasonal effects of the consumer price index in Colombia for the last five years. This would provide borrowers more stable monthly debt service in relation to their income, which in turn could help improve overall portfolio performance. Moreover, mortgage-backed securities (MBS) institutional investors also generally prefer securities indexed by a moving average inflation index (as shown by their preference for IPC-based rather than UVR-based Treasury notes), because of a more steady evolution of the net balances and a resulting better liquidity through secondary markets. A study is needed to ascertain the legal feasibility of applying such change to the existing loan portfolio, with possible retroactive applications. The timing of any change should be decided in order to

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9. Such as the possible retroactive effect on the existing portfolio of any change of the UVR index or the interest rate ceiling, or further debtor's procedural appeals in the courts, or any unpredictable further decision of the Constitutional Court.
avoid any brutal increase of repayments for debtors. Care should also be taken to avoid sending a wrong signal about the stability of a new housing finance system, and to prevent simultaneous use of multiple definitions of UVR. The reform would need appropriate safeguards in order to avoid market confusion and disruption.

Overall, a strong package of several initiatives along the lines above will likely be needed to moderate the prevailing uncertainties and tensions in the housing finance sector and weaknesses in the mortgage markets. The government could also consider a more proactive policy involving the creation of a special fund cofinanced by the State and the lenders (from their margins paid by borrowers and from part of the foreclosure proceedings) to reimburse a small part of the credit amortization of borrowers with good payment records.

More credit competitiveness is also still needed in Colombia and could be achieved by encouraging (a) all banks—not only the erstwhile CAVs—to make loans for housing, (b) the issuance of mortgage bonds as a funding tool competing with the securitization company, (c) the modernization of mortgage servicing at banks, and (d) the unbundling of loan origination and loan servicing functions.

Other measures that could improve the overall infrastructure for housing credits include:

- Housing appraisal rules could be better adjusted to comparative market trends
- The credit reporting system should not be limited to current records
- Reduced delays in property registration.

Prudential Regulations as Applied to Housing Finance Institutions and Activities. Since July 2000, strengthened loan-loss provisioning rules have been applied to banking activities related to housing finance. Most important, only a limited and declining (over time) percentage of the estimated collateral value can now be deducted from nonperforming debt,\(^{10}\) in contrast to former full deduction of an artificially inflation-appreciated collateral. An additional prudential regulation that has been tightened relates to provisions against the net exposure of banks to market and interest rate risks. This new assignment is particularly relevant for mortgage loans because of the interest rate index mismatch between the converted UVR-based long-term loans and the dominant DTF-based liabilities. The additional capital requirement is being phased in gradually starting in January 2002. Initial estimates by mid-2001 suggested a gap of ColS770 billion (of which about ColS230 billion is in private banks).

Overall, banks have reacted positively to these measures through recapitalization efforts under the close scrutiny of the Banking Superintendency. As illustrated, loan-loss provisioning has improved considerably (from 11.4 percent to 36 percent), although it may not be sufficient.

\(^{10}\) Seventy percent until 18 months of late payments, 50 percent until 24 months, 0 percent after two years.
Several banks have been struggling to meet higher capital requirements, however, with an average ratio of 8.3 percent by January 2000, improving in October 2001 to between 10 percent (the minimum new requirement) and 15.6 percent (the highest ratio recorded). At least two banks met the required level by borrowing special lines from FOGAFIN (see next section).

These corrective measures were appropriate and efficient, but they cannot work as preventive tools to restore the overall soundness of the mortgage industry.

FOGAFIN Recapitalization Lines. To help banks comply with their minimum 10 percent capital adequacy, since 2001 FOGAFIN has been offering some subordinated credit lines, mostly for capitalization purposes. The provisions of this second-round recapitalization program were tailored to more readily meet the needs of institutions with a heavy volume of housing loans. The most attractive line offers lengthy terms (up to 9 years), including a four-year capital grace period, 2.5 years of capitalized interests, a moderate price (DTF + 3 percent), and guarantees limited to overcollateralized shares (133 percent) of the recapitalized bank. Given this low risk-adjusted rate, FOGAFIN should consider strengthening the collateral requirements under this program by requiring collateral with lower-risk assets.

Fondo de Estabilización de la Cartera Hipotecaria as a Transition Measure. To facilitate prudent risk management by housing banks, the government also established an interest rate swap fund (a public hedge facility called the Fondo de Estabilización de la Cartera Hipotecaria, FRECH). This new instrument is one of the special transition measures allowed under the new Housing Law, put in place by decree and administered by the Central Bank. It is designed to enable banks to hedge part of their market risks introduced by the conversion of UPAC into UVR-denominated loans.

Although FRECH was a welcome initiative, care should be taken to make sure that the operations of the fund are financially balanced. The mechanisms of reciprocal payments between banks and FRECH are triggered by the evolution of DTF above UVR compared to a fixed 4.9 to 7.5 percent collar as applied to up to 40 percent of the eligible portfolio (outstanding balance up to 31 December 2000). The option can be exercised at any time during four years, but this period may be extended by further four-year cycles up to a total of 12 years. These features appear reasonable enough to maintain the fund equilibrium, and thus avoid any further

12. With a market DTF rate below the lower threshold, the bank pays FRECH the difference. Between the extremities of the band, the fund is neutral. Above the high level, the FRECH pays back the bank with the observed difference, without any limit. New loans originated after 2001 are not eligible.
13. Beyond that, the applied band is 5.9 to 7.5 percent, as an incentive for the bank to look for other solutions.
State contingencies. But unless real short-term market rates are perceived to rise significantly, banks see no incentives for using this fund that could only hedge their catastrophic market risks. They will still face significant losses if DTF market rates rise moderately (so far DTF has stayed below 4 percent in real terms).

The FRECH can (and should) therefore play only a limited hedging policy role. The contractual deadline was extended by another year (to 31 December 2002). A longer life period is recommended for the scheme, together with a requirement that the collateral values be regularly market-adjusted without forecasting an evolution of interest rates related to past monetary policy.

**Guarantee Fund for Mortgage Securities.** As mandated by the Housing Law, FOGFIN is implementing a guarantee fund for timely payment—capital and interest—of eligible mortgage securities issued by banks, fiduciaries, and securitization companies, issued in the next two years for the sole purpose of funding Vivienda de Interés Social (VIS) social housing credits. This initiative is expected to assimilate VIS securities as public debt (at a lower price and “repo-able”), thus reducing the funding cost of VIS social loans (capped credit rate at UVR + 11 percent) and placing new mortgage securities among reluctant investors. FOGFIN has prepared preliminary standardized rules and actuarial estimations. International experience shows that advanced risk-monitoring procedures are needed to avoid an inactive fund or further State losses.

The proposed premium expressed as a yearly spread applied to the outstanding debt is 1 percent for all eligible MBS and 0.4 percent for all eligible mortgage bonds, with eligible mortgage securities meeting the minimum conditions equivalent to a BBB rating. The fund has direct access to significant but limited budgetary support (US$200 million). The use of the external rating as a pricing factor was abandoned because of the difficulty on the part of relatively inexperienced rating companies in Colombian mortgage securities about mortgage markets (appraised housing market values, use of credit bureaus to screen credit applications, and so forth). There is another serious moral hazard issue, because issuers may challenge the rating agencies to provide overestimated ratings in order to pay cheaper premiums, but the credibility of the ratings agencies would then be less sanctioned by market investors, who would be repaid by the public fund anyway.

Banks and securitization companies view the MBS premium as too expensive—above a 36-billion-peso threshold—implying a subsidy difference of 64 billion pesos, notwithstanding indirect subsidies related to the regulatory treatment of these securities. This real level of indirect subsidies is even higher if actuarial estimations

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14 Established from a 10-year moving historical data average, which may not faithfully indicate forward rates, given the introduced changes in financial and monetary policy.
15 Already two years after the law has been enacted.
16 Many nonperforming loans, depressed housing prices, ineffective foreclosure procedures.
17 As if combining products and skills from Ginnie Mae, the Federal Housing Administration, and Fannie Mae in a more uncertain and risky context.
are taking into account: (a) the moral hazard factor of a public fund within a mortgage culture of nonpayment; and (b) the aggravated credit risk related to a deteriorating legal, political, and macroeconomic environment.

The premium could also be differentiated according to the quality of the portfolio (loan-to-value ratios, seasoning, enhancement, servicing standards) and the unsecured bank rating when applied to mortgage bonds. Otherwise, we may face a situation of a subsidized guarantee to a mediocre MBS, and an overpriced guarantee to a sound mortgage bond.

For the following reasons, creating a separate legal structure may be preferable to just making it a department at FOGAFIN:

- Such insurance activities should be regulated and supervised independently.
- FOGAFIN acts as an intermediary agent of the nation and should be financially insulated from the related risks of the Fund; a separate structure would reflect this separation role and facilitate the estimation of related budgetary liabilities.
- The Fund may have to guarantee mortgage bonds issued by a bank owned by FOGAFIN.

The Fund should also be constituted as if it were to be run for more than the scheduled two years. International experience suggests that a lobbying effort can be expected to result in the continuation of the program, particularly if subsidized. The Fund should invest in a sustainable structure, implying staffing and training, institution building, investment, and outsourced experts for some functions (servicing contracts, selection and monitoring of risks with adequate incentives). More detailed servicing instructions, debt recovery procedures, pricing mechanisms, sanctions, and incentives are needed. The recent experience of the Hong Kong Mortgage Company represents a useful model and reference.

There have been several requests to make the MBS instruments “repo-able” at the Central Bank. Given the reluctance of the Central Bank to go this route, an intermediate option might be to first swap the MBS instruments through the FRECH into Treasuries without haircuts, and then use them for “repo” operations with the Central Bank. This has the disadvantage, however, of deviating the FRECH from its principal original objective.

**Secondary Mortgage Markets.** Securitization companies were expected to permit banks to gain access to capital market funding and, therefore, reduce their exposure to liquidity and market risks. Since the new vehicles and funding tools were created by the Housing Law, no MBS has been issued because of regulatory and operational delays, costly credit enhancements related to a vulnerable mortgage industry, high market interest rates, and a lack of benchmarks.

On the other hand, 78 percent of the portfolio is still performing well, including many seasoned loans that resisted adverse stress conditions. They also meet securiti-
zation standards because their cash-flow pattern has been standardized by the Housing Law.

Recently several housing finance institutions (ex-CAVs) jointly established and capitalized a securitization company (Hitos) with the objective of accelerating the development of secondary mortgage markets. Hitos currently has about US$110 million in capitalization (including International Finance Corporation participation). Its first MBS program, of Col$500 billion, is expected shortly, after the purchase of seasoned pools from sponsor banks and from FOGAFIN.

The Superintendency of Securities (Superintendencia de Valores, SV) implemented a regulation imposing a minimum capital of 40 billion pesos on securitization companies. This could represent a barrier against further competition, although it serves as a cushion to offset the current high level of market uncertainties and unknown risk exposure of securitization companies.

The SV passed another decree in November 2001 regulating securitization companies, mortgage-backed securities, and mortgage bonds (bonos hipotecarios). SV has opted for an evolutionary strategy requiring a high level of disclosure of information to investors, and leaving flexibility to securitization companies about their activities and resulting risk exposure. A small core team at the SV has been working intensively on these issues. The Ministry of Finance has also exempted securitization companies permanently from the 0.2 percent financial tax and stamp duties, and for three years from the presumptive taxes.

SV needs to expand its staffing and training by starting thorough oversight inspections, detailing its regulations and, if necessary, implementing prompt corrective actions. The regulated company also needs this information to adjust its own procedures.

More explicit capital adequacy rules should also relate to the net exposure to risks, in order to avoid capital regulatory arbitrage between banks—regulated by the Banking Superintendency—and securitization companies—regulated by the SV. A combination of a ratio-based minimum and a structured approach to internal model evaluation may be usefully developed.

A number of additional improvements in the rules, regulations, and practices governing home mortgage securitization should be considered to help deepen this market:

- Securitization companies should also be authorized to issue mortgage bonds if they can be assimilated as “credit institutions” holding mortgages on balance sheets.

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18 Both Collaterized Mortgage Obligation (CMO) and pass-through mortgage securities are explicitly referred to through a draft regulation. On the other hand, the drafted decree about securitization companies mentions that all investors of securities should be equally treated, thus should be understood per specific class in the case of a CMO program.

19 Which may vary according to diverse pool purchases, funded differently, with various enhancements.
The SV may want to explore the possibility of mixing eligible mortgage loans with public government debt in order to back MBS or mortgage bonds, for enhancement purposes. This would be useful for non-VIS securities that are ineligible for FOGAFIN guarantees.

Dematerialized MBS are automatically registered without preapproval as long as the prospectus meets the general standards. The specific nature of MBS would legitimize further exemptions from the information required according to the corporate governance section of the capital markets law (code of good conduct).

Despite the differences existing between mortgage securities, information formats should be standardized between mortgage-backed securities and mortgage bonds (both about the corresponding identified mortgage pool and about the issuer and/or guarantor).

SV should also adjust its regulations with the revised Basle principles in mind. For example, the subordinated debt retained by the selling institution as a first loss exposure should be deducted from capital, whereas second-loss positions are subject to lower capitalization rules. Another reference is the Australian regulation.

A bank or securitization company purchasing back its own securities should not lose the tax exemption reserved to external investors and to VIS originators holding their loans. Otherwise, securitization companies may face difficulty in supporting the liquidity of their papers. The same issue exists for banks holding their own mortgage bonds.

Finally, institutional investors should be encouraged to invest in MBS and mortgage bonds by:

- Low asset risk weighting for banks holding well-rated MBS and mortgage bonds
- Relaxed constraints from the synthetic portfolio of pension funds (short-term bias)
- Investment ceilings for insurance companies and eligibility to technical reserves
- Eligibility of MBS and bonds to the public social security and pension fund (ISS).

**Undeveloped Mortgage Bond Markets.** A parallel SV regulation allows the issuance of mortgage bonds (bonos hipotecarios), that is, bonds issued by credit institutions using general mortgage pools as collateral. However, this potentially useful

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20. Up to a ceiling corresponding to the capital charge as if the portfolio had not been securitized

alternative instrument to deepen market resource mobilization has not received official encouragement, and remains untested. No mortgage bond has been issued. The needed capital market funding excessively depends on the development of one single securitization company. The legitimate goal of complementary and competing funding tools could not materialize. Yet, mortgage bonds represent a good funding option for relatively sound banks, as demonstrated in Chile. In Colombia, they would permit both lenders and investors to benefit from available income tax incentives similar to those for MBS. Ostensible reasons include the lack of UVR treasury benchmarks, and the distrust of investors moving toward a vulnerable mortgage sector. But the SV regulation also raises several issues.

- Existing mortgage pools are so far disregarded as eligible collateral. The imposed “perfect matching” rule between credits and bonds should be widened to accept a limited dose of overcollateralization and the refinancing eligibility of the existing stock. This would help to reduce the market risk exposure of banks, particularly because (a) the production of new eligible loans is limited; (b) their market exposure is significant, especially for VIS loans capped at UVR + 11 percent; and (c) the alternative securitization of their most profitable credits is not always the most attractive option. This change would be facilitated by a high degree of portfolio homogeneity due to the UVR standardization, and a reasonable residual average maturity (six to seven years) that matches the expectations of investors (the term of new loans would be excessive). The SV mentioned a possible change, but the market perception remains blurred.
- The prepayment regime may be improved by proportional allocation rather than a lottery system. In addition, an issuing bank could be permitted to adjust the level of prepayment risk passed to investors, through overcollateralization or by stripping different payment classes. An issuing bank should be authorized under certain conditions (including a mention in the prospectus) to buy back and trade its bond.
- In the case of mortgage loan foreclosure, the accepted substitution by another eligible asset—as in most other countries—would represent an alternative viable solution to the imposed prepayment, in order to keep paying cash flows to investors.
- The requirement of bond maturity exceeding the loan term—article 4—does not respect the principle of permanent matching between cover assets and bonds.
- The pool of matching assets should be authorized to also include some government debt in order to enhance the quality and rating of the mortgage bonds.
- The tradable yearly coupon—article 6—should be optional rather than mandatory.
- The prospectus of a mortgage bond could be less demanding of the issuer than for a corporate bond (remuneration of the Board, and so forth).
• The functions of the intervention agent and the investors' representative may usefully be merged within one single agent (this is cheaper).
• The SV qualified only one amortization standard (UVR fixed payment) for mortgage bonds, whereas investors may prefer a menu of schemes pre-approved by the Banking Superintendency.
• The bankruptcy privilege should be reconciled with the preparation of the close-ending bank resolution, should a large proportion of such high-quality assets be isolated to protect mortgage bonds, thus leaving depositors at higher risk.

Liquidity Backstop for Mortgage-Related Securities. In an effort to foster development of primary and secondary markets for MBS, the authorities have also been actively considering the establishment of an MBS “backstop facility” to help provide some minimum liquidity to the institutional investors of eligible mortgage securities. By providing a minimum liquidity, such a backstop facility could serve as a valuable instrument in helping MBS markets take off. However, to avoid potential adverse effects, its design and application should be carefully circumscribed within pre-agreed criteria and parameters.

Most important, the backstop should operate purely as a liquidity-enhancing mechanism, and avoid taking on any credit risks per se. Moreover, any true “market-maker” role should be avoided for such a facility at this stage, given the lack of reliable benchmarks that would be needed to establish strict market-making rules and the high level of intermediary risks.

An alternative which has been suggested to increase liquidity in the MBS market is to make MBS instruments eligible for central bank “repo” operations under certain conditions. However, this will require a major amendment of the Central Bank law (for example, along the lines adopted by the European Central Bank). Given that the Central Bank may not regard such a change as desirable (at least under the current conditions of volatility in mortgage markets), a temporary expedient would be to allow the FRECH mechanism to swap on a temporary and short-term basis eligible mortgage securities against Treasury securities with some adequate “haircuts” to take into account the associated risks. Separate accounting systems and stringent reserve rules should be used under such an approach to avoid any conflict with the main FRECH purpose.

Another variant is creating a public fund supporting some minimum demand for end investors, through periodic auctions. Its proceeds could be used to acquire and sell eligible mortgage securities on primary or secondary markets, or to refinance an issuer facing an exercised put option embedded in its mortgage security. The fund should operate according to tight eligibility rules, sufficient capitalization, and sunset mechanisms. It should trade a small portion of securities and adjust prices according to market with sufficient incentives for private agents to gradually replace it. The banks as issuers of their mortgage bonds should also be authorized to trade their papers.
Urban Development

This Chapter was written by Thakoor Persaud and Alexandra Ortiz.

Urban development is crucial to Colombia's goal of overall economic development. To a large extent, the country has been successful in exploiting the comparative advantage of its cities as centers of commerce, finance, employment, politics, and culture. Rapid urbanization, coupled with the economic crisis that has beset the country over the last five years, however, has outpaced the government's capacity to provide adequate services, and has brought about an increase in the level of urban poverty, both in relative and absolute terms. From 1996 to 2000, the incidence of poverty in urban areas went from 42.8 percent to 51 percent. In absolute terms, the number of urban poor increased from 12 million to 16 million during this period. By 2000, of the 25 million poor Colombians, 64 percent lived in urban areas.

This Chapter presents the main issues accompanying the growth of increasingly complex urban areas in Colombia, and provides an overview of the major challenges facing its urban sector. Unlike other traditional sectors, the urban development sector is a composite of crosscutting sectors as broad as urban governance and urban poverty reduction, and as specific as urban water supply and sanitation. This Chapter first discusses the nature and magnitude of urbanization in Colombia, and the institutional and legal framework in place to manage it. This is followed by an assessment of urban poverty and the main problems in urban land and housing, water supply and sanitation, solid waste management, and transport sectors. The last section outlines policy recommendations to help shape priority actions for addressing the key urban issues discussed.

1 This Chapter incorporates the findings of a background study conducted by Jorge Acevedo of the University of Los Andes, Bogotá, in collaboration with Wigberto Castañeda and Manuel Salazar. Elizabeth Mehta helped edit the Chapter.
I. Urbanization in Colombia

Colombia is a highly urbanized country. More than 70 percent\(^2\) of its population of 42.3 million live in urban areas, defined as those with a population of 5,000 or more. Unlike in many other countries in the region, there is a more balanced distribution of urban population in Colombia's cities. The largest cities—Barranquilla, Bogotá, Cali, and Medellín—have more than 1 million inhabitants each, and about 40 cities have populations of over 100,000. In recent years, however, the concentration of population in the capital city is becoming increasingly evident. In 1980, 20 percent of the urban population lived in Bogotá, the largest city. By 1995, Bogotá was home to 22 percent of Colombia’s urban population (World Development Indicators 2000).

Over the past two decades, the rate of internal migration in the seven largest urban areas of Colombia has shown an overall decline, although significant interurban variations still remain (Table 1). In Bogotá, for example, there was a sharp decline from about 2 percent in 1982 to about 0.9 percent in 2000; in Medellín and Cali, the decline was not as pronounced. Among the major cities, Bogotá has the lowest gross rate of migration. In absolute terms, however, it accounts for the largest net inflow of migrants, followed by Cali, Medellín, and Bucaramanga, with the latter experiencing the highest in-migration rate, at 3 percent. According to recent estimates by the National Department of Statistics (Departamento Nacional de Estadísticas, DANE), the number of migrants arriving in Bogotá every year remains roughly constant at about 55,000 people. This number would be higher if those fleeing from areas of armed conflict in the country are considered. According to calculations from the Red de Seguridad Social, there were about 15,000 refugees who fled to Bogotá in 2000.\(^3\)

Another pattern that has recently emerged is that smaller municipalities on the periphery of large cities now receive a larger share of migrants. While some migrants arrive directly and settle in these areas, as a first step to becoming integrated into the

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2. Population projections from Departamento Nacional de Estadísticas (National Department of Statistics, DANE), based on the definition of urban and rural (cabeza-resto).
3. The estimate of desplazados—internal refugees—vary greatly according to the researchers, the methodologies, and the time the study was done. Codhes estimates are larger than those of the Red de Solidaridad Social. According to the former, between 1985 and 1996 the violence in Colombia displaced 856,781 people. Out of 181,010 people displaced in 1996, 23.9 percent (43,261) went to Bogotá. Both methodologies differ substantially: the Red’s is an official figure, based on the displaced population written in its registry, figures from the Codhes were calculated for 1996, based on a survey. The calculations of the Red may underestimate the displaced population, because the unregistered households are excluded. The calculations of the Codhes show figures closer to the DANE estimates of total internal migration. Quite likely the question about “the motive of migration,” as Codhes formulates it, is biased, overestimating the number of forced migrants. For this paper the figure of the Red is selected, even though it may underestimate the true figure.
Table 1. Gross Annual Rates of Internal Migration to the Main Cities and Some Conurbations, 1982–2000

<table>
<thead>
<tr>
<th></th>
<th>Bogotá</th>
<th>Cali</th>
<th>Yumbo</th>
<th>Medellín</th>
<th>Barranquilla</th>
<th>Soledad</th>
<th>Bucaramanga</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1982.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent migrants &lt; 1 year</td>
<td>57,344</td>
<td>26,106</td>
<td>1,824</td>
<td>25,434</td>
<td>21,365</td>
<td>4,318</td>
<td>N/A*</td>
</tr>
<tr>
<td>Gross annual rate</td>
<td>2.0</td>
<td>2.8</td>
<td>6.3</td>
<td>2.4</td>
<td>3.5</td>
<td>4.7</td>
<td>N/A</td>
</tr>
<tr>
<td>Total population</td>
<td>2,867,232</td>
<td>932,384</td>
<td>28,957</td>
<td>1,059,754</td>
<td>610,438</td>
<td>91,896</td>
<td>N/A</td>
</tr>
</tbody>
</table>

|                  |        |      |       |          |              |         |             |
| September 1987   |        |      |       |          |              |         |             |
| Recent migrants < 1 year | 69,180 | 37,350 | 1,045 | 29,817 | 19,626 | 3,769 | N/A         |
| Gross annual rate | 1.6    | 2.6  | 2.3   | 2.0      | 2.1       | 2.1     | N/A         |
| Total population | 4,846,884 | 1,431,293 | 45,738 | 1,496,246 | 945,544 | 181,594 | N/A         |

|                  |        |      |       |          |              |         |             |
| September 1992   |        |      |       |          |              |         |             |
| Recent migrants < 1 year | 74,239 | 44,263 | 2,976 | 34,877 | 20,428 | 10,207 | N/A         |
| Gross annual rate | 1.5    | 2.8  | 6.0   | 2.3      | 2.0       | 4.3     | N/A         |
| Total population | 4,940,516 | 1,654,754 | 49,258 | 1,516,391 | 1,015,989 | 234,924 | N/A         |

|                  |        |      |       |          |              |         |             |
| September 2000.  |        |      |       |          |              |         |             |
| Recent migrants < 1 year | 55,280 | 39,223 | 1,692 | 30,187 | 10,871 | 12,122 | 15,203      |
| Gross annual rate | 0.9    | 1.8  | 2.1   | 1.6      | 8          | 4.3    | 3.0         |
| Total population | 6,449,980 | 2,124,496 | 80,749 | 1,891,120 | 1,279,431 | 280,163 | 512,083     |

1. Conurbated to Cali
2. Conurbated to Barranquilla
*N/A = Not available

Note: Gross rate of annual immigration = number of migrants with less than a year of residency/total population *100

Sources: Encuesta Nacional de Hogares (ENH), September 1982, 1987, 1992, and 2000, and consultant calculations
city, others move from the city centers to reduce housing costs and become homeowners or tenants. As a result, many municipalities near large cities face growing demands for urban land, basic services, and other urban amenities. These include Soledad, Malambo, and Puerto Colombia near Barranquilla; Floridablanca and Pedequinta adjoining Bucaramanga; Yumbo in Cali; and the most prominent case, Soacha, a municipality close to Bogotá.

These peripheral towns gather around large core cities, together forming functional agglomerations and dependencies, which blur municipal frontiers. These urban agglomerations, or metropolitan centers, are expected to increase in both number and size over the next decades, requiring special institutions and policies to effectively address common problems of housing, basic services, land use, planning, environment, transport, and other needs.

While the Constitution contains provisions for managing conurbations, implementation is severely constrained by such factors as the difficulty of getting municipalities, especially the smaller ones, to yield key elements that affect their autonomy and independence, and getting larger municipalities to share the costs of responding to demands by new residents. To some degree, Medellín has been rather successful in consolidating its metropolitan area through development planning and infrastructure building. Bogotá, on the other hand, has not been able to surmount several political, jurisdictional, and related difficulties with its neighboring municipalities. It is now trying to address these problems through an ad hoc mechanism, the metropolitan region, which is essentially an informal consensual planning arrangement. Through this process, Bogotá and its neighboring municipal administrations seek to harmonize their respective *Planes de Ordenamento Territorial* (nine-year development plans, or POTs) and to work together to find joint solutions to their urban land, housing, transport, and other basic services needs.

II. The Legal and Institutional Framework

The political, fiscal, and administrative decentralization, which the government of Colombia began two decades ago, has passed through its first stage and is now being adjusted to respond to various areas of need. With decentralization, city/municipal administrations enjoy a high level of autonomy in managing their own finances, although the major source of income for many smaller municipalities remains constitutionally mandated central government transfers. Other positive impacts are wider local participation, accountability, and the strengthening of the legal and regulatory framework of municipalities.

Decentralization, however, has also given rise to serious problems, such as absent or lax central government monitoring, poor service quality, and inefficient financial management, resulting in many bankrupt municipalities, both large and small. In addition, other political issues impede the decentralization efforts. Mayors and councilors are elected to serve for three years, but legally are not allowed to serve consec-
ute terms. Their short term in office disrupts the continuity of decentralized administration and undermines the sustainability of many development programs. Many mayors and other elected local officials are also among the casualties of violence.

In response to financial issues faced by municipal governments, the government of Colombia recently introduced two structural reforms: a constitutional amendment modifying the rate of increase of national revenue transferred to the municipalities by the central government, and an amendment to Law 60 of 1993 (Law 715 of 2001) defining clearer distribution criteria along with conditions governing the use of transfers by municipalities.

Several other laws were enacted to facilitate the decentralization process. The Urban Reform Law (Law 9 of 1989) was designed to provide local governments with such powerful tools as expropriation, the designation of priority land for urban expansion, land banks, land rezoning and urban integration, land improvement tax, and clarification of development and construction rights. The new Constitution of 1991 provided additional impetus to decentralization by consolidating the key role of the municipality and clarifying the role of the Departamento as an intermediary authority between the central government and the municipality. The recently modified Law 60 of 1991 explicitly defines this division of responsibilities. In particular, the duties of the Departamento include planning, technical assistance to the municipalities, policy coordination, and implementation of sectoral programs. Municipalities are primarily responsible for providing basic services such as water supply and sanitation, education, health, and housing, with special emphasis on satisfying the needs of the population who have Unsatisfied Basic Needs (NBI). Law 60 also specifies the formulas for computing the distribution of resources from national revenue among the municipalities, and the manner by which these resources should be used.

Law 99 of 1993 established the National Environmental System (SINA) and created a new Environmental Ministry to manage it. The SINA, which defined the overall framework for environmental management, conferred direct responsibility for urban environmental management on cities of over 1 million inhabitants. City Environmental Management Agencies (EMAs) were subsequently created (Barranquilla and Cali were the first cities to establish their EMAs) or adapted to the new legal framework in 1994. Although the law established that the EMAs would have similar functions as Autonomous Regional Corporations (CARs) within their jurisdictions, it did not specify whether they would have the same "rights" in terms of managing financial resources. Revenues obtained by EMAs from environmental

---

4 The indicator of Unsatisfied Basic Needs (NBI) is used to compute the transfer of resources from the central government to the municipalities and departments. With this methodology, a person or a household with any one of the following features is considered poor: inadequate housing, housing without services, critical overcrowding, no school attendance, and high economic dependency. The NBI, which is different from other poverty measurements of income, permits direct measurement of the state and local government's efforts to improve the coverage of basic services and school attendance.
licenses or fines are transferred to the city’s treasury. The agencies’ annual budget is
decided based on a separate negotiation with the mayor, creating sustainability issues
for the EMAs. Law 99 also established the mechanisms and guidelines for the prepa-
ration of municipal environmental plans.

Law 134 of 1994 created mechanisms to strengthen citizen participation in local
decisionmaking in cities, while Law 388 of 1997 modifies the urban reform law,
incorporating elements of recent legislation on environmental, metropolitan, and
territorial issues. Law 388 also mandates that all municipalities must formulate and
adopt their respective POTS covering land use, land regulation, land development,
and urban expansion. To ensure continuity, the law stipulates that the local three-
year development plans of incoming administrations must be consistent with the
POTS. While the former are short-term plans, POTS have a nine-year planning hori-
zon, spanning three administrations.

With the above legal and institutional reforms, the government of Colombia
seeks to promote an integrated urban planning and development process, and ensure
continuity in the administrative framework while broadening local participation in
the decisionmaking process.

III. Urban Poverty

In Colombia, the indicator of Unsatisfied Basic Needs (NBI) is widely used as an
indicator of poverty. Using this indicator, the last decade saw a significant decline
in the proportion of poor people with unsatisfied basic needs (Table 2). Between
1993 and 2000, this indicator dropped substantially from 26.8 percent in 1993 to
16.4 percent in urban areas, as a result of the efforts of the government in widening
the coverage of basic services (sewerage system, potable water, energy) and improv-
ing school attendance of children and youth. For all indexes, improvements
occurred in both rural and urban areas, albeit in relative terms; the overcrowding
index, however, did not improve as much as the others.

A less optimistic picture emerges from the findings of the World Bank’s 2001
“Colombia Poverty Report.” After a continuous and significant reduction in urban
poverty between 1978 and 1995, economic recession has pushed poverty back to its
1988 levels. Urban poverty decreased at rates close to 1.5 percentage points per year
between 1978 and 1995. Unfortunately, the 1999 rates are again close to those of
1988, and even slightly higher for the poverty gap. The recession not only increased
the number of poor people in urban areas, but the poor also became poorer; an
observation confirmed by the increase in the percentage of extremely poor people in
1999 (Table 3).

5. Over the years, there have been extensive discussions on the strengths and weaknesses of
NBI as a poverty indicator, but it continues to be widely used by the authorities and
academia.
Table 2. Indicators of Unsatisfied Basic Needs by Zone, 1993–2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Zone</th>
<th>Percent in Poverty (1 NBI)</th>
<th>Percent in Misery (&gt; 1 NBI)</th>
<th>Percent Inadequate Housing</th>
<th>Percent Inadequate Services</th>
<th>Percent Critical Crowding</th>
<th>Percent Not Attending School</th>
<th>Percent High Economic Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>Total</td>
<td>37.2</td>
<td>14.9</td>
<td>11.6</td>
<td>10.5</td>
<td>15.4</td>
<td>8.0</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>26.8</td>
<td>9.0</td>
<td>7.0</td>
<td>7.2</td>
<td>12.0</td>
<td>4.8</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>62.5</td>
<td>30.3</td>
<td>23.7</td>
<td>19.2</td>
<td>24.4</td>
<td>16.4</td>
<td>23.3</td>
</tr>
<tr>
<td>1996</td>
<td>Total</td>
<td>26.0</td>
<td>8.9</td>
<td>8.6</td>
<td>5.5</td>
<td>11.1</td>
<td>4.0</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>16.9</td>
<td>4.1</td>
<td>4.1</td>
<td>2.6</td>
<td>8.1</td>
<td>2.1</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>48.6</td>
<td>20.7</td>
<td>19.8</td>
<td>12.8</td>
<td>18.5</td>
<td>8.5</td>
<td>18.1</td>
</tr>
<tr>
<td>1997</td>
<td>Total</td>
<td>25.9</td>
<td>8.6</td>
<td>8.0</td>
<td>5.4</td>
<td>11.3</td>
<td>4.2</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>17.8</td>
<td>4.5</td>
<td>4.3</td>
<td>2.8</td>
<td>8.3</td>
<td>2.8</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>46.5</td>
<td>19.1</td>
<td>17.5</td>
<td>11.9</td>
<td>19.0</td>
<td>7.8</td>
<td>17.9</td>
</tr>
<tr>
<td>1998</td>
<td>Total</td>
<td>26.0</td>
<td>8.2</td>
<td>6.6</td>
<td>4.7</td>
<td>11.1</td>
<td>4.7</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>17.4</td>
<td>4.1</td>
<td>3.6</td>
<td>2.0</td>
<td>8.3</td>
<td>2.5</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>47.8</td>
<td>18.6</td>
<td>14.0</td>
<td>11.5</td>
<td>18.2</td>
<td>10.2</td>
<td>19.8</td>
</tr>
<tr>
<td>1999</td>
<td>Total</td>
<td>24.9</td>
<td>7.3</td>
<td>6.7</td>
<td>4.0</td>
<td>11.2</td>
<td>3.9</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>17.5</td>
<td>3.9</td>
<td>3.5</td>
<td>2.1</td>
<td>8.6</td>
<td>2.7</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>43.7</td>
<td>15.9</td>
<td>15.1</td>
<td>8.8</td>
<td>17.8</td>
<td>7.0</td>
<td>16.7</td>
</tr>
<tr>
<td>2000</td>
<td>Total</td>
<td>23.0</td>
<td>6.5</td>
<td>6.7</td>
<td>3.6</td>
<td>10.2</td>
<td>3.2</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>16.4</td>
<td>3.5</td>
<td>3.5</td>
<td>1.7</td>
<td>7.9</td>
<td>2.4</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>40.0</td>
<td>14.2</td>
<td>14.8</td>
<td>8.5</td>
<td>16.2</td>
<td>5.3</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Sources: Department of National Planning, Boletín SISD, número 30, DNP-DDS-GCV, based on DANE’s Encuesta Nacional de Hogares, September
Table 3. Poverty Indicators and Income Inequality, Urban Colombia, 1978–99

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty rate (percent)</td>
<td>70</td>
<td>55</td>
<td>48</td>
<td>55</td>
</tr>
<tr>
<td>Poverty gap (percent)</td>
<td>35</td>
<td>23</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Extreme poverty rate (percent)</td>
<td>27</td>
<td>17</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>US$2 per day poverty(^1) (percent)</td>
<td>34</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Mean income per capita(^2)</td>
<td>157,080</td>
<td>235,163</td>
<td>294,522</td>
<td>277,469</td>
</tr>
<tr>
<td>Income inequality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gini Coefficient</td>
<td>0.473</td>
<td>0.486</td>
<td>0.522</td>
<td>0.545</td>
</tr>
</tbody>
</table>

\(^1\) Based on Purchasing Power Parity Convertors from World Development Indicators database.
\(^2\) 1999 pesos, based on monthly household income

Income inequality, measured by the Gini Coefficient, has steadily increased in urban Colombia during the last two decades, a worrisome finding in view of the strong link between income inequality and violence. For the most part, however, social indicators had improved over the past 20 years, with some drawbacks in school enrollment from 1995 to 1999 (Table 4).

While the level of poverty is proportionately greater in rural than in urban areas, in absolute terms there are more urban poor in Colombia given the country’s high urbanization level. According to the 1997 Quality of Life Survey,\(^6\) the expenses of the urban poor are mainly for housing and food. For the poor in large cities, transport and utilities are significant items in their budgets. Among the poorest 20 percent of city dwellers, expenditures are divided among housing (close to 40 percent), food (30 percent),\(^7\) and transport (5 percent). In Bogotá, the poorest spend 30 percent on housing, 30 percent on food, and 8 percent on transport.

IV. Access to Public Services

Statistics show that residents in the major urban areas have better NBI indicators today than in the past, which reflects efforts made by various administrations over the past decade to improve their access to basic services. In terms of income, however, the years of economic decline exhibit an alarming national impoverishment process in which urban residents are finding it progressively harder to survive.

\(^6\) The Quality of Life Survey is the most recent research with data about household expense structure. Though the Encuesta de Hogares includes questions on household expenses, it does not go as deep as the former and its data are not as good.

\(^7\) Computations by Jorge Acevedo based on the 1997 Quality of Life Survey.
### Table 4. Social Indicators, Urban Colombia, 1978–99

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average education &gt; 18 years</td>
<td>6.2</td>
<td>7.7</td>
<td>8.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Illiteracy rate(^1) (percent)</td>
<td>5.3</td>
<td>3.3</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>School enrollment (percent)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ages 7 to 11</td>
<td>91.8</td>
<td>94.8</td>
<td>96.5</td>
<td>95.3</td>
</tr>
<tr>
<td>Ages 12 to 17</td>
<td>76.9</td>
<td>80.5</td>
<td>84.4</td>
<td>82.2</td>
</tr>
<tr>
<td>Ages 18 to 22</td>
<td>31.2</td>
<td>35.8</td>
<td>41.0</td>
<td>36.3</td>
</tr>
<tr>
<td>Complete primary school (ages 12 to 17)</td>
<td>67.0</td>
<td>78.7</td>
<td>77.7</td>
<td>89.8</td>
</tr>
<tr>
<td>Complete high school (ages 18 to 22)</td>
<td>21.6</td>
<td>35.3</td>
<td>48.7</td>
<td>59.2</td>
</tr>
<tr>
<td><strong>Child labor (percent)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ages 12 to 16</td>
<td>12.0</td>
<td>11.5</td>
<td>9.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Ages 12 to 14</td>
<td>5.8</td>
<td>5.0</td>
<td>5.2</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Child Malnutrition(^2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime(^3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicides (per 100,000 pop)</td>
<td>26</td>
<td>62</td>
<td>65</td>
<td>59(^4)</td>
</tr>
</tbody>
</table>

\(^1\) For population age 12 and older
\(^3\) Levitt and Rubio (2000)
\(^4\) 1998 figure

Note: Urban Colombia represents Barranquilla, Bogotá, Bucaramanga, Cali, Manizales, Medellín, and Pasto


The situation is reflected in such indicators as mounting arrears on mortgage payments, high levels of illegal connections to basic utilities, and the rise of other forms of illegal activities. A gradual impoverishment due to falling incomes does not negate the positive effects of wider service coverage; however, it presents a major challenge to policymakers since it lowers the ability and willingness of the poor to pay for services and increases the tendency for illegal connections and defaults. Under such a scenario, policies aimed at reducing or eliminating subsidies and legalizing connections in order to make utility companies more self-sufficient may be perceived as aggravating the already impoverished condition of poor households, especially those in which such costs constitute a significant part of their household expenditures.

The main challenge is not only to provide adequate levels of basic services, but also to ensure that these services are affordable and that there is an effective demand for services among the poorest. Policymakers are therefore confronted with various efficiency and equity challenges: how to guarantee a rational and efficient supply of services, how to regulate utilities in order to achieve a better tradeoff between economic and efficiency needs on one hand, and welfare needs on the other; how to make user charges reflect the cost of the service provision—all of which need to be accomplished without placing an unbearable burden on the urban poor. The fact that the cost of providing conventional services to the poor in marginal neighbor-
hoods is usually much more than in well-established areas is also another factor to be considered in this context.

Apart from addressing the service needs of the urban poor, responsibilities for infrastructure and services provision are further complicated as more conurbation areas are formed in major Colombian cities. This poses a daunting challenge especially to smaller cities and municipalities, demanding a more integrated and participatory framework governing the planning and delivery of services. To shed further light on the many issues involved, a discussion on three main groups of public services—land and housing, water supply and sanitation, and urban transport—is in order.

a) Land and Housing

Housing policy in Colombia involves a complex institutional network of public, private, governmental, and nongovernmental participants at the national and local levels. Among the major actors are the Presidency of the Republic, the Ministry of Development, the Agriculture Ministry, and the Social Solidarity Network, which are mainly responsible for policy design; the Ministry of Economy for financing; various specialized agencies for the provision and management of credit, subsidies, and other financial support, other governmental and nongovernmental organizations for the provision of technical assistance; several Superintendencias for regulation and control, and regional and local governments for urban planning and land regulation.

The fragmentation of responsibility and authority makes it difficult to implement an efficient housing policy, especially in light of the many sociopolitical and economic factors associated with housing. Coordination between and among concerned agencies is so minimal as to constrain decisionmaking on urban planning, spatial organization, and the provision of housing and related infrastructure and services.

i. National Housing Policy in Perspective

Traditionally the government of Colombia has played a prominent role in the country's housing market as both funder and builder of housing units. During the last three decades, the government's housing policies have gone through three cycles. (a) from 1972 to the late 1980s, (b) from 1991 to 1997, and (c) from 1998 to the present.

The first phase began in 1972 with the UPAC, a system created in an inflationary period to help generate both savings for mortgage loans and demand for such loans at a time when such a market was nonexistent. Through specialized financial intermediaries, the UPAC system opened the door for short-term savers to earn a positive real return on their savings by combining a monetary correction factor with an interest premium. At the same time, it offered mortgage borrowers long-term financing at real positive rates of interest, but with an adjustment mechanism that
allowed them to make partial payments initially, to capitalize part of their interest payments during the early years of the loan, and to gradually increase their amortization schedules during the later years. While the UPAC system was largely responsible for the jump in housing finance, it nevertheless had many fundamental weaknesses related to term mismatch, wrongly grounded assumptions about increased borrower payment capacity over time, capitalization provisions, and other unfavorable market conditions. Additional demand incentives were provided to low-income families through such devices as zero down payment and upfront subsidies, but such instruments led to problems during periods of economic decline.

The second phase came as part of the new framework of the 1991 Constitution, which upholds “dignified housing” as a constitutional right and lays special emphasis on Social Interest Housing (Vivienda de Interés Social, VIS) for all Colombians. The earlier policy, based on the role of the State as financier and direct producer of housing, was revamped, partly as a result of charges of corruption and inefficiency of public programs. With direct demand subsidy as its main feature, Law 03 of 1991 established a national system for VIS and created the National Institute for Housing of Social Interest and for Urban Reform (Instituto Nacional para la Vivienda de Interés Social y la Reforma Urbana, INURBE) as the State agency in charge of providing subsidies, enabling low-income households to purchase dwelling units supplied by private producers. In spite of these reforms, 27 percent of the subsidies granted went unclaimed because of low supply of VIS, making it clear that not enough attention was being paid to supply-side constraints. Moreover, the worsening macroeconomic condition in the country precipitated another crisis. High interest rates, along with growing unemployment, resulted in mounting insolvency as debtors found their unpaid loan balances becoming higher than the value of their underlying assets. By the end of 1998, about 140,000 of a total of 800,000 mortgage borrowers surrendered their units because they could not afford their monthly payments. The government of Colombia was forced to step in and provided debt relief for about 800,000 families at a cost of about US$1.8 billion.

In 1998 the Constitutional Court further complicated matters by declaring unconstitutional the policy instruments introduced in the 1993 reform. Law 546 was enacted in December 1999, defining a new housing finance system, the Unidad de Valor Real (Constant Value Unit, UVR), which has several features of the old UPAC system but without the capitalization of interest. The housing policy during the third phase represents the government of Colombia’s serious attempts to strengthen the country’s housing finance system, stimulate the entry of large companies into the VIS market, create incentives for the poorest families to save, and get the Casas de Subsidio Familiar to provide more financing for social housing. In spite of these actions, however, the housing finance sector remains weak and, in a worsening economic climate could precipitate a serious crisis in the sector.

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ii. Housing Deficits in Major Cities

Housing policies in Colombia are invariably based on estimates of qualitative and quantitative deficits for various target groups. Aided by such estimates policymakers try to measure the gap between the number of housing units available and the number required so that every person is guaranteed access to decent housing. Estimates of resources and investments required to fill the identified gap are then made.9

For the period 1997–2000, estimates of the National Planning Department (Departamento Nacional de Planeación, DNP) show that by 2000, the quantitative deficit was 11.8 percent, corresponding to 1,165,122 units, and the qualitative deficit was 19.5 percent, or 1,914,518 families living in dwellings that could be repaired. Around 64 percent of the average housing deficits are faced by households earning less than three minimum salaries. In both urban and rural areas the overall deficits remained constant in spite of multiple housing programs. Urban areas accounted for 76 percent of the country’s quantitative housing deficit in 2000 (Table 5). Such deficiency in housing supply, coupled with continuing in-migration, has become an issue that has reached critical proportions in some cities.

Qualitative and quantitative housing deficits and the concomitant issues of overcrowding and the poor quality of the housing stock, however, form only a part of the overall urban housing problem in Colombia. Housing deficit estimates do not shed light on several other important issues (for example, the reason for limited housing supply), and only serve to draw attention away from supply-side constraints. They simply focus on measures to boost housing demand through temporary and unsustainable mechanisms, such as subsidization and credit provisions.

iii. Low-Income Housing Issues at the Local Level

The shortage in housing supply as evidenced by the housing deficit has an unwelcome consequence of producing informal housing and land tenure, a widespread problem in all large Colombian cities. Informality usually starts by either organized invasions of public lands by several families or by the sale by “pirate developers” of lands that do not meet formal regulatory requirements. In both cases informal settlers receive neither property titles nor even the most rudimentary services from the government (laws and regulations prohibit government intervention in these “illegal” areas). With limited access, if any, to basic services such as water supply and sanitation, informal settlements are characterized by unhealthy environmental and social conditions. Although reliable data are limited, information for Bogotá shows that as many as 240 hectares of land are developed informally per year for a total of 23 percent of the city’s developed area. Data from Cali show that 13 percent of its residents, or as many as 260,000 people, live under informal property tenure regimes.

A closer look at the Bogotá case shows that households belonging to the first three socioeconomic strata can afford a maximum of $9,000 for a housing solution,

9. These statistics ought to be read with a critical eye since there are various methodologies, each with their own weaknesses
whereas VIS housing being offered by the government is in the range of $13,000 to $16,000. Therefore the main issue in low-income housing is the lack of an affordable supply of this service for the poorest. Only municipalities can act on these supply-side constraints, while demand-side interventions are best taken by the national government.

Two supply-side constraints have the highest impact on the housing shortage: (a) land scarcity, hence the high price of serviced land in urban areas, and (b) the rigidity of land regulations and the building permit process. The case of Cali is illustrative of the first constraint. In January 1993, the municipal government presented to the city council a project to develop 380 hectares of land for low-income housing (Ciudadela Despaz). The land price per square meter then was 365 pesos (at constant prices). Upon acceptance of the project by the City Council, the land price jumped to 571 pesos. With the establishment of urban regulations it rose to 1,580 pesos, and later to 1,751 pesos when basic infrastructure was provided. By the time the project was completed, the price of land was 3,600 pesos per square meter, a ten-fold increase in two years.

Besides affecting the price of land directly, land regulations also restrict the effective supply of land by controlling the floor-to-area ratio through minimum lot size, maximum construction density, and setback requirements, among other things. By controlling the floor-to-area ratio, local governments control the consumption of land, the only factor for which poor residents can outbid nonpoor residents.

As illustrated in Figure 1, nonpoor residents will always prefer more consumption of land and will be willing to bid for it only after a minimum amount \( L^* \). Poor residents will also prefer more consumption of land, but can only outbid the nonpoor below \( L^* \). By imposing a minimum land consumption at \( L^\text{min} \), municipal governments force the demand of poor residents to the right of \( L^\text{min} \), where, for the most part, they cannot outbid the nonpoor.

Again taking the case of low-income housing in Ciudadela Despaz in Cali, regulations established that 15 percent of the total area should be earmarked for community centers, open space, and installations for public telephones, 15 to 20 percent for vehicular streets; 15 to 20 percent for sidewalks and parking spaces (1 for every 10 lots); and 3 percent as a reserve area. According to the cost figures of private developers, the cost of urbanization oscillated between 32 and 50 percent of the total development costs. With high demands accompanying urbanization and the skyrocketing price of land, the housing solutions intended for families in the first and second socioeconomic strata ended up in the hands of middle-income households.

b) Water Supply, Sanitation, and Solid Waste Management

Until the mid-1980s, basic water supply, sanitation, solid-waste collection, and disposal services in the major cities were provided by public municipal companies created for those purposes. In 1987, within the decentralization framework, the responsibility for water supply and sanitation was handed over to municipalities.
Table 5. Housing Deficit (National, Urban, and Rural), 1997–2000

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Households</td>
<td>9,155,481</td>
<td>100.0</td>
<td>9,440,151</td>
<td>100.0</td>
<td>9,834,709</td>
<td>100.0</td>
<td>2.4</td>
</tr>
<tr>
<td>2 Households sharing rooms</td>
<td>841,829</td>
<td>9.2</td>
<td>904,281</td>
<td>9.6</td>
<td>925,209</td>
<td>9.4</td>
<td>3.2</td>
</tr>
<tr>
<td>3 Households in nonhabitable dwellings*</td>
<td>306,352</td>
<td>3.3</td>
<td>264,545</td>
<td>2.8</td>
<td>239,913</td>
<td>2.4</td>
<td>-7.8</td>
</tr>
<tr>
<td>4 Quantitative deficit = (2) + (3)</td>
<td>1,148,181</td>
<td>12.5</td>
<td>1,168,826</td>
<td>12.4</td>
<td>1,165,122</td>
<td>11.8</td>
<td>0.5</td>
</tr>
<tr>
<td>5 Qualitative deficit = households in dwellings that can be improved**</td>
<td>1,812,560</td>
<td>19.8</td>
<td>1,973,743</td>
<td>20.9</td>
<td>1,914,518</td>
<td>19.5</td>
<td>1.8</td>
</tr>
<tr>
<td>6 Total housing deficit (4) + (5)</td>
<td>2,960,741</td>
<td>32.3</td>
<td>3,142,569</td>
<td>33.3</td>
<td>3,079,640</td>
<td>31.3</td>
<td>1.3</td>
</tr>
<tr>
<td>7 Households without deficit</td>
<td>6,194,740</td>
<td>67.7</td>
<td>6,297,582</td>
<td>66.7</td>
<td>6,755,069</td>
<td>68.7</td>
<td>2.9</td>
</tr>
<tr>
<td>8 Habitable housing stock (1) - (4)</td>
<td>8,007,300</td>
<td>87.5</td>
<td>8,271,325</td>
<td>87.6</td>
<td>8,669,251</td>
<td>88.1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Urban

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Households</td>
<td>6,745,782</td>
<td>100.0</td>
<td>6,986,380</td>
<td>100.0</td>
<td>7,284,336</td>
<td>100.0</td>
<td>2.6</td>
</tr>
<tr>
<td>2 Households sharing rooms</td>
<td>766,850</td>
<td>11.4</td>
<td>825,662</td>
<td>11.8</td>
<td>820,432</td>
<td>11.3</td>
<td>2.3</td>
</tr>
<tr>
<td>3 Households in nonhabitable dwellings*</td>
<td>98,949</td>
<td>1.5</td>
<td>64,364</td>
<td>0.9</td>
<td>64,066</td>
<td>0.9</td>
<td>-13.5</td>
</tr>
<tr>
<td>4 Quantitative deficit = (2) + (3)</td>
<td>865,799</td>
<td>12.8</td>
<td>890,026</td>
<td>12.7</td>
<td>884,498</td>
<td>12.1</td>
<td>0.7</td>
</tr>
<tr>
<td>5 Qualitative deficit = households in dwellings that can be improved**</td>
<td>932,096</td>
<td>13.8</td>
<td>921,157</td>
<td>13.2</td>
<td>908,876</td>
<td>12.5</td>
<td>-0.8</td>
</tr>
<tr>
<td>6 Total housing deficit (4) + (5)</td>
<td>1,797,895</td>
<td>26.7</td>
<td>1,811,183</td>
<td>25.9</td>
<td>1,793,374</td>
<td>24.6</td>
<td>-0.1</td>
</tr>
</tbody>
</table>
Table 5. (continued)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7  Households without deficit</td>
<td>4,94,887</td>
<td>73.3</td>
<td>5,175,197</td>
<td>74.1</td>
<td>5,490,962</td>
<td>75.4</td>
<td>3.5</td>
</tr>
<tr>
<td>8  Habitable housing stock (1) - (4)</td>
<td>5,879,983</td>
<td>87.2</td>
<td>6,096,354</td>
<td>87.3</td>
<td>6,399,502</td>
<td>87.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Households</td>
<td>2,409,699</td>
<td>100.0</td>
<td>2,453,771</td>
<td>100.0</td>
<td>2,550,373</td>
<td>100.0</td>
<td>1.9</td>
</tr>
<tr>
<td>2. Households sharing rooms</td>
<td>74,979</td>
<td>3.1</td>
<td>78,619</td>
<td>3.2</td>
<td>104,777</td>
<td>4.1</td>
<td>11.8</td>
</tr>
<tr>
<td>3  Households in nonhabitable dwellings*</td>
<td>207,403</td>
<td>8.6</td>
<td>200,181</td>
<td>8.2</td>
<td>175,847</td>
<td>6.9</td>
<td>-5.4</td>
</tr>
<tr>
<td>4  Quantitative deficit = (2) + (3)</td>
<td>282,383</td>
<td>11.7</td>
<td>278,800</td>
<td>11.4</td>
<td>280,624</td>
<td>11.0</td>
<td>-0.2</td>
</tr>
<tr>
<td>5  Qualitative deficit = households in dwellings that can be improved**</td>
<td>880,464</td>
<td>36.5</td>
<td>1,052,586</td>
<td>42.9</td>
<td>1,005,642</td>
<td>39.4</td>
<td>4.5</td>
</tr>
<tr>
<td>6  Total housing deficit (4) + (5)</td>
<td>1,162,846</td>
<td>48.3</td>
<td>1,331,386</td>
<td>54.3</td>
<td>1,286,266</td>
<td>50.4</td>
<td>3.4</td>
</tr>
<tr>
<td>7  Households without deficit</td>
<td>1,246,853</td>
<td>51.7</td>
<td>1,122,385</td>
<td>45.7</td>
<td>1,264,107</td>
<td>49.6</td>
<td>0.5</td>
</tr>
<tr>
<td>8  Habitable housing stock (1) - (4)</td>
<td>2,127,317</td>
<td>88.3</td>
<td>2,174,971</td>
<td>88.6</td>
<td>2,269,749</td>
<td>89.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* Households living in dwellings with simultaneous deficiencies in public services, space, and material of the walls
** Households living in dwellings with one or two simultaneous deficiencies in public services, space, or structure

Moreover, the 1991 Constitution promotes the goal of private sector participation (PSP) in providing these services and defined the responsibility of the State to regulate, supervise, and monitor the performance of PSP, and assist in providing security for private sector players. Law 142 (public domestic services statute), which was enacted in 1994, established the legislative and regulatory framework for strengthening the role of municipalities in providing quality service, emphasizing efficiency through competition, and the promotion of PSP in service delivery.

The Ministry of Economic Development has assumed responsibility for developing policies and plans for the sector since the creation in 1992 of the Dirección de Agua Potable (Potable Water Directorate) within the Vice-Ministry of Housing, Urban Development and Potable Water. The Ministry provides technical assistance, defines service norms and standards, and provides technical and financial support to municipalities. The Ministry of Health sets water quality standards, while the Ministry of the Environment formulates environmental policies and regulations to protect water sources. The Ministry of Mining and Energy regulates groundwater development and use.

The Water Regulatory Commission (CRA) promotes competition among service providers, controls monopolies, defines tariff-setting methodologies based on standard formulas and on investment plans submitted by the operating companies, and sets service quality and technical standards to be followed by water utilities. The

10. Decree 219 of 15 February 2000 eliminated the Vice-Ministry of Urban Development but maintained the unit.
Superintendency of Domestic Public Services (SSPD) is responsible for monitoring and supervising the adequacy and efficiency of operations, establishing uniform accounting systems, supervising the administration of subsidies, and monitoring the general administration of public service companies. The Autonomous Regional Corporations (CARs), as regional implementing agencies of environmental policy, regulate and monitor the use and quality of water resources, and issue environmental licenses.

i. Present Situation

Colombia has achieved significant advances in the coverage of water supply, sewerage, and solid-waste collection services (Tables 6 and 7). The coverage of these services in the main urban centers is over 90 percent, a high figure compared to other countries of the region. In the major cities in 2000, water supply coverage was 95 percent, sewerage 88 percent, and solid waste collection 91 percent.

Such relatively high overall coverage levels, however, mask several problem areas. One is the disparity in the coverage of services, leaving out “informal” areas where many among the poorest strata of the urban population live. Another is the generally unsatisfactory quality of water, with the exception of cities of over 500,000 inhabitants that are provided a 24-hour supply of potable water with 100 percent quality (fit for human consumption). In most other cities, not only is the quality of water unreliable, there is also deficiency in the quantity of water made available as supply lasts for only 21 hours per day on average.

Table 6. Coverage of Water Supply and Sewerage Services in Colombia (percent)

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>70.6</td>
<td>79.7</td>
<td>83.30</td>
<td>59.45</td>
<td>63.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Urban</td>
<td>89.2</td>
<td>94.6</td>
<td>97.6</td>
<td>80.7</td>
<td>81.8</td>
<td>80-90*</td>
</tr>
<tr>
<td>Rural</td>
<td>28.0</td>
<td>41.1</td>
<td>44.3</td>
<td>11.3</td>
<td>14.4</td>
<td>15.0</td>
</tr>
</tbody>
</table>

* DNP shows 90 percent, a figure that seems high when compared with an 80-8 percent figure from the Ministry of Development.

Sources: DNP-USD-DIOPS, based on DANE, 1985-93 census, EH/93/97. Consulted DNP’s webpage, “Sistema de Indicadores Sociodemográficos para Colombia.”

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12 These figures might be overestimated due to the impossibility of getting reliable information as cities grow and because of outdated cadastre information.
13 Potable water and basic health policy, with information from the second national assessment of water of the Health Minister Consultation from the Economic Development Minister website.
14 Ibid.
Table 7. Coverage of Water Supply, Sewerage, and Solid-Waste Collection in the Main Cities (percent), 2000

<table>
<thead>
<tr>
<th>City</th>
<th>Water Supply</th>
<th>Sewerage</th>
<th>Solid Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>95.1</td>
<td>86.0</td>
<td>Over 95</td>
</tr>
<tr>
<td>Cali</td>
<td>95.9</td>
<td>94.0</td>
<td>81.0</td>
</tr>
<tr>
<td>Medellín</td>
<td>99.1</td>
<td>93.2</td>
<td>91.2</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>94.0</td>
<td>80.0</td>
<td>100</td>
</tr>
<tr>
<td>Cartagena</td>
<td>77.8</td>
<td>64.1</td>
<td>100</td>
</tr>
<tr>
<td>Cúcuta</td>
<td>91.4</td>
<td>89.8</td>
<td>71.8</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>99.0</td>
<td>98.0</td>
<td>100</td>
</tr>
<tr>
<td>Pereira</td>
<td>96.6</td>
<td>93.9</td>
<td>92.0</td>
</tr>
<tr>
<td>Average</td>
<td>95.3</td>
<td>88.3</td>
<td>91.0</td>
</tr>
</tbody>
</table>

Source: Superintendency of Domestic Public Services (SSPD)

The main issue confronting the water supply sector, however, is how to ensure adequate service coverage in the future. Based on past trends in service coverage, the difficulty of augmenting water supply after a certain level becomes evident (Table 8). Between 1995 and 2000, only Barranquilla showed some real improvement in supply coverage. Cartagena is a special case: while its population has doubled over the past 20 years (to around 750,000 today), service coverage has not matched the growth in its population. Since about 31 percent of its population live under extreme poverty conditions, water supply coverage in the city is not likely to improve.

The combination of technical and financial inefficiencies and weaknesses (high water losses, poor cost recovery, and poor strategic planning) raises serious doubts about the future availability of adequate water supplies for the growing urban agglomerations. If present trends continue, those living in the most urban-

Table 8. Coverage of Water Supply Services in Major Cities

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>85</td>
<td>98</td>
<td>98</td>
<td>95.1</td>
</tr>
<tr>
<td>Cali</td>
<td>92</td>
<td>94</td>
<td>93</td>
<td>95.9</td>
</tr>
<tr>
<td>Medellín</td>
<td>98</td>
<td>99</td>
<td>99</td>
<td>99.1</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>83</td>
<td>83</td>
<td>86</td>
<td>94.0</td>
</tr>
<tr>
<td>Cartagena</td>
<td>72</td>
<td>76</td>
<td>83</td>
<td>77.8</td>
</tr>
<tr>
<td>Cúcuta</td>
<td></td>
<td></td>
<td></td>
<td>91.4</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>99.0</td>
</tr>
<tr>
<td>Pereira</td>
<td>97</td>
<td>97</td>
<td>95</td>
<td>96.6</td>
</tr>
</tbody>
</table>

Source: Superintendencia de Recursos Hídricos de Bogotá (SRHB), 2000.

15 Política de Agua Potable y Saneamiento Básico. Consulted the Ministerio de Desarrollo Económico webpage.
ized areas (about 38 percent of the population) will face the risk of water rationing by 2016. According to studies conducted by Empresa de Acueducto y Alcantarillado de Bogotá (EAAB, the sewerage and water supply utility company in the city), unless substantial investments are made to increase its production and distribution capacity, Bogotá will be able to meet projected water demand only until 2014.

Most Colombian cities have a combined underground sewerage and drainage system, often with limited capacity and installed in low-lying areas that are subject to periodic flooding in the rainy season. Of the major cities, only Bucaramanga and, to some extent, Bogotá and Medellín, had wastewater treatment plants in operation in 2000 (Sánchez Triana 2000). In most other cities, only about 8 percent of domestic wastewater generated receive some kind of treatment (ibid.), a very low level when compared with other countries of similar income in the region. Untreated domestic wastewater is thus discharged directly into nearby rivers and waterways, causing water pollution. Aggravating the problem are solid waste, pesticide runoffs, and wastewater discharges from industries. The government estimated that in 1991 most industries inside or close to the urban centers dumped their waste into rivers and shores. Of these, close to 40 percent were dumped into rivers feeding the Magdalena River (not including the Bogotá River) and 35 percent into the Bogotá River.

The lack of adequate infrastructure to transport and adequately treat domestic wastewater and industrial effluents is increasingly becoming a problem nationwide. As more rivers and streams become polluted, the negative impacts on health can reach serious proportions. In Bogotá, initial efforts at wastewater treatment imposed very high and unsustainable costs to the city. This is an area that will require high priority attention so that cost-effective solutions are found.

Except in Cali and Cúcuta, solid-waste collection rates in major urban centers are relatively high—over 90 percent. The problem, however, concerns waste disposal. In Colombia only 14 percent of the municipalities have any control over the final disposal (Presidencia de la República 1998); most garbage is disposed of in open field dumps without any lining or other measures to prevent runoff and underground seepage. In cities such as Bucaramanga, this practice has led to the contamination of adjacent water sources (Alcaldía de Bucaramanga 1999).

ii. Main Sector Problems

Water supply and sanitation services are the responsibility of the municipalities and districts through their autonomous public service enterprises (ESP). The creation of ESPs as public, private, or mixed enterprises was decreed by Law 142 of 1994 to improve services and to cushion them from political intervention. The results so far have been less satisfactory, including low level and quality of service, high water loss, high labor costs, distortions in tariff and subsidy structures, weaknesses in project planning and implementation, a high proportion of fraudulent users, and billing errors. Many of these problems can be attributed to political interference at several levels of management within utility agencies. Additionally, pressures from very pow-
erful labor unions have led to costly salary and benefit packages, making it difficult to encourage greater private sector participation or to increase efficiency and productivity within ESPs.

Between 1995 and 1997, the SSPD found in a sample survey of the 16 largest utilities in the country that 91 percent of their operating income was used to cover operating costs (ibid.), leaving a very small margin for expansion and new investment. In some water companies, such as in Cúcuta, the operating costs in 2000 exceeded operating income by over 50 percent. While in theory the companies could levy charges to ensure self-sufficiency and sustained operations, in practice they have not been able to do so. Tables 9 and 10 give an idea of the revenue base of utilities in major cities.

Law 142 of 1994 instituted a scheme of cross-subsidization under which the commercial and industrial sectors, and the two highest strata of residents could be made to pay an additional contribution of up to 20 percent\(^{16}\) over the value of their consumption to help finance a percentage of the basic consumption of the lower strata. For two reasons, however, the benefits of the scheme do not necessarily accrue to those for which it is intended. First, the socioeconomic stratification used as the criterion for targeting subsidies proved to be a poor indicator of income levels such that many recipients are nonpoor households. Second, the level of subsidy is too high and the population targeted too large such that the cost of service provision is borne by only a small percentage of the population. A case in point is Bogotá, which, of the four major cities, earns the highest revenue from tariffs (though it still lags in updating its tariff schedule). Recently, however, it incurred operational


<table>
<thead>
<tr>
<th>City</th>
<th>Utility Companies</th>
<th>Result in 2000 (percent)</th>
<th>Result in 1999 (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cúcuta</td>
<td>Empresa Industrial y Comercial de Cúcuta SA</td>
<td>166.77</td>
<td>162.33</td>
</tr>
<tr>
<td>Cali</td>
<td>Empresas municipales de Cali &quot;Emcali&quot;</td>
<td>114.24</td>
<td>105.7</td>
</tr>
<tr>
<td>Bogotá</td>
<td>Empresa de acueducto y alcantarillado de Bogotá</td>
<td>108.4</td>
<td>114.03</td>
</tr>
<tr>
<td>Pereira</td>
<td>Aguas y Aguas de Pereira</td>
<td>94.78</td>
<td>110.72</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>Compañía del acueducto metropolitano de Bucaramanga</td>
<td>86.99</td>
<td>102.54</td>
</tr>
<tr>
<td>Cartagena</td>
<td>Aguas de Cartagena SA. ESP</td>
<td>82.46</td>
<td>80.03</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>Sociedad de A A A de Barranquilla—Triple A</td>
<td>76.26</td>
<td>78.42</td>
</tr>
<tr>
<td>Medellín</td>
<td>Empresas públicas de Medellín EPM</td>
<td>72.02</td>
<td></td>
</tr>
</tbody>
</table>

Source: SSPD. The table has been arranged by the results in 2000, from the highest down

---

16. Law 632 of 2000 allowed higher percentages to maintain the equilibrium between income and consumption cost, for which the utilities must follow the methodology expressly defined by the national government.
Table 10. Solid Waste Companies: Total Expenses/Operational Income, 1999 and 2000

<table>
<thead>
<tr>
<th>City</th>
<th>Utility Companies</th>
<th>Result in 2000 (percent)</th>
<th>Result in 1999 (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cúcuta</td>
<td>Empresa Industrial y Comercial de Cúcuta</td>
<td>166 77</td>
<td>162 33</td>
</tr>
<tr>
<td>Medellín</td>
<td>Empresas Varios de Medellín</td>
<td>105 72</td>
<td>132 26</td>
</tr>
<tr>
<td>Pereira</td>
<td>Empresa de Aseo de Pereira</td>
<td>98 61</td>
<td>96 35</td>
</tr>
<tr>
<td>Cartagena</td>
<td>Ciudad Limpia del Caribe</td>
<td>91 64</td>
<td>96 5</td>
</tr>
<tr>
<td>Bogotá</td>
<td>Consorcio Lime</td>
<td>85 96</td>
<td>80 84</td>
</tr>
<tr>
<td>Bogotá</td>
<td>Ciudad Limpia</td>
<td>83 43</td>
<td>81 89</td>
</tr>
<tr>
<td>Bogotá</td>
<td>Consorcio Aseo Capital</td>
<td>74 08</td>
<td>82 24</td>
</tr>
</tbody>
</table>

Source: SSPD. The table has been arranged by the results for 2000, from the highest down.

deficits. With 77 percent of its users belonging to income strata 1, 2, and 3, for which subsidies are provided, and only 9.5 percent from strata 5 or 6, which pay for the services, it’s financial position has weakened.

Apart from the large subsidies, which impose a heavy burden on their budget, unaccounted-for water (UFW) also represents a substantial loss to water utilities. In 2000, on average, UFW accounted for about 39 percent of the volume of water produced (Table 11). The reported annual losses of the 16 utilities surveyed are on the order of 600 million cubic meters, a waste valued at US$370 million (Sánchez Trinidad 2000). The CRA estimates that if the 16 largest utilities in the country could reduce these water losses from 40 percent to 20 percent, the water saved could pro-

Table 11. Unaccounted-For Water in Major Cities, Percentage

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>EAAB</td>
<td>36</td>
<td>33</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>Cali</td>
<td>Empresas Públicas de Cali–Emscali–EPM</td>
<td>33</td>
<td>36</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>Medellín</td>
<td>Empresas Públicas de Medellín–EPM</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>Triple A</td>
<td>60</td>
<td>55</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Cartagena</td>
<td>Aguas de Cartagena</td>
<td>56</td>
<td>54</td>
<td>51</td>
<td>42</td>
</tr>
<tr>
<td>Cúcuta</td>
<td>EIS Cúcuta</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>Compañía del acueducto</td>
<td>29</td>
<td>34</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>Pereira</td>
<td>Aguas y Aguas de Pereira</td>
<td>45</td>
<td>49</td>
<td>48</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Years 1995, 1996, and 1997. CRA’s webpage. based on SSPD, Superficies en m³, No 2

17 CRA’s webpage
vide service to about 40 percent of their population. With adequate maintenance, average investment cost could drop from 69 percent to 55 percent.\(^{18}\)

c) Urban Transport

In Colombia, public transport use is high, as evidenced by the large share of motorized trips by this mode in some cities (Table 12). The situation in all major cities does not differ markedly. For this reason, this section focuses mainly on public transport issues and less on other (though not the least) transport-related concerns, such as road management, nonmotorized transport, traffic management, and so forth.

Overall, public transportation in Colombia’s largest cities is characterized by inefficiency and lack of an adequate management structure.\(^{19}\) The main issues are (a) excessive service supply, (b) inefficient government regulation, and, as a consequence, (c) a high accident rate. These are further discussed below.

i. Excessive Service Supply

The excess of public transport vehicles has reached critical proportions in some Colombian cities. Cities like Barranquilla and Bucaramanga have less than 240 inhabitants per vehicle, resulting in congestion and low travel speed. An exception is Armenia, which has a somewhat more orderly public transportation system and has fewer vehicles serving more residents (Table 13).

The excess of public transport vehicles and road deficiencies result in a high level of traffic congestion and disorder. For example, the volume of passengers in the

<table>
<thead>
<tr>
<th>Table 12. Demand for Public Transportation in Major Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City</strong></td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>Bogotá (95)</td>
</tr>
<tr>
<td>Bucaramanga (Metropolitan area) (97)</td>
</tr>
<tr>
<td>Pereira (97)</td>
</tr>
<tr>
<td>Ibague (90)</td>
</tr>
</tbody>
</table>

*Sources: Based upon calculations of Jorge Acevedo from various sector studies*

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Table 13. Public Transport Vehicles and Their Productivity in the Main Cities, 2000

<table>
<thead>
<tr>
<th>City</th>
<th>Population (thousands)</th>
<th>Public Transport Vehicles*</th>
<th>Inhabitants per Vehicle</th>
<th>Passengers per Vehicle—km</th>
<th>Passengers per Vehicle—day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>6.500</td>
<td>22.000</td>
<td>295.0</td>
<td>2.02</td>
<td>432</td>
</tr>
<tr>
<td>Medellín</td>
<td>1.938</td>
<td>3.813</td>
<td>508.3</td>
<td>3.31</td>
<td>392</td>
</tr>
<tr>
<td>Cali</td>
<td>1.800</td>
<td>4.253</td>
<td>423.5</td>
<td>1.76</td>
<td>400</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>1.000</td>
<td>4.201</td>
<td>238.1</td>
<td>N/A</td>
<td>317</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>431</td>
<td>1.833</td>
<td>235.0</td>
<td>2.30</td>
<td>407</td>
</tr>
<tr>
<td>Manizales</td>
<td>350</td>
<td>795</td>
<td>440.0</td>
<td>2.96</td>
<td>409</td>
</tr>
<tr>
<td>Valledupar</td>
<td>270</td>
<td>546</td>
<td>495.0</td>
<td>N/A</td>
<td>126</td>
</tr>
<tr>
<td>Armenia</td>
<td>250</td>
<td>305</td>
<td>820.0</td>
<td>3.19</td>
<td>495</td>
</tr>
</tbody>
</table>

*This information comes from local authorities, November 2000. There might be unregistered vehicles moving through the city. Some figures for Bogotá are presented later in this paper showing the significant magnitude of unregistered vehicles.

Source: Consejo Instituto SER de Investigación, Pablo E. Bocanegra Ingenieros Consultores, 2001

most congested corridors in Pereira peaks at 7,000 passengers per hour in each direction; in corridors in Bucaramanga, it is 142,000 passengers per day in each direction; and in Bogotá, there are corridors with close to 30,000 passengers per hour in each direction. As a consequence, the speed on these corridors drops to levels of 5 to 8 kilometers per hour in Pereira, 6 to 10 kilometers per hour in Cali, and occasionally less than 5 kilometers per hour in Bogotá. Low speeds and the concentration of vehicles cause high levels of pollution and noise where most of the users wait for transport.

ii. Inefficient Government Regulation

Services are privately operated by companies that, while not recipients of subsidies, do not pay for the right to the routes they service. Companies granted route rights by local governments are typically groupings of many affiliates (as many as hundreds or even thousands, depending on the city) who are owners or owner-drivers. In return for a monthly fee, these companies organize and assign routes and coverage intended to equalize profitability for their members.

In theory, the licensing system controls entry, routes, trip frequencies, and fares. In practice, there is minimal enforcement of license terms and companies have no difficulty in creating a new route or withdrawing from existing service. While the system has the semblance of a deregulated system, in practice, there is very little competition among companies since each has monopoly rights (without time-limit constraints) to its awarded routes. The main area of competition lies among the drivers and operators who have no job security or social benefits and whose salaries depend on the number of passengers transported, a situation which pushes them to commit many infractions and get involved in many accidents.
The main issue thus is the lack of an efficient transport regulatory system, resulting in the concentration of bus routes in major corridors which has, in turn, led to deterioration in service quality, and the progressive abandonment of unprofitable routes on the periphery, which in turn has given way to increased informal or illegal transport systems charging high fares, as discussed below.

As mentioned, the increased number of vehicles has resulted in a diminishing number of passengers per vehicle, which in turn has generated pressure from the operators on the government to raise fares. In all cities there is a flat fare (not related to distance but still considered to be high) the level of which varies from city to city. In some cities (led by Bogotá) the fare system is complicated by several levels, incorporating factors such as age of vehicle and services offered (Table 14). There is usually a surcharge for nightly operations. Upmarket “executive” and “super-executive” service vehicles do not allow standing passengers.20

iii. High Accident Rate

An adverse consequence of all or a combination of the problems discussed above is the alarmingly high incidence of accidents in many Colombian cities, a large proportion of which involves public transport vehicles. Table 15 shows the figures for those killed and hurt in 1999 in traffic accidents in several cities. For comparison, the data are calculated per 100,000 inhabitants for each city, and from calculating the average among the group of cities listed. While there are wide differences in acci-

<table>
<thead>
<tr>
<th>City</th>
<th>Type of Service</th>
<th>Fare (pesos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>Bus 90 and previous</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Bus 91 and after</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>Buseta 92 and previous</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Buseta 93 and after</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>Executive bus</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Super-executive bus</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Microbús</td>
<td>800</td>
</tr>
<tr>
<td>Medellín</td>
<td>Plain bus</td>
<td>600</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>Plain bus</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>Executive buseta</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Luxury microbús</td>
<td>600</td>
</tr>
<tr>
<td>Manizales</td>
<td>Buseta gasoline</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>Buseta diesel</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>Bus</td>
<td>350</td>
</tr>
<tr>
<td>Armenia</td>
<td>Bus</td>
<td>450</td>
</tr>
</tbody>
</table>

Source: Consorcio Instituto SER de Investigación, Pablo E. Bocarejo Ingenieros Consultores, 2001

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20. This is the formal requirement, but in practice, with no enforcement control, there are standees among such passengers.
Table 15. Accident Rates in Colombia’s Main Cities, 1999

<table>
<thead>
<tr>
<th>City</th>
<th>Population (000s)</th>
<th>Accidents in 1999</th>
<th>Rate per 100,000 Inhabitants</th>
<th>% of Events with Public Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dead</td>
<td>Injured</td>
<td>Dead</td>
</tr>
<tr>
<td>Bogotá</td>
<td>6,500</td>
<td>872</td>
<td>22,427</td>
<td>13.4</td>
</tr>
<tr>
<td>Medellín</td>
<td>1,938</td>
<td>447</td>
<td>21,781</td>
<td>23.1</td>
</tr>
<tr>
<td>Cali</td>
<td>2,000</td>
<td>397</td>
<td>7,265</td>
<td>19.9</td>
</tr>
<tr>
<td>Barranquilla</td>
<td>1,000</td>
<td>137</td>
<td>1,191</td>
<td>13.7</td>
</tr>
<tr>
<td>Bucaramanga</td>
<td>508</td>
<td>32</td>
<td>1,790</td>
<td>6.3</td>
</tr>
<tr>
<td>Manizales</td>
<td>350</td>
<td>149</td>
<td>706</td>
<td>42.5</td>
</tr>
<tr>
<td>Ibague</td>
<td>426</td>
<td>27</td>
<td>643</td>
<td>6.3</td>
</tr>
<tr>
<td>Total</td>
<td>12,722</td>
<td>2,061</td>
<td>55,803</td>
<td>16.2</td>
</tr>
</tbody>
</table>

Source: Fondo de Prevención Vial, 1999, and calculations by Jorge Acevedo

dent rates and in incidence of accidents and number of casualties among cities, there is a clear need for stronger transport policies to address this problem.

The existing transport conditions affect the poor in various ways. On one hand, the excess of vehicles and the lack of efficiency of the system mean high fares. On the other, in many poor neighborhoods on the periphery, no legal transport service operates. Unlicensed pickup trucks or jeeps, which generally provide alternative informal services, charge even higher fares, thereby lessening the mobility of the poor and limiting their access to employment opportunities, social services, and other city amenities.

To alleviate the urban transport problems, two recent projects were undertaken by the government, both of which have had a profound influence on policies in the public transport sector (Boxes 1 and 2).

V. Policy Recommendations

Following are some of the factors and options which merit greater policy, institutional, and fiscal attention by the government of Colombia as it seeks to promote urban growth and development. The objective is to offer a set of policy recommendations that focuses not on grandiose plans but on strategically important “triggers” that have the greatest potential for improving the quality of life in urban areas, and which can be easily translated into actions at the local level.

a) Urbanization

In Colombia about 31 million people reside in urban areas and about 12 million in rural areas. Based on current projections, the country will have close to 40 million urban and about 10 million rural inhabitants within the next two decades. Apart
Box 1. The Medellín Metro

Work on the Medellín Metro began in July 1984 with a scheduled completion date of October 1989. However, operations commenced only in 1995 after multiple delays, cost overruns, and protracted litigation among the parties. While the original project cost was US$600 million, the final cost is now estimated to be about US$2.5 billion, with pending claims expected to add another US$600 million. Initially, the government of Colombia was expected to guarantee the cost of the investment only while the city made the payments. Since the city could not meet its payments, the government of Colombia has had to assume the obligation, adding a very significant burden to its fiscal situation.

The Metro system comprises three lines linking 25 stations spanning a length of 29 kilometers. It has 42 motorized units pulling 126 passenger wagons with a total daily capacity of about 430,000 passengers. However, it currently transports only about 310,000 passengers per day. According to the Empresa Metro de Medellín, the annual operating income from fares adds up to US$32 million, and publicity and office rentals add another US$2 million annually. The annual revenue covers operating, administration, and routine maintenance costs.

Due to the adverse fiscal situation created by the Medellín Metro, Law 310 of 1996 was passed to redefine the government's role in future mass transport projects in Colombia. It stipulates that the national government could assume only partial financing of such projects, between 40 percent and 70 percent of the debt service, and only after a series of strict feasibility analyses and requirements have been met.

Box 2. The TransMilenio System in Bogotá

After the Medellín system began operations, Bogotá pushed ahead with separate plans to design, build, contract, and operate a new system of buses on exclusive busways, the TransMilenio (TM). The TM system, which commenced operation at the beginning of the new millennium, is structured on main corridors, with lanes destined exclusively for the operation of articulated, high-capacity buses. These lanes are physically separated from the mixed, general traffic lanes, which are available for the circulation of private vehicles, trucks, and taxis. The network of main corridors is integrated with feeder routes, operated by buses with lesser capacity in order to increase the coverage of the system. Roads and bus stops have been adopted for the feeder routes, and stations are made easily accessible to pedestrians on the trunk routes. Operation and control are sup-
Box 2. continued

ported by a central control center, where the information provided by buses and by the stations is processed, providing continuous monitoring and feedback to the operators.

The municipality is responsible for the construction and maintenance of the infrastructure, and the supply and operation of the control center equipment. The private sector, through concession contracts, supplies and operates the buses and the fare collection equipment. The income from the transportation activity must cover all operating, maintenance, and equipment replacement expenses, and the profits of all of the private actors involved in the system. The private sector, through a commercial, trusteeship, receives the income collected from fares and distributes it among the participants according to contractual agreements.

TM is expected to be implemented in four stages, with a total of about 388 kilometers of trunk lanes that would cover about 80 percent of public transport routes in the city over the next 16 years. It will have about 4,475 articulated buses costing about US$900 million. The completion of the entire trunk lane system is expected to cost about US$2 billion. The first stage of the system was inaugurated in December 2000. It currently comprises three main corridors extending 38 kilometers of exclusive busways. The current fare is 900 pesos, or about US$0.40, similar to that of the conventional service in Bogotá. TM transports about 570,000 passengers per day at an average speed of 26 kilometers. The system has received universal acclaim and has been cited as a paradigm of a modern and effective public transport system.

In comparison with the Medellín metro, the impressive positive impact of the TM led both national and local governments to sign new agreements for the later. In an agreement dated November 2000 the government of Colombia has committed itself to contributing US$1.3 billion for the continuation of the TM system in Bogotá. Funding will be provided over a 17-year period, starting in 2000.

The resounding success of TM contrasts sharply with the prevailing public transport system in other parts of Bogotá and other cities in Colombia, where congestion, pollution, and long commute times are still the norm. In Bogotá, the authorities have taken some short-term measures to help ameliorate such conditions. The *pico y placa* system seeks to reduce traffic congestion during peak hours by restricting access by both private and public vehicles through their license plate numbers. In doing so, the city was able to achieve a 20 percent reduction in their movement without negative impacts on passengers. Efforts are under way to create incentives to discourage the use of old polluting vehicles and to eventually take them out of circulation.
from overall population growth rates, there will be many more conurbation areas as a result of rapidly expanding cities and municipalities, forming large urban agglomerations. These trends should be accorded greater consideration by policymakers when making decentralization and revenue-sharing decisions.

As provided in the Constitution, the creation of a strong, intermediate-level authority, such as the Departamentos, to work with municipalities and conurbations should be given high priority. The immediate challenge is to rescue bankrupt municipalities and Departments. At the same time, the projected addition of 9 million more people in Colombian cities calls for stronger decentralized governance. Two priority actions are recommended:

- The government of Colombia should offer strong incentives for bankrupt municipalities, municipal entities, and Departamentos to prepare and implement workable plans involving such measures as improved cadastres, more realistic property tax rates, improved tax collection, and enforcement systems that would help improve local capacity to generate resources.
- With only three years in office, the term of mayors and councilors is so short as to promote short-term behavior. This term should be extended and/or the local officials should be allowed to serve consecutive terms to ensure continuity in development administration.

b) Land and Housing

On the demand side, lack of income is the main reason why families do not have adequate housing and access to services. On the supply side, the main constraints are the existing disincentives to suppliers, such as complicated, costly, and lengthy processes involved in land and housing development; and norms, standards, and other regulations that are often counterproductive. More often than not, official interventions place emphasis on boosting demand through such artificial devices as temporary subsidies (in grants, interest rates, wage taxes, and so forth). Once this temporary support is withdrawn, housing programs collapse, with consequent wider budgetary and financial implications.

- Progressive upgrading via community-based development has proven to be not only an efficient mechanism by which the poor are helped to help themselves, but also a practical solution to problems of property tenure and access to basic services. Major efforts should therefore be taken to scale up urban upgrading in all major cities. This calls for the creation of a more flexible and creative regulatory environment, allowing for orderly settlements on environmentally suitable sites that can later be regularized. At the same time, rigid control measures must be adopted to prevent occupation of hazardous or ecologically sensitive areas.
- Urban upgrading alone will not solve the problem of low-income housing. It is necessary to prevent the need for informal development in the first place.
New government interventions should therefore support the expansion of shelter supply for the poor by addressing supply-side constraints. To some degree this was attempted by Bogotá when it created a municipal entity, *Metrouvienda*, with the authority to remove some of the major constraints that preclude private suppliers from entering the housing market. While this may prove to be a good strategy, it is at best a short-term measure. The government should also work with local authorities to remove major institutional bottlenecks and disincentives as mentioned above so that entities such as *Metrouvienda* become unnecessary.

c) Water Supply and Sanitation

While the coverage rate of water supply, sewerage, and solid waste collection services is high in the major cities, in absolute numbers, hundreds of thousands of families are still inadequately served, most of which belong to the poorest income strata. Often, high water, sanitation, and solid-waste coverage ratios mask qualitative gaps and focus attention away from very serious deficiencies in services provided. Moreover, only about 7 percent of wastewater and about 14 percent of solid waste generated receive any type of postcollection disposal and treatment, posing considerable health and environmental risks, particularly to those who live along the floodplains and around city dumps. It is therefore recommended that:

- Given the weak financial condition of many municipalities and public water utility companies, necessary actions should be taken by the government of Colombia to improve efficiency within these entities through increased tariffs to reflect the full cost of service provision, including investment and operating capital, and through more rationalized and better-targeted subsidies to improve access by the urban poor.
- In its effort to expand services, the government should adopt an approach that will rely on more appropriate technology and variable design standards to deal with differential capacity to pay by different income groups. Particularly in low-income communities, it should assist in identifying alternative levels of infrastructure with costs that are not beyond their capacity to mobilize community contributions or pay user charges, and that are appropriate for community-level maintenance.
- More stringent enforcement of existing policies should be pursued and stronger regulatory measures adopted to prevent or reduce water pollution problems arising from inadequate wastewater and solid waste disposal.

d) Urban Transport

Local government agencies in charge of public transport often lack technical, administrative, and financial capacity to introduce required changes in the sector, let
alone implement these reforms in a more strategic and efficient way. Building the appropriate policy context in this sector has become an urgent area for the next government to address. Given the extent of urban transport inefficiencies as discussed earlier, the following policy recommendations merit priority consideration:

- A national urban transport policy should be formulated to promote people-oriented urban transport strategies and to transfer the "good practice" knowledge being accumulated from Bogotá to other cities. It would also aim at strengthening the institutional capacity of local government agencies responsible for urban transport, roads, and public spaces.
- TransMilenio demonstrates how it is possible to implement policies that give priority to public transport over private car travel, using scarce road space and providing quick access from outlying low-income areas, while at the same time improving the image of what used to be perceived as a chaotic, polluting, and unpleasant bus service. It also shows that private sector participation can be facilitated by carrying out a transparent bidding process and instituting clearly defined concessions. Transport studies should be initiated to identify other cities where TransMilenio-type bus reforms could be feasible and desirable and, where appropriate, assist in their implementation. Increased use should be made of the municipal surtax on gasoline for the investments required.
- The new urban transport strategies should address not only issues of access, efficiency, and vehicular pollution, but also of traffic safety. The traffic safety strategies to be developed for each city should place emphasis on road safety education, sound road and traffic engineering, and enforcement of traffic rules.

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Transport

This Chapter was written by Mauricio Cuellar.

I. Background

At the end of the 1980s and the beginning of the 1990s Colombia carried out a series of policy and institutional reforms aimed at modernizing the State. These reforms took place within the broader strategies of opening the economy to international competition and the reduction of protectionism of the industry and local services. There was an effort to stimulate the participation of the private sector in activities previously developed by the public sector, and the decentralization of service provision to subnational entities was promoted, as established by the 1991 Constitution. At the end of the 1990s, the changes in the economic and social environment, due particularly to the armed conflict, led the government to focus on solving the armed conflict, which resulted in a slowing down of the implementation of the reforms, generating institutional, financial, and investment uncertainties across sectors.

At the beginning of the 1990s, when the opening of the economy began, it was evident that the country did not have the necessary infrastructure and transport system to support that opening. For example, (a) the railroad system was in disrepair and undergoing a major overhaul of its operations, (b) conditions for navigation on the Magdalena River had deteriorated badly, (c) there were considerable supply restrictions due to protection policies regarding local air and sea transport enterprises, (d) the efficiency levels of the port terminals were among the lowest in the region and their tariffs were the most expensive, and (e) the road system was very poor in terms of condition and coverage.

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1 This Chapter was prepared with the guidance of Aurelio Menendez, Senior Transport Economist, LAC Transport Cluster. German Ospina (Consultant) assisted with data collection.
During the same period, investments in the sector aimed at reaching the following key development objectives: (a) enhanced road accessibility to and from impoverished areas and those with high levels of violence, (b) promotion of competition through provision and improvement of the transportation corridors of foreign trade, and (c) employment generation through the construction and maintenance of road infrastructure.\(^2\)

The government strategy for the improvement and maintenance of transportation corridors focused on the promotion of private sector participation under concession contracts. For the road system, the railroad system, maritime terminals, and the main airports, it was to be implemented through concession contracts with the private sector. An aggressive plan of private participation was then initiated.

Transport is essential for development in Colombia. Transport-related activities represented nearly 5 percent of the country's gross domestic product in 2000, and generated approximately 8 percent of total employment. Adequate transportation is essential to promote foreign trade and internal demand, and to move products from production centers to ports and consumption centers. From 1994 until 1996, load mobilization in terms of tons per kilometer decreased, while the gross domestic product increased during the same period. From 1996 to 1999 the performance of both indicators has been similar. Figure 1 shows this relationship.

**Figure 1. Transportation and Economy, GNP, Tons per Kilometer**
In 1999, in Colombia, approximately 220 million tons (including cargo transported by pipelines and multidoets) were transported, representing a 20 percent increase over 1995. Between 1995 and 1999 there was an increase—from 48 to 60 percent—in the volume of cargo transported by pipelines and railroads. This was due to the increase in the volume of oil and coal that used these modes of transport. Regarding the volume of cargo moved (not including cargo moved through pipelines and multidoets), 70 percent was done by road, 25 percent by railroad (mainly coal), 4 percent by river, and 1 percent by air.

The majority of general cargo and containers in Colombia is moved over roads. Despite the reduction in volume in recent years, mostly due to the armed conflict and financial problems, this mode has had higher reliability levels, timeliness, and security. Table 1 shows the historical trend of cargo movement in Colombia by mode of transport.

From 1995 to 2000, Colombian exports increased from 42.7 million tons to 62.9 million tons, almost a 48 percent increase. Most of the exports were made by sea (98 percent), particularly through specialized private terminals (coal, oil, and banana). In regional port terminals, the volume of exports was stable at approximately 3.5 million tons, and consisted mostly of general cargo and containers. Air exports were approximately 250,000 tons, and road exports to neighboring countries were approximately 1 million tons.

Imports were stable at approximately 12.5 million tons. The higher movement was made by sea (90 percent), but in contrast to exports, the movement of specialized ports represents only 10 percent of the total. The terminals of regional port companies mobilized 50 percent of imports, and there was a 30 percent reduction of air imports compared to 1995. There was also a reduction in road mobilization of imports originating in the Andean Community.

With respect to the transportation of passengers, in 1999, 97 percent of total passengers transported used roads, followed by air (8 percent), and river (5 percent). Railroad transport is almost null. The trend in recent years has been a reduction in

Table 1. Cargo Mobilization at National Level (thousand of tons per year)

<table>
<thead>
<tr>
<th>Year</th>
<th>Road</th>
<th>Internal</th>
<th>Paza Rio</th>
<th>Coal</th>
<th>River</th>
<th>Air</th>
<th>Subtotal</th>
<th>Pipelines</th>
<th>Ducts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>86,742</td>
<td>882</td>
<td>2,438</td>
<td>17,054</td>
<td>2,634</td>
<td>140</td>
<td>109,890</td>
<td>48,859</td>
<td>23,405</td>
<td>186,154</td>
</tr>
<tr>
<td>1999</td>
<td>77,674</td>
<td>367</td>
<td>2,076</td>
<td>27,478</td>
<td>3,735</td>
<td>134</td>
<td>111,464</td>
<td>80,875</td>
<td>22,822</td>
<td>216,546</td>
</tr>
</tbody>
</table>

Source: Ministry of Transport (MT) 2001, MT Cargo Surveys

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3 The handling of this export cargo has been under the responsibility of the ports formerly managed by Colpuertos (a national government agency Barranquilla, Cartagena, and Santa Marta, in the Atlantic Ocean, and Buenaventura and Tumaco in the Pacific Ocean
the number of passengers moved by all modes of transportation, possibly because of the security situation and the current economic crisis.

Because of the importance of the road subsector within the transport system in terms of cargo and passenger mobilization, and because of its great importance in giving access to poor, isolated populations, this Chapter will emphasize this subsector.

**ROAD SECTOR.** Colombia has approximately 146,000 kilometers of roads, of which 16,500 (11 percent) are national roads managed by the Instituto Nacional de Vías (National Highway Institute, INVIAS), 100,000 kilometers are managed by the Departments (68 percent), 15,000 kilometers are managed by the Fondo de Caminos Vecinales (10 percent), and the remaining 14,000 kilometers have undefined ownership. Seventy-seven percent of the roads managed by INVIAS are paved (12,705 kilometers). Each network is defined by its ownership/management instead of by its functionality, which often generates a duplication of functions and difficulties in the preparation of the road inventory. The extension of the road system in Colombia and its condition are much lower than in comparable countries in the region, and substantially lower than those of more-developed countries. For example, the number of kilometers of paved road per million inhabitants in 1995 was 1,340 for Venezuela, 820 for Mexico, 347 for Peru, and 309 for Colombia.

Accessibility of roads for the population differs considerably in the various regions. While there are Departments with very good road and transport coverage, such as Atlántico, Caldas, and Quindío, there are a large number of areas where inhabitants must travel for several days (such as Chocó, Caquetá, Putumayo, the Pacific Coast region among others) to gain access to basic services and to the capitals of the Departments. This isolation is linked to the lack of basic services provided by the State, facilitating the presence of guerrilla and delinquent groups.

Due to the lack of funds allocated to maintenance, the road system deteriorates quickly. Table 2 shows the deterioration percentages of the paved road system managed by INVIAS.

### Table 2. Deterioration of Paved Road System Managed by INVIAS (percent)

<table>
<thead>
<tr>
<th>Condition</th>
<th>1998</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>78</td>
<td>70</td>
</tr>
<tr>
<td>Regular</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Bad</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

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4 Regarding the national network, 63 percent is paved, 27 percent is unpaved, and 10 percent is to be constructed
The situation is even more dramatic regarding unpaved roads—those that provide access to poorer areas. According to the condition assessment of this network, and comparing 2000 and 2001, Table 3 shows the following.

**Table 3. Condition of Unpaved Roads (percent)**

<table>
<thead>
<tr>
<th>Condition</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>45</td>
<td>34</td>
</tr>
<tr>
<td>Regular</td>
<td>39</td>
<td>42</td>
</tr>
<tr>
<td>Bad</td>
<td>16</td>
<td>24</td>
</tr>
</tbody>
</table>

There is no information on the rest of the road system, however, due to the limitation of resources directed to the maintenance of roads, and according to what the transporters express, the deterioration of the secondary and tertiary networks has also increased.

The main causes for this deterioration are the absence of sufficient resources to finance maintenance activities, and the lack of adequate axle-weight controls of cargo vehicles. Regarding the latter, it is worth noting that after discussions with freight transport operators, the allowed weight per axle was recently increased. Consequently, the damage to the road system is likely to increase. There is no information yet about the measures taken or the costs to upgrade the pavements to support the new axle weights.

The traffic volume on roads managed by INVIAS remains low, with a national average below 2,000 average daily traffic (ADT). Volumes over 10,000 ADT are shown on only 375 kilometers, corresponding mainly to access roads to the major cities. Thirty percent of the INVIAS network has an ADT below 500. In the departmental network, an average of 150 ADT is estimated, and in municipal and rural networks, the average is approximately 25 ADT. Regarding the road traffic composition, there is an average of 70 percent of light vehicles, 10 percent of buses, and 20 percent of trucks. However, in the main road corridors, the truck percentage may reach 60 percent, as is the case of La Línea in the Bogotá–Buenaventura corridor.

**Recent Achievements.** The following are the achievements reached in the transport sector since the reforms initiated at the beginning of the 1990s

- The government has carried out institutional reforms that attempt to clarify the roles of each sector entity in planning, regulation, control, and execution. In addition to the planning activities, the Ministry of Transport is responsible for policymaking, the Regulatory Transportation Commission (Comisión Reg-

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5 In operations carried out in recent years, it was found that 10 percent of the trucks are overloaded
uladora de Transporte) is responsible for its regulation, the Superintendency of Transport and Ports is responsible for control and enforcement, and the implementing agencies are in charge of each mode of transportation. Due to its nature, the air mode is regulated by another entity.

- The sector has directed its resources to support economic growth through investments in the main network, which links the large production and consumption centers to each other, and these with maritime ports, mainly through private participation. The sector has also supported employment-generation programs and contributed to the peace process, to the extent that through roads, the sector gives access to depressed and high-violence-level zones.

- The participation of the private sector through concessions has extended to all modes of transport and administrative levels (central government, departmental, and municipal entities), from the development of infrastructure to operation and maintenance. Table 4 shows the activities taken over by the private sector in the last decade. The road concession program has represented an important and valid alternative to deal with the problems related to investment slowness in road infrastructure, although it presents difficulties that hinder its continued development and that generate a financial drag for sector resources. The port reform has shown positive results due to increased productivity and reduction of costs and, therefore, rates; reduction of service time to ships; and investments made in new technologies. Also, the high corruption levels suffered by the old State-owned port agency have been eliminated. This increase in port productivity does not anticipate the need to build new port premises in the medium term. Regarding the air sector, three main airports and the second runway of the Bogotá Airport have been given under concession contracts, with results still uncertain. Regarding the railroad sector, two networks were given under concession contracts (Atlantic and Pacific), and their results have not been evaluated yet.

- The actions taken by the government to reduce accidents and road hijackings have yielded positive results. Regarding measures taken against hijacking in particular, modern tracking systems have been implemented, leading to important reductions in land hijacking. The Ministry of Transport has adapted transit monitoring of vehicles through the use of location devices (the Global Positioning System, GPS) and the implementation of reaction programs by the road police.

- The development in Bogotá of a clear and consistent policy of urban transport has generated a new image of the city, reproduced in other cities within the country and in the region. The Transmilenio system, costing only 10 percent of what a heavy metro system costs, has opened the possibility for other cities to consider solving their public transport problems through a modern, cost-effective system with a high level of service, thus avoiding considerable and unsustainable investments.
<table>
<thead>
<tr>
<th>Type of Infrastructure/Service</th>
<th>Type of Network/Installation</th>
<th>Responsible Entity</th>
<th>Name of Project</th>
<th>Scope</th>
<th>Present Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>National</td>
<td>INVIAS</td>
<td>13 road concessions of first and second generation</td>
<td>2,418 km</td>
<td>C, O</td>
</tr>
<tr>
<td></td>
<td>National</td>
<td>INVIAS</td>
<td>4 toll concessions in national roads</td>
<td>55 toll stations</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>National</td>
<td>INVIAS/Departments</td>
<td>2 national road concessions managed by Valle and Magdalena</td>
<td>122 km</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Departmental</td>
<td>Department de Antioquia</td>
<td>3 road concessions in Cundinamarca and 1 in Valle</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unidad Administrativa Civil</td>
<td></td>
<td>José María Córdoba Airport – Las Palmas</td>
<td>Credit/toll</td>
<td>O</td>
</tr>
<tr>
<td>Airports</td>
<td>National</td>
<td></td>
<td>Second runway – El Dorado</td>
<td>Concession</td>
<td>O</td>
</tr>
<tr>
<td>Ports</td>
<td>National</td>
<td>Superintendencia Portuaria</td>
<td>Cartagena, Barranquilla, and Cali terminals</td>
<td>Concession</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>National</td>
<td>Ferrovia/Office of Mayor, Bogotá</td>
<td>Barranquilla, Buenaventura, Cartagena, and Santa Marta, Sociedades Portuarias Regionales</td>
<td>Concession</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Municipal</td>
<td></td>
<td>Pacific and Atlantic networks</td>
<td>Concession</td>
<td>C</td>
</tr>
<tr>
<td>Railroad Transportation</td>
<td>National</td>
<td></td>
<td>License Servicios de Tránsito y Transporte Project, plates</td>
<td>Concession</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Municipal</td>
<td></td>
<td>Management of vehicle registries and driver licensing</td>
<td>Concession</td>
<td>Being assembled</td>
</tr>
</tbody>
</table>

C = Construction
O = Operation
II. Main Sector Issues and Strategies

Notwithstanding the above-mentioned achievements, there still remain aspects to be developed and reviewed. Within the national context, the armed conflict has an important effect on the sector development, and the sector has become part of the national strategy to help reduce the armed conflict by seeking access to isolated areas where the guerrillas operate.

a) Armed Conflict Negatively Affects the Functioning of the Sector

Like other sectors of the economy, the transport sector has suffered the effects of the armed conflict experienced throughout the country. The increase in road hijackings, illegal armed posts (reteres), road closings due to actions of subversive groups where users are massively kidnapped (pescas milagrosas), and blockades caused by peasant mobilizations have generated great losses for the nation’s economy. The situation has affected both the development and operation of transportation, with the following consequences:

- The factors that cause most road closings are public disturbances, landslides, and anticipated work (for repairs). In 2000, of the total hours of roads closed (25,890 hours), 30 percent were caused by landslides, 14 percent were anticipated, and 56 percent were caused by disruptions. Road hijacking has increased considerably in recent years, leading to large losses and to insurance companies rejecting cargo insurance. Obviously, this situation affects the development of multimodal transportation due to the risk of assuming responsibilities in cargo management. In the case of passenger transportation and vehicle transit, the lack of secure roads and the pescas milagrosas have caused a reduction in the traffic volume and closing of roads at night. Equally important has been the negative effect in the financing of road concessions, particularly those of first generation where the State guaranteed minimum traffic. The obvious result of the security situation is that foreign investment in the sector has been discouraged.

- Destruction of the transportation infrastructure by blowing up railroad, bridges, and toll stations further creates costs for the economy. The railroad system has also been affected by blowups of the track that links coal exploitation sites in the Cesar Department with the port. Also, the control by armed groups of the basins of navigable rivers has discouraged use of the river mode of transportation.

- The displacements to major cities caused by the conflict are creating strong pressures on service provision, transportation being one of them. Generally,

6. Twenty-three percent of these closures due to disruptions were caused by hijacking and theft, 37 percent by guerrilla actions, and 40 percent by community blockades.
these people move to the outskirts of the cities where the availability of transportation services is reduced and its provision more expensive.

b) Isolation of Areas Due to Lack of Transportation Infrastructure

One of the main causes of the social and economic deterioration of the various rural zones is their isolation due to lack of a transportation infrastructure. The lack of physical access to basic social services such as education and health, and to production and consumption centers, is an exclusion factor. There appears to exist a high correlation between the zones of higher sociopolitical conflict and the deficient road development of the various modes of transportation. This aspect was identified in the development of the Plan Nacional de Rehabilitación at the end of the 1980s and in the recent Road Plan for Peace (Plan de Vías para la Paz) as part of Plan Colombia. Currently, the construction of a series of roads to integrate wide regions into the rest of the country is being made through Plan Colombia (see Annex Table A.1 for a list of the roads included in the Plan de Vías para la Paz). These investments seek to benefit the poorest rural populations in critical zones of the conflict through the following actions: (a) improvement of the intermodal transportation infrastructure, (b) generation of temporary employment through the intensive use of the local labor force, and (c) promotion of civil participation in the execution and sustainable maintenance of works. In addition, conservation and reconditioning programs of rural roads are being developed, as are the construction and improvement of river port premises. INVIAES is responsible for the Vías para la Paz works which, upon completion, will be devolved to the Departments for maintenance.

c) The Unfinished Development of the Institutional and Regulatory Framework

In 1992, a reform of the transport sector was carried out with the goal of adapting its institutional nature to the new development strategies. To further the decentralization process, the road system to be managed by the central government was defined, and the remaining system was transferred to Departments and Municipalities. At the beginning of 2000, a new institutional reform was created (Decree 101). This reform sought to cover the institutional gaps left by the 1992 reform. The Ministry of Transport was given the lead role in transport policies at the national level, and its activity was focused on the formulation and adoption of policies, general plans, programs, and projects in the matter of transit, transportation, and infrastructure, transferring the regulatory responsibilities to a Transportation Regulation Commission (Comisión de Regulación de Transporte), similar to those existing in other public service sectors. Vigilance and control activities regarding transit, transportation, and infrastructure were transferred to the Superintendency.

7 Energy and Gas, Telecommunications, and Water, Sewerage, and Waste collection Regulation Commissions
of Transport (Superintendencia de Transporte),\textsuperscript{8} and the specialized entities continued to be responsible for the execution of works.\textsuperscript{9} Implementation of this new organization began in 2001, and there are still some gaps and duplication of functions that need to be addressed.\textsuperscript{10} Annex Table A.2 shows the functions of the sector entities.

The following addresses the reform aspects (including the ongoing decentralization process) and regulatory subjects where the progress initiated at the beginning of the 1990s needs to be consolidated or resolved.

\textbf{i. Institutional}

- The purpose of having a Transport Ministry focused exclusively on planning and policymaking was truncated, since it continues to be responsible for the execution of river works and dredging access channels to maritime ports. Continuing its role as an execution entity, biases its fundamental activity as policymaker due to budgetary, political, regional, and contracting pressures.
- The institutional framework seeks to define the roles and specializations of each entity of the sector at the national level. However, this framework is not so evident at the regional level. For example, the jurisdictional scope of the Regulatory Commission or of the Superintendency is not clear about the standards that must be applied in transport operations at the Departmental and Municipal levels, including concessions.\textsuperscript{11}
- The Transportation Regulatory Commission (Comisión Reguladora de Transporte) remained within the Ministry of Transport as a unit with neither legal status nor its own budget. This makes the Commission very vulnerable to political interests and eliminates the independence that, by nature, a regulatory entity must have. This situation makes the Ministry, in fact, the depository of the regulatory role.

\textsuperscript{8} Created from the old Port Superintendency, established in 1991.
\textsuperscript{9} Except control and vigilance of the air sector, which remained under Aerocivil.
\textsuperscript{10} Entities at the national, departmental, and municipal levels are contracting out road interventions through concessions without coordination. In principle, the Regulatory Commission is in charge of those activities for the whole sector. However, in practice, departmental and municipal transit authorities are issuing regulations without consulting the Regulatory Commission.
\textsuperscript{11} For the execution of major works, some Departments, such as Antioquia, have established special tolls, and others, such as Cundinamarca and Valle, have awarded regional concessions. The lack of regulatory clarity and coordination of concessions has created problems in the various entities, particularly regarding the location of toll stations. For example, in the geographic area of the Sabana de Bogotá, there are over 20 toll stations, and recently the municipal administration proposed the installation of six new access stations to the capital.
ii. Regulatory

- Regulation plays an important role in structuring and enforcing free competition and tariff control. Transportation tariffs, which until 1997 were defined by the market, are now regulated by the Ministry. At present, the Ministry manages a maximum and minimum tariff band where, theoretically, operators are positioned according to the operating costs. In general, the increase of tariffs between 2000 and 2002 has been 19 percent. In practice, tariffs are negotiated directly between the owners of the cargo and the operators. However, tariff regulation and negotiations have become major issues in the relation between the government and the sector. On the other hand, the profitability of freight operations has been affected by an oversupply of transport services (of approximately 40 percent), a simultaneous reduction in the demand caused by the economic crisis, and a considerable increase in operating costs.

- Trade with the neighboring countries of the Andean Group has remained stable in spite of the existing difficulties in border crossings. Notwithstanding existing agreements, border crossing between Colombia and Venezuela and Colombia and Ecuador continues to require truck transshipment.

- Although reduced, accident levels remain high, with approximately 6,500 fatal accidents during 2000. Although the Ministry is working on the prevention of accidents, higher priority is given to delinquency problems.

- Regarding urban transportation, the regulatory treatment of municipalities is the same across all types and sizes. There is no national policy regarding urban transportation.

- The Ministry is responsible for the information records of the various elements and parties involved in transit and surface transportation. At present, the technological development of territorial transit entities is deficient and does not allow for complete and reliable information. This leads to deficiencies in the support of decisions taken at the local and national levels, poor service to users, insecurity and deficiency in the collection of fees, lack of control and high inefficiency in processing of paperwork and, as a consequence, corrupt practices in the issuance of licenses.

iii. Road Decentralization Process

- The road decentralization process was accompanied by the diminishment of the role of the Fondo Nacional de Caminos Vecinales. The fund still exists, and it appears it will continue to exist for the foreseeable future. However, its role is being limited to fulfilling political and regional requirements not necessarily responding to any program, except for those interventions included under the Plan de Vías para la Paz. Some investments in the tertiary (rural) road net-

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12 This information includes, among other things, registry of vehicles and motorcycles, national registry of drivers and offenders, penalties, and taxes.
work have been made using cofinancing mechanisms with the Municipalities.
The presence of the Fondo in the Departments is very limited.

• Since 1993, Departments and Municipalities have become responsible for the
  management and maintenance of the secondary and tertiary road systems.
The Departments took charge of several roads transferred from the national
government (INVIAS and Office of Caminos Vecinales) but its present main-
tenance status is unknown. The transfer of road segments to the Departments
has been suspended (there still remain 15,012 kilometers to be transferred)
and the continuation of the process is uncertain. This situation could gener-
ate the reverThose from public and private ownership of road networks.
• The foregoing is due to the lack of clear financial mechanisms (free of politi-
cal pressures, as was the case of the Fondo de Cofinanciación Vial) to support
the decentralization of the secondary and tertiary road networks to the
Departments. Given the lack of resources, the regional authorities did not
find any type of incentive to assume responsibilities over those roads and,
besides, the enhancement of the technical capabilities of the departments has
not been sufficient. Therefore, the ability and readiness of the subnational
governments to develop the technical and administrative capacity to effect-
ively manage the road system within their jurisdictions and to secure the neces-
sary resources to finance the required maintenance activities remain of high
priority to advance the decentralization agenda in the road sector.

d) Ensuring Adequate Resources to Address the Needs of the Transport Sector

Investments in the transport sector have been limited by the financial restrictions of
the entities that depend on the national budget (INVIAS, Caminos Vecinales, Ferrovías,
Ministry of Transport). These restrictions have been more dramatic in recent years,
reaching their lowest level in 2000. In 2001, appropriations for the sector increased as
a result of the investments in the Plan de Vías para la Paz. Sector investment in 2000
was similar to that of 1991 (COP$700,000 in 2001 pesos, approximately US$310 mil-
lion). Between 1991 and 2001, however, investment grew considerably, reaching a
maximum in 1996 (COP$2.1 billion in 2001 pesos, approximately, US$930 million).
The dependence on treasury resources, together with the existing complex budgetary
processes, make investments more difficult each time. Figure 2 shows budgetary
appropriations for investment in the transport sector in the last 12 years. Note that in
2001 (year 12) a small investment recovery was experienced.

Public investment in the transport sector has been focused mainly in the road,
airport, and railroad subsectors. In 2000, 71 percent of the total budget was allo-
cated to roads. Financing came from the national budget and own resources. Table

In the few years following its creation in 1993, INVIAS became an effective
entity, capable of preparing multiannual investment plans, and with in-house tech-
In its efforts to confront the challenges of modernizing the road system, INVIA's technical capacity on the national budget generated great vulnerability in the sustainable allocation of its resources. When the economic crisis of the end of the 1990s arrived, INVIA's budget was reduced considerably. Its technical capacity was also negatively affected. In addition, INVIA's management was continuously reshuffled, and with that came a decrease in its efficiency in the management of contracts.

INVIA's own resources are limited to toll collection. Other financing sources are valorization contributions and tax surcharges on diesel, though the latter is not significant. In 2000, gross toll collections amounted to COP230,000 million, representing approximately 40 percent of the entry's budget (commitments). However, the trend of this source of resources is decreasing due to decreasing traffic volumes and the award of new road concessions to which toll collections in the respective roads are transferred. Twenty-three percent of the 2000 budget was directed to investments in new construction, 27 percent to concession projects, 30 percent to improvement and maintenance of the system, 10 percent to the microenterprise program for maintenance, and 10 percent to payment of recurring expenses. Among these percentages, can be noted the impact of concession guarantees on INVIA's budget.

The calculation of resources estimated only for the maintenance of the road system under INVIA (80 percent in good condition, 15 percent in regular condition,

13 Corresponds to the guarantee payments of the concession contracts
14 Corresponds to the purchase of land, study programs, payment of court decisions, maintenance of equipment, and so forth
Table 5. Transport Budget 1998–2001 (millions of pesos)

<table>
<thead>
<tr>
<th>Investment Item</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
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</table>

and 5 percent in bad condition) is COP650,000 million per year (approximately US$282 million). The available resources to serve the national road system in 2001 were COP250,000 million (US$108 million), representing 40 percent of the total required.

Departmental and Municipal resources allocated to interventions on roads come from fuel and diesel tax surcharges and the vehicle tax. The tax surcharge is 5 percent over the fuel cost and 3 percent over the diesel cost. Also, the national government assigns the proceeds from vehicle taxes to the Departments and Municipalities for their use in any type of investments. Departments also have access to the Royalties Fund (Fondo Nacional de Regalías). Departments may also collect tolls on

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15 There is a Subsidy Fund of Fuel tax Surcharge to subsidize Departments with low consumption levels.

16 This fund supports road, river, port, and airport projects. The largest portion of these resources is allocated to investments in roads. In 1999, the approved resources reached approximately COP105,000 million, of which COP98,000 corresponded to the road sector.
their roads and establish valorization contributions.\textsuperscript{17} Notwithstanding these financing sources, there are no clear regulations on the collection and use of these resources.

The air subsector is financed with own resources. These are the Airport Tax (Tasa Aeroportuarria) and other duties paid by users and resources derived from concessions.\textsuperscript{18} In financial terms, this subsector is self-sustaining because airports with income resources higher than costs subsidize airports with deficits. Thus, a financial equilibrium of the airport system has been achieved without major difficulties. It is important to maintain this scheme since, in their structure, the private participation processes must take into account surplus margins to allow the operation of loss-making airports, but that are paramount for the country's integration.

e) Private Participation in the Development of the Sector's Infrastructure

As mentioned, in the 1990s, the participation of the private sector was at the heart of the strategy for the development of transport projects. Through concessions the government sought the allocation of private sector resources to execute works in the transport sector. The participation of the private sector through concessions has extended to all modes of transportation and administrative levels (National, Departmental, and Municipal), not only regarding infrastructure, but also in the operation and provision of services. The participation of the private sector has even extended to activities reserved for the State, such as the issuance of driver’s license management and vehicle plates. The participation of the private sector has been essential for the development of the transport sector.

Nevertheless, there has not been a participation strategy integrated into the transportation system. Thus, in the road sector as in others, development has been isolated, generating in some cases competition among the various modes of transportation. The participation of the private sector in concessions in the railroad and river systems could be financially uncertain due to the cargo volumes mobilized by these modes (except for coal, which is transported in large volumes by the railroad), and has caused a financial drain on the national government in those cases in which the contracts included government guarantees for minimum revenues. With the exception of oil and coal, which have their own specialized means of transportation, cargo volumes transported within the country could be covered by the existing supply of road services. On the other hand, there is no development in dry docks or intermodal installations to facilitate multimodal transportation, especially in the

\textsuperscript{17} Thus, departments such as Antioquia and Cundinamarca collect rolls on some of their roads and impose contributions from valorization (or property revaluations) for works executed.

\textsuperscript{18} In 2000, total collection reached COP 251,000 million, of which approximately 57 percent was assigned for operation, 41 percent for investment, and 2 percent for debt payment.
Atlantic corridor, and there are no regulatory or operating conditions that could attempt to maximize the comparative advantages of each mode of transportation.

At present, the road system subsector has the highest private sector participation in the transport sector. Since 1994, the road concession program has developed in three phases, called "generations." The first generation comprises 11 projects awarded between the end of 1994 and the beginning of 1997. The two second-generation projects were awarded between the end of 1997 and the beginning of 1999, and the third generation, which began in 2002. Annex Table A.3 lists the third-generation concession projects. Each generation has sought the elimination of difficulties encountered in the previous generation, improvement of conditions, and a more effective public–private alliance. The road concession has represented a valid alternative to facing the problems associated with investment lag in the road infrastructure. However, the program has been characterized by a lack of clarity regarding strategic aspects, which has not allowed the consolidation of a long-term concession program.

INVIAS is the entity responsible for executing concession contracts for the road system. As mentioned, guarantee payments under the concessions of the first generation represented approximately 30 percent of the entity's annual budget in 2001. Of the nine contracts of this first generation, only two are operating without financial difficulties. The structure of the first generation of road concession contracts included minimum traffic and cost overrun guarantees.

Later the government conducted more detailed engineering studies before initiating bidding processes, allocated risks in a more efficient way according to each party's management capacity, and established variable concession terms depending on the achievement of the concessionaire's expected income. Two concessions were contracted under this scheme (second generation), one of which is undergoing judicial review (under the concept of caducity), and the other is in operation. In the third generation, projects are conceived as trade corridors, where the efficient operation of the road network becomes essential, and socioeconomic factors of the area of influence of that network are considered in the structuring and financing of the concession. Furthermore, the schedule of the execution of improvement or construction works are adjusted to the actual demand, establishing contractual agreements on the basis of capacity requirements and service levels. Projects of this third generation are expected to be contracted in 2002.

Road concessions have encountered the following problems: (a) weakness of the institutional scheme in the follow up, control, and supervision of contracts, which have been carried out partially and inconsistently; (b) emphasis on award speed and weakness in planning processes and decision-making without a clear priority as to their contribution to the country's development objectives; and (c) project structuring without regard to the effects on the overall transportation system.19

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19. At the regional level, Departments also awarded some road concessions. Based on the first-generation scheme, these concessions face the same problems as those at the national level.
Private participation in the road sector has two dimensions. The first is to have proper designs in the structuring of the new concessions. It must be taken into account that the number of potential projects to be structured is very limited (after the first and second generation, the new projects to be awarded under concession are reduced), and that the first and second generations will have effects (financial and operational) over possible new concessions. Therefore, concessions should be reviewed integrally.

The second dimension is to respond to concessions already awarded and which are facing difficulties. These concessions have demanded high levels of public contribution by the risk-allocation scheme adopted, particularly, by the guarantees offered for sharing the commercial risk with the concessionaire. There are two basic problems. (a) there is a reduced potential of modifying substantial contractual conditions, and (b) renegotiating the contracts would involve substantial financial requirements—purchasing existing guarantees, for example. Contract management and effective supervision of performance should be strengthened. The reduction of public contributions is very important, but unlikely to be achieved.

Regarding the other subsectors, the railroad sector has contracted concessions for the Pacific and Atlantic systems (1,746 kilometers), including line reconditioning, improvement, and extension. Since the two concessions awarded for the reconditioning, improvement, and maintenance of the Atlantic and Pacific lines are about to be initiated, it would be premature to evaluate these two concessions. In turn, and having due regard for the importance of the river system for regional and local transportation, the participation of the private sector in the management and reconditioning of the Magdalena and Meta Rivers is uncertain. Existing and potential cargo volumes are not seen as attractive for private participation, and before initiating these processes it would be wise to evaluate the characteristics and the new technologies developed for navigation along these types of rivers.

With respect to airports, the government intends to continue with the concession tenders for the Bogotá and Medellín Airports, together with other minor airports, basically following the scheme proposed for the Cali Airport already under concession. The concession contracts seek to promote a clear transfer scheme of risks and responsibilities and to program works according to an investment plan that responds to the demand needs and to the service levels offered. The concessionaire will pay the government a contribution for the use of the airport premises. Once the large airports are given under concession, the regulatory entity—Aerocivil—will continue operating and managing the regional airports, which generate low income but play an important social and integration role. The resources to be given to the government by the concessionaires of the larger airports would have to be sufficient to meet the resource requirements of the regional and local airports and air security.

20 Prior to the Cali Airport, the second runway of the Bogotá Airport and the Barranquilla and Cartagena Airports had been awarded in concession.
f) Difficulties in the Mobilization of Population within Urban Areas

As mentioned in the Urban Development Chapter, the increase of land development in Colombia, and urban population growth, have generated strong pressure on the quality of public transport services. Cities in developing countries invest more than 20 percent of their annual investment budget in their transportation and road systems. Transportation costs for the poorer urban population consume up to 25 percent of family income. A great proportion of the poor urban population in Colombia is excluded due to lack of access to employment, health facilities, and interaction with the rest of the community. On the other hand, the increase in vehicle motorization in the cities has created heavy pressure on the urban space for the construction of new roads. This situation, which in itself is unsustainable, must be reviewed by the local authorities with a view to defining policies to support mass transit, nonmotorized transport, protection of the public space, and restriction of the use of private vehicles.

In recent years, Bogotá has undergone a significant change in public transport development, mainly due to the Transmilenio system; policies of public space protection, such as widening of sidewalks and street parking restrictions; construction of bike routes; and vehicle restriction measures by plate number—the so called pico y placa for private and public transport vehicles. Because of those policies and strategies, the city has become a model at the national and regional levels. Due to financial reasons, the city postponed its decision to construct a heavy metro system, and instead built a modern bus system (Transmilenio). This system, representing 10 percent of the investment cost of a heavy metro system, has been a model for other cities considering solving their transportation problems through investment in a modern, cost-effective system with a high level of service. Based on the Transmilenio experience, improvement of public transport has become a priority for most Colombian cities, such as Barranquilla, Bucaramanga, Cali, Cartagena, and Pereira, which are now interested in developing good-quality mass transport systems, commensurate with their financial capabilities.

Public bus transportation in Colombian cities is disorganized and of low quality, and directly affects urban productivity and quality of life. Regulatory measures have been directed at improving inefficiency and at the use of inadequate equipment (for example, in elements that affect the structure of the transport industry or the type of the existing fleet). As a result, operating speeds are very low, travel times are high, as are accident rates, and there are high levels of air and noise pollution. The operation still maintains the "penny war" (guerra del centavo), bringing negative consequences to the level of service, security, and financial sustainability of the industry.21 In Colombian cities, including Bogotá, where there still are serious transport prob-

21. In the guerra del centavo the salary of the driver depends on the number of passengers transported. This incentive creates an aggressive competition for passengers on the streets, negatively affecting safety and quality of service, and creating congestion.
lems to be solved, the cost of transport is highest in the outlying areas, where the poorer populations live.

Although each municipality has regulatory responsibilities, national regulations influence transport in the cities. National decisions, such as those of affiliating companies (which promote the 

*guerra del centavo*), the useful life of the vehicle stock, and clearance of vehicles for public transport, are decisions involving transport organization in the cities which affect the transport offer itself over service security. With the exception of *Transmilenio* buses, the buses being used for public transport are not appropriate for their purpose. Also, the national government is responsible for approving intermunicipal routes, but fails to take into account whether service is already provided in neighboring or municipal conurbations, where service is clearly urban.

In addition, traffic and transport authorities are often weak and do not have adequate tools for planning and managing the sector. Generally, operating clearances are given without technical criteria where political interests and corruption take precedence.

In sum, the four main issues regarding the transport sector are (a) the effects of the armed conflict and the isolation of various zones within the country, (b) the completion and consolidation of the institutional reform, (c) the progressive deterioration of the road system due to lack of resources and the financial drain caused by the guarantee commitments of the first generation of concessions, and (d) the low level of service and the mobility problem suffered by populations in the main urban centers. The recommendations that follow are directed at formulating a strategy that enables the elimination of institutional, regulatory, financial, and social bottlenecks found in the analysis of the sector. The recommendations emphasize aspects related to the road sector, because road transport is the main mode of transport in the country.

III. Recommendations

a) Contributing to the Peace Process

The transport sector contribution to the generation of peace conditions should continue and should be strengthened through environmentally sustainable investments aimed at benefiting the poorest rural populations in critical zones of the conflict. This should be done by enhancing the access of those populations to public services and markets, improving transport infrastructure according to the conditions of each zone (including the possible interconnection to other land and river transport facilities and services), generating temporary employment through the extensive use of local manpower, and promoting community participation in the design, operation, maintenance, and monitoring of road projects. In addition, road and transport projects should be interlinked with economic activities, productive initiatives, and social development. In this respect, a case in point is the project along the transversal corridor that passes by Mompox, in the Bolivar Department. This transport project,
envisioned as a regional development project, would help integrate poor and isolated communities so they receive social services and are given opportunities, and would facilitate the implementation of local development, poverty alleviation, and peace promotion programs.

The armed conflict is affecting the participation of the private sector in infrastructure development and operation, the amount of budgetary appropriations to the sector (since the resources of the national budget are being diverted to defense), and the decentralization process (also due to financial difficulties and the diversion to social and public order issues of the various administrations). The impact of the armed conflict must be factored into the definition and design of the financing and private sector participation initiatives for the sector.

b) Consolidation of the Institutional Reforms of the Transport Sector

The consolidation of the institutional reforms of the transport sector and the strengthening of its entities are critical. An institutional framework needs to be established. The time has come to identify the needs for institutional support in all entities and at all levels of public administration. The recommendations within this area are:

i. Formulation of Policies and Sector Planning

- Strengthen the Ministry of Transport's technical capacity to enable it to perform its policymaking and planning roles through the use of appropriate tools and the development of intermodal strategies. Revamping of the office of the Transport Master Plan (Plan Maestro de Transporte), as a means of developing the appropriate tools that would enable the management activities to be integrated into the infrastructure planning system in the medium and long term, should continue, thus facilitating decision making in public investment matters.

ii. Regulation and Control

- It is necessary to separate the Transport Regulation Commission (Comisión de Regulación de Transporte) from the Ministry of Transport and to determine its scope at the Departmental and Municipal levels. The Commission should be entirely autonomous in terms of budget and management matters. Also, strategies should be established to enable it to clearly identify the priorities and basic aspects of the regulation. The regulation should seek quality, security, and coverage of the service provided according to guidelines, parameters, and criteria established in Colombia's transport laws.

- The regulations should promote competition in the provision of freight transport services, and with respect to the transport of urban and intermunicipal passengers, competition should be created for market space (through tenders). This will translate into market-based control over the current oversupply in the long-haul transport industry.
• The Superintendency of Transport is responsible for the inspection, vigilance over, and control of the concession contracts, although the purpose and scope of such inspection and vigilance is not clear. There is a need for a program to support the Superintendency in its responsibilities and to identify the priorities for guiding the roles developed by this entity and to enable the definition of a framework for the evaluation of its performance.

iii. Executing Entities
• The government must reactivate the institutional strengthening of INVIALS to complete its transformation into a commercial entity, including in particular: (a) raising its project management capacity; (b) institutionalizing the use of performance-based indicators; (c) strengthening its capacity to supervise and manage contracts with the private sector; (d) increasing user participation and the participation of other stakeholders in the decision making process of the road sector, and (e) gradually implementing quality criteria on contractors, operators, and consultants.

iv. Greater Road Security
• It is necessary to strengthen the Ministry of Transport, the Regulatory Commission, and the executing entities in order to include within their priorities both accident prevention and the lowering of the accident rate. In addition to measures taken to reduce the accident rate, such as improvement of the traffic signs in the national road system, it is necessary to continue road maintenance programs, control vehicle weight, promote campaigns for prevention of accidents, and establish a security program to include security audits, agreements with education and health entities, training of users and road and traffic police, and continuing of prevention campaigns.
• Regarding the serious hijacking problem, it is necessary to adopt a monitoring system and to implement the use of vehicle location devices. It is important to increase coordination between the Transport and Defense Ministries in order to develop strategies to fight security problems on the roads.

c) Decentralization of the Road System
• Defining institutional and operational roles among Departments, Municipalities, and national agencies, and establishing the steps for a technical and financial strategy, including financial incentives, so that territorial entities can assume this role in an efficient and sustainable way.
• Completing the decentralization process of the tertiary system. To that effect, the transfer of rural roads to Departments should conclude the liquidation of the corresponding national entity.
• Strengthening the institutional capacity of Departments and Municipalities for a sustainable maintenance of the secondary and tertiary system. For that
purpose national entities must resume the training programs developed at the beginning of the process, and structure a training program that emphasizes generation of knowledge.

d) In Search of Financial Sustainability for the Sector

The high level of financial dependency on the national budget means that the sector meets its responsibilities with difficulty, especially regarding maintenance of the infrastructure. This situation generates the need to invest great amounts of money in reconditioning and reconstruction work, with the resulting additional costs for the country. At present, there is no relationship between user contributions and the effective expense of the system and, therefore, it is impossible to set up a market where works are determined by supply and demand. Notwithstanding having resources available derived from user charges (tolls and fuel surtax), their appropriation is limited as to their availability. While toll income is generated by the main roads, and at present more than 50 percent of the resources are directed to concession contracts (to serve approximately 15 percent of the national road system), fuel surtax resources are generated mainly in the major cities and, in a high percentage, their use is destined for the urban road system and transport systems, and to a lesser extent, for Departmental and Municipal roads.

The structuring of further private participation contracts should be taken into account. The primary road system depends on private participation programs. The option to be considered must take into account (a) the generation of an appropriate return for both the licensor and the licensee; (b) the level of control provided to the licensee for the operation of a defined road corridor or set of roads; (c) the level of control over cash income and surplus, including subsidies between road sections or payments to finance works; and (d) the institutional structure that defines roles and obligations of the different public and private entities in relation with the concession, structure, and award, type of licensee, road operator, control, and follow-up.22 The challenge is to put into operation these four elements, particularly in an environment where projects are already licensed and new concessions are to be contracted.

Concessions already awarded have required important levels of public contribution by the risk-allocation scheme adopted and, particularly, by risk guarantees offered to share the commercial risk with the licensee. These guarantees commit approximately 30 percent of the INVFIAS annual budget. The reduction of these contributions depends mainly on the analysis of contractual conditions with concessionaires to achieve a win–win situation. Furthermore, the sector entities must step up their supervision of these projects to ensure proper accounting of guarantees and

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22. Booz Allen & Hamilton, Opciones para el Fortalecimiento de las Concesiones Viales en Colombia. PPIAF Study, World Bank. This study is in the final stages of production. A discussion workshop with the key stakeholders was expected to be held before the end of June 2002, prior to the release of the final version.
compliance with contractual arrangements. It is estimated that contribution reduc-
tion could be achieved if the following steps are implemented: (a) modification of 
overall exposure, (b) reduction of risks covered, and (c) budgetary flexibility. How-
ever, any type of modification to contracts will necessarily generate costs that should 
be clearly evaluated. For third-generation concessions, the State has available the 
Contingencies Fund (Fondo de Contingencias), to which INVIA
t has to contribute 
resources from its current budget for every new contract in which guarantees are 
offered. For each project the amount that needs to be allocated will depend on the 
type of risk being covered and its expected probability of occurrence. It is believed 
that this instrument is quite novel and useful for contingent risk management of the 
concessions.

The complexity and characteristics of the concession contracts have led to a 
reconsideration of the public-private relationship. In the INVIA
t case, the entity has 
not had adequate capabilities to manage these types of contracts and continued 
supervision of public works. During the execution of concession contracts, a clear 
weakness of INVIA
t has been evident in comparison to its private counterpart. Due 
to the complexity and volume of the negotiations and the technical and operational 
limitations by INVIA
t, it is necessary to consider institutional alternatives for the 
management and supervision of the road concessions.

Based on the foregoing, proposals have been advanced to limit INVIA
t's responsi-

bilities to the planning of the concession program, taking as a basis the overall 

vision that the entity has of the road system, and to transform the Concessions Division 

of INVIA
t (Subdirección de Concesiones) into an autonomous entity (under the 

jurisdiction of the Ministry of Transport) entrusted with the responsibility of supervis-
ing, and providing follow up to the concession contracts. The objective of sepa-
rating this entity is to ensure a faster decision-making process, and to create condi-
tions favorable to attracting and retaining specialized staff. To maximize the benefits 
of this scheme, the supervisory entity of concessions could eventually include the 
supervision and management of other types of concessions in the transport field, 
such as ports, railroads, and airports.

References

Booz Allen & Hamilton. 2001. “Options for Concession Strengthening in Colom-

——— (Forthcoming.) Opciones para el Fortalecimiento de las Concesiones Viales en 
Colombia. PPIAF Study. PPIAF; World Bank.

Annex

Table A.1. Road Priority Projects—Vías para la Paz Program

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<td>Outlines and policies and control</td>
<td></td>
</tr>
<tr>
<td>Cargo and passenger land transport</td>
<td>Outlines and policies</td>
<td>Economic regulation, market access, competition promotion, etc</td>
</tr>
<tr>
<td>Road transport</td>
<td>Outlines and policies</td>
<td>Economic regulation, market access, competition promotion, etc</td>
</tr>
<tr>
<td>Air transport</td>
<td>Outlines and policies</td>
<td>N/A</td>
</tr>
<tr>
<td>Urban transport</td>
<td>Outlines and policies</td>
<td>Uncertain</td>
</tr>
</tbody>
</table>

N/A = Not applicable
Table A.3. Port Indicators With and Without Reform

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Before 1993</th>
<th>1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby average time/ship/day</td>
<td>10</td>
<td>No standby time or minimum standby time depending on port</td>
</tr>
<tr>
<td>Time/ship/port</td>
<td>10 days</td>
<td>1.5 days</td>
</tr>
<tr>
<td>Labor hours/day</td>
<td>16 hours/day</td>
<td>24 hours/day</td>
</tr>
<tr>
<td>Ton/ship/day bulk</td>
<td>500</td>
<td>2,500 minimum</td>
</tr>
<tr>
<td>Ton/ship/day general</td>
<td>750</td>
<td>1,700</td>
</tr>
<tr>
<td>Containers/ship/hour</td>
<td>16</td>
<td>25–30</td>
</tr>
<tr>
<td>Tariff reduction</td>
<td></td>
<td>52 percent</td>
</tr>
</tbody>
</table>

Source: Superintendency of Ports
Table A.4. Anticipated Private Participation in Transport

<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>Type of System/Installation/Award Year</th>
<th>Responsible Entity</th>
<th>Name of Project</th>
<th>Present Status/Scope</th>
<th>Award Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>National</td>
<td>INVIAS</td>
<td>8 concessions in the national highway network</td>
<td>3,578 km</td>
<td>Being structured</td>
</tr>
<tr>
<td></td>
<td>Municipal</td>
<td>IDU Bogotá</td>
<td>Avenida Longitudinal de Occidente (ALO)</td>
<td></td>
<td>Structure postponed</td>
</tr>
<tr>
<td>Transport</td>
<td>National</td>
<td>Ministry of Transport</td>
<td>Sistema de Trámites de Transito a Nivel Nacional</td>
<td>Concession</td>
<td>Under study</td>
</tr>
<tr>
<td>Airports</td>
<td>National</td>
<td>UAEAC</td>
<td>Terminales de Bogotá y Medellín (José María Córdoba)</td>
<td>Concession</td>
<td>Under study</td>
</tr>
<tr>
<td>River</td>
<td>National</td>
<td>Cormagdalena</td>
<td>Recond &amp; Maintenance Magdalena River</td>
<td>Concession</td>
<td>Under study</td>
</tr>
<tr>
<td></td>
<td>MT</td>
<td></td>
<td>Recond &amp; Maintenance Meta River</td>
<td>Concession</td>
<td>Demand study contracted</td>
</tr>
<tr>
<td>Seaports and access</td>
<td>MT</td>
<td></td>
<td>Channel access to Buenaventura port</td>
<td>Concession</td>
<td>Project postponed</td>
</tr>
<tr>
<td>channels</td>
<td></td>
<td>Cormagdalena</td>
<td>Channel access to Barranquilla port</td>
<td>Concession</td>
<td>Being structured</td>
</tr>
<tr>
<td>Railroad</td>
<td>National/Regional/Municipal</td>
<td>Ferrovías</td>
<td>Approach trains in Bogotá, Medellín, and Cali</td>
<td>Concession</td>
<td>Bogotá and Medellín under study. Cali considered</td>
</tr>
</tbody>
</table>

(continues on next page)
<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>Type of System/Installation/Award Year</th>
<th>Responsible Entity</th>
<th>Name of Project</th>
<th>Scope</th>
<th>Present Status/Award Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban transport</td>
<td>Municipal large cities</td>
<td>Office of Mayor, Cali</td>
<td>Public service massive transport system for Cali</td>
<td>Being structured</td>
<td>Pending decision</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Office of Mayor, Bogotá</td>
<td>Transmilenio bus system</td>
<td>Concession</td>
<td>Most concessions and contracts already awarded</td>
</tr>
<tr>
<td></td>
<td>Municipal/intermediate cities</td>
<td>Office of Mayor, Bucaramanga</td>
<td>Massive transport system for Bucaramanga (buses)</td>
<td>Potential concession</td>
<td>Being structured</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Office of Mayor, Ibagué</td>
<td>Traffic service management for Ibagué</td>
<td>Potential concession</td>
<td>Under study</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Office of Mayor, Pereira</td>
<td>Massive transport system for Pereira (buses)</td>
<td></td>
<td>Conceptual design to be contracted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Office of Mayor, Valledupar</td>
<td>Traffic/transport system for Valledupar</td>
<td></td>
<td>Local interest</td>
</tr>
<tr>
<td></td>
<td>Other offices of mayors in the Atlantic Coast</td>
<td></td>
<td></td>
<td></td>
<td>Local interest</td>
</tr>
</tbody>
</table>
Energy Sector Strategy

This Chapter was written by Eduardo Zolezzi.

I. Background

Colombia's generous endowment of energy resources includes oil, natural gas, hydropower, and coal. The corresponding subsectors compete for markets either at the level of final consumers or as inputs for power production, and they also have existing or potential export markets. As a result, energy sector policy involves complex trade-offs between consumer interests, environmental considerations, and a large number of private and public agents that often operate under imperfect market conditions.

Recent economic performance has been disappointing: 1999 witnessed a deep recession in which gross domestic product (GDP) shrank by 4.3 percent; 2000 yielded low growth (2.8 percent), and 2001 did not do much better. Unemployment started to grow in 1997 and has reached record levels, in excess of 15 percent, and has not improved in recent years. The energy sector has become the major foreign exchange earner, having displaced coffee in the 1980s. It now accounts for 39 percent of the country's exports, mainly through oil and coal, and around 7 percent of GDP.

Despite being an oil and coal exporter, and producing sizable amounts of natural gas and electricity, Colombia's per capita consumption is, paradoxically, extremely low: as shown in Figure 1, at 760 kilograms of oil equivalent per capita, it is about half, or less, that of other Latin American countries such as Argentina, Chile, or Mexico, and a fifth that of a developed, conservation-minded country such as the United Kingdom.

a) Terrorism

Underlying the country's economic problems are social issues that have erupted in a wave of violence, confrontation with rebel factions, and terrorism. The energy sec-
tor has been a prominent victim of this state of affairs, due to pipeline sabotage and the wrecking of transmission pylons. One major export-oriented pipeline (Caño Limón-Coveñas) was sabotaged 260 times during 2001 (every 36 hours on average!) and over 900 times during its 17 years of existence; since its inception, an estimated 117 million barrels of oil have not been able to be exported due its unavailability. At US$16 to US$20 per barrel, the gross cost to the country was around US$2 billion. During 2001 alone, foregone exports were valued at around US$500 million. Similarly, the electrical interconnection between the central region and the Atlantic Coast operated intermittently during 2001. During 2000, 448 transmission pylons were sabotaged, forcing the sector to spend around US$13 million on repairing them; in 2001 the number of incidents was lower—254—but still had a repair cost of around US$9 million. However, the major cost of power transmission disruption is borne by users, who pay for the additional costs of power production associated with “out of merit” dispatch; during 2001 the cost of disruptions in the network translated into around US$200 million of extra production expenses.

1. Dispatch of generating plants (what plants are operated and when) is done in order of the less to the more expensive to operate, which is called “merit order.” “Out of merit order” is when plants are operated not in “merit order.”
The sector is managed by the government's Ministry of Mines and Energy (MME). MME comprises a semi-autonomous planning and information unit (Unidad de Planeamiento Minero–Energética, UPME) and an independent regulatory commission for power and gas (Comisión de Regulación de Energía y Gas, CREG). Public sector involvement in the sector's operational aspects includes Empresa Colombiana de Petróleos (ECOPETROL), the State oil company; Empresa Colombiana de Gas (ECOGAS), a public gas transmission enterprise; ISA Generación (ISAGEN), a major, state-owned power producer; Interconexión Eléctrica S.A (ISA), the principal power transmission company; Empresas Públicas de Medellín (EPM), a foremost municipal company; and several distribution companies. Energy sector projects are also under the purview of the National Planning Department (DNP) and require liaising with the Ministry of the Environment (MOE).

There is also a strong private sector presence in the sector. Private oil companies have been established for many years in exploration and production, and they operate the major gas and oil fields. The coal subsector is totally in private hands, including the major Cerrejón Zona Norte coal mine. Private enterprises operate the main gas pipelines under build, operate, maintain, and transfer (BOMT) contracts. In the power sector, private companies (or companies with a private majority interest) own 60 percent of the installed capacity and account for 49 percent of final customer sales; they supply around 43 percent of all customers.

The provision of public services to final users is supervised by the independent Superintendencia de Servicios Públicos Domiciliarios (SSPD), which is in charge of responding to customer complaints and taking over companies the financial condition of which impedes providing service under standard quality conditions. SSPD is currently in charge of five distribution companies, including the one supplying the Cali market (the second-largest city in the country).

The following sections provide a brief overview of each sector (oil, gas, power, and coal) and an outline of environmental questions, in order to identify achievements and issues that will be revisited in greater depth in the second part of this Chapter.

b) Oil Subsector

Colombia became an oil exporter in the 1980s with the discovery, by Occidental Petroleum in association with ECOPETROL, of the Caño Limón field. Oil prospects improved further with the discovery, in association with British Petroleum (BP), of the Cusiana oil and gas field. Oil exports in 2000 amounted to 384kbpd, equivalent to 56 percent of total production; the maximum export volume was reached in 1998 and 1999 with 456kbpd and 515kbpd, respectively. Within Latin America and the Caribbean, Colombia's production (684kbpd) comes in fifth.

2 Thousands of barrels per day
roughly on the same level as Argentina, behind Venezuela (around 2,900kbpd), Mexico (2,800kbpd), and Brazil (1,100kbpd).

Proven oil reserves have exhibited a downward trend in the last six years: they have decreased from around 3,000Mbbl\(^3\) in 1995 to around 2,000Mbbl in 2000. The R/P\(^4\) ratio has deteriorated from 14 years in 1995 to 8 years in 2000. Within the region, reserves are modest compared to Venezuela (around 70,000Mbbl) and Mexico (28,000Mbbl), and comparable to those of Argentina (Figure 2); Colombia's reserves would account for around 2 percent of the Latin America and Caribbean totals. Nevertheless, based on geological data, the country's potential is estimated at 37,000Mbbl. Substantial amounts of oil remain to be discovered and justify additional exploration efforts.

Oil exploration and production are conducted mainly under an "association" contract between ECOPETROL and private companies. Exploration risks are borne by the private company and, if a commercial field is found, costs and production are shared according to a formula that has evolved since its inception around 1974, in order to spark and maintain interest in exploration.

The demand for oil products is filled by refineries owned by ECOPETROL, and by imports. Demand for white products (distillates and gasolines) was 204kbpd in

Figure 2. Comparative Reserves (Mboe)

![Comparative Reserves Chart](image)


3. Millions of barrels.
4. Reserves to Production.
2000, down from 232kbpd in 1997, in line with the deterioration of economic conditions. Imports accounted for less than 3 percent of total demand in 2000. In broad terms the country is self-sufficient regarding oil products and has maintained exports of the latter on the order of 80kbpd, equivalent to 30 percent of production (including fuel oil). Colombia’s refining capacity is around 300kbpd, a modest figure when compared to Brazil, Mexico, or Venezuela, all of which have refining capacities in excess of 1,200kbpd. Installing additional capacity has been debated for some time, and the current thinking revolves around the expansion of the Cartagena refinery with private sector participation.

Pricing of oil products is determined by MME according to a formula that was initially established to progress to international prices. During 2000 the ex-refinery price increased by 40 percent, thereby reflecting the general increase in oil prices (for example, 40 percent for Brent crude between 1999 and 2000). Caps are established along the distribution chain; taxes account for around 40 percent of the price at the pump for regular gasoline and 30 percent for diesel. Current prices are around US$1.45 per gallon for regular gasoline and US$1 per gallon for diesel. Pricing conditions for different oil products are summarized as follows.

- Regular gasoline: regulated price at the production and wholesaler levels, with limited competition at the pump; taxes include national taxes, local taxes, and value added tax (VAT).
- Premium gasoline is deregulated and has taxes similar to regular.
- Diesel: regulation similar to regular, but the regulated ex-refinery price does not reflect costs when compared to gasoline (27 percent lower); taxes are similar to those of regular gasoline.
- Fuel oil: deregulated, subject only to the VAT.

The original pricing formulas of 1998, which were intended to lead to a progressive deregulation of oil products, were subsequently modified to reduce the short-term impact of higher international prices. The government intends to continue on the road to deregulation, but this requires a credible commitment to stable rules, which so far has not been evidenced, in order to attract participants other than ECOPETROL, either as importers or refiners. The rules governing prices for gasoline and diesel have created a “dieselization” incentive that does not respond to economic signals. Finally, it is necessary to acknowledge that popular sensitivity to gasoline and diesel prices is acute and that it can provoke protests and riots similar to those witnessed in France and the United Kingdom during the summer of 2000. Given Colombia’s precarious social stability, the government’s reluctance to run such risks is understandable.

c) Gas Subsector

Natural gas is a relative newcomer to the energy market. Although it has supplied the Atlantic Coast region (where the major gas fields in production are located) since
the mid-1970s, it has been available in significant amounts in the interior only since the early and mid-1990s. Its development has been stimulated by the construction of gas pipelines which link the fields on the Atlantic to the interior under the “Gas Dissemination Program” promoted by the government. Since 1991, natural gas has been available in most major cities of the interior, including Bogotá, Cali, and Medellín. It has allowed a significant substitution of electricity at the residential level and the installation of gas-fueled turbines for power production at sites other than the Atlantic Coast.

Proven reserves are currently around 7.2 Tcf, of which 73 percent are marketable. They are concentrated in the Atlantic region’s Guajira field and in the interior Cusiana field (an oil-producing field with large amounts of associated gas). The Cusiana field requires gas to be treated before significant amounts can be marketed. The R/P ratio for gas is currently 25 years. However, this ignores both the dynamics of gas fields, which do not lend themselves to reprogramming of their production pattern, and the bottlenecks in the gas pipeline system.

Gas production in 2000 amounted to 578 Mcmd, of which 80 percent originated in the Atlantic Coast–Guajira gas field operated by Texaco under a contract with ECOPETROL. The Atlantic region consumed 63 percent of total supplies; the interior region was partially supplied by transfers through the interconnection pipeline, a vulnerable link that has been the target of terrorist activity that can disrupt supplies to a large number of consumers and power plants.

Demand for natural gas is concentrated in the power sector (42 percent), ECOPETROL (21 percent), industry (22 percent), households (13 percent), and transport (2 percent). Total gas demand remained stable (around 400 Mcmd) between 1990 and 1995, since then, it has grown due to new power sector demand, increased industrial demand, and domestic demand. The latter witnessed an increase in the number of consumers from 0.94 million in 1995 to 2.2 million in 2000 (a 19 percent average annual growth rate).

Future demand for natural gas is subject to considerable uncertainty due to (a) the absence of historical demand data given its relatively recent penetration in the energy market, and (b) more important, the uncertainty surrounding power sector demand. The latter is influenced by the demand for electricity and by hydrological uncertainty; an appearance of an El Niño drought would immediately provoke natural gas demand to shoot up. Currently, due to depressed power sector demand and to the commissioning of hydropower plants (see Power Subsector section), additional gas demand for power production, at least until 2005, is expected to be accommodated with the existing supplies and pipeline capacities.

Natural gas transport is performed mainly through facilities under BOMT contracts with private investors–operators and ECOPETROL. ECOGAS, majority-owned by ECOPETROL, manages the BOMT contracts and charges users for use

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5 Tera (10^{12}) cubic feet
6 Million cubic feet per day
of the pipelines following pricing formulas established by CREG. Distribution prices are also regulated by CREG; the distribution markup is established for periods of five years and is adjusted yearly to reflect improved productivity, inflation, and exchange rate changes (that is, an "RP minus X"-type formula). An indicative price for domestic supplies in major cities (Bogotá, Medellín) is in the range of US$4.5 to US$5.0/MBTU, compared to US$6 to US$7/MBTU in the United States and over US$8/MBTU in the United Kingdom. Industrial prices, by contrast, are on the order of US$3.4/MBTU compared to US$2.7 to US$2.9/MBTU in the United States and the United Kingdom, respectively.

Wellhead prices of natural gas are regulated by CREG. Currently, the two main fields (Texaco and Cusiana), together with the Ópón field (which was expected to yield large amounts but proved to be uneconomical), are regulated by linking the price to the fuel oil price. Prices for "new" gas are free (that is, to be negotiated at the market price). Furthermore, by 2005 all gas supplies would no longer be regulated at the wellhead, subject to CREG determining whether "adequate" competition exists.

Natural gas regulation has been the subject of considerable debate, particularly regarding wellhead prices. Confrontation between MME and CREG has occurred in the past, usually under a reasonable argumentation framework, but in the case of natural gas, debates during 2000–01 led to notorious public quarrels that culminated with the resignation of CREG’s commissioners. Given the recent availability of the resource, it is understandable that CREG should lack the experience to tackle many of the challenges of its regulation, particularly in the downstream sector. However, it would seem to have acquitted itself relatively well in this respect: areas for gas distribution have been established and gas has been made available to large numbers of new users, with private operators leading the establishment of new connections.

d) Power Subsector

During the last decade the power subsector has witnessed a dramatic evolution: from practically 100 percent public ownership in 1991, it has achieved, as noted, 60 percent private sector participation in generation (measured by installed megawatts [MW]), and 43 to 49 percent private sector participation in supply to final consumers (depending on whether the measure is taken according to number of consumers or kilowatt-hour [kWh] sales). In the process, a competitive wholesale market was developed, CREG acquired highly developed regulating skills, and UPME has been able to reach a level of technical competence that has allowed it to take over the planning functions previously vested in subsector entities. From an initial count of around 40 agents between generators, vertically integrated companies, and distribution companies in 1991, there are now over 100 agents, which comprise producers, transmission enterprises, distribution companies, and suppliers. Along the way, generators and distribution companies created associations (ACOLGEN and ASOCODIS, respectively) that have established a strong lobbying presence.
The reforms and the regulatory framework put in place in the power subsector are impressive, particularly if compared to the situation that prevailed a decade ago. Although a portion of the assets is still in public hands, operation and management of the largest publicly owned power companies (ISAGEN, ISA [transmission], and EPM) is to be commended, particularly under the circumstances of increasing guerrilla attacks on the power infrastructure in recent years.

Current installed capacity is around 13,000MW, of which 66 percent corresponds to hydro plants. Total production in 2000 amounted to 42.3 Gigawatt hours (GWhs) and peak demand reached 7,700MW. The power sector has not been immune to the country's economic afflictions: production and peak demand have practically stagnated since 1996, although there appear to be signs that demand is picking up, although at a very modest rate. In any case, there is a significant amount of excess capacity as evidenced by utilization factors on the order of 0.3 for thermal plants and 0.6 for hydro facilities.

With a population estimated at 42 million in 2000, and an average of 5 to 6 people per household, there are around 7 million to 8.4 million households. Residential consumers amount to 7.3 million, which would indicate a coverage ratio on the order of 90 percent. However, this figure does not adequately represent the significance of areas that lack continuous electricity service:

- Noninterconnected zones (commonly known as Zonas No Interconectadas, or ZNI) cover 52 percent of the country; they include about 72 municipalities and a total of around 900 communities, and they account for a population of around 2 million (about 5 percent of the total).
- The ZNI have a very low population density (3 persons/km²), which presents an important obstacle to electrification.
- Coverage in the ZNI is only about 50 percent, and electricity service is available only about 12 hours per day in the municipal townships and about 5 hours per day in other communities.
- The ZNI account for a large part of the territory where violent confrontations take place; finding acceptable solutions to their needs is an important element of the peace process.

Achieving increased coverage in the ZNI is a major issue for the near future due to its social and environmental implications.

**The Wholesale Market.** Wholesale power is traded in a competitive bid-driven market. It was based on the England and Wales model. Initially, participation in the wholesale market included producers and suppliers, and customers with loads above 2000kW; this limit has been reduced to either 100kW, or consumption above 55MWh per month. Accordingly, the number of physically monitored borders has

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shot up from around 150 initially, to over 3,000. This development attests to the expertise acquired by wholesale market institutions during the last six years.

The wholesale market is managed by ISA, the main transmission company, which includes the dispatch function resulting from the bidding process, and the accounting and clearinghouse functions. Plans have been proposed to detach these functions from ISA and to set them up within independent entities in the interest of greater transparency. This has not taken place and it is not at present a high-profile issue because there appears to be general satisfaction with the existing arrangements.

Spot market prices have proved to be highly volatile, but overall they have reflected the excess supply conditions. Average spot prices for energy were in the 2 to 3US$/kWh range. However, generators' income is increased by a "capacity charge" which was instituted in late 1996; it thereby increases the average market price significantly, by as much as 2US$/kWh. The rationale behind the capacity charge is to remunerate idle capacity that may be needed in case of emergency drought conditions.

In parallel to the bidding market there is a forward contract market, which allows hedging by suppliers and producers. It allows contracting parties to avoid the market's volatility. The forward contract market accounts for around 75 percent of total energy purchases.

Other elements that enter the wholesale energy price are so-called constraint costs, which reflect the additional cost imposed by transmission bottlenecks. This cost element was a minor constituent of the price until terrorist activity increased to a point where the system has operated with disconnected areas despite substantial investments in network reinforcement (for example, ISA's expansion program).

Retail prices are regulated according to formulas developed by CREG, which include regulated markups for transmission, subtransmission, distribution, and commercialization. The authorized unit cost will depend on each regulated supplier's characteristics and its purchases on the contract and wholesale markets; for example, at the low voltage level, it varies among retailers between 10.8US$/kWh and 6.5US$/kWh. At the level of final consumers, there is a regulated cross-subsidization scheme mandated by law, which imposes a surcharge on higher-income residential users and nonresidential (industrial and commercial) users to subsidize lower-income domestic consumers. For example, the average prices by consumer subsector were 5 7US$/kWh for domestic consumers, 8.3US$/kWh for commercial users, and 7.1US$/kWh for industry. Within the domestic-user group, prices averaged 4.5US$ for the poorest group and 8.7US$/kWh for the richest.

Privatization Processes. The reforms implemented since 1992 include the sale of state-owned power plants and the incorporation of private sector participation in production and distribution. This process was exceedingly successful, particularly in the case of the Bogotá utility, which was transformed from a financial and technical trouble case into a highly successful enterprise. For example, the company succeeded in controlling losses and reducing them from over 22 percent to 14 percent, a goal
that had eluded previous administrators for many years. Privatization was less successful in the case of utilities on the Atlantic Coast, where the distribution utilities were sold and the proceeds of the sale were kept by the government. The private operators were faced with the need for additional investments in highly deteriorated networks, a new company (Unión Fenosa) bought these companies and is endeavoring to turn them around financially.

A number of companies that were targeted for privatization are still in government hands. Some of them have been taken over by the SSPD, and their financial weakness has far-reaching effects; for example, these companies tend to accumulate debts in the wholesale market, which increases the debt to generators and tends to undermine their credibility. Currently, the wholesale market has an accumulated debt of around US$110 million, which is equivalent to about 22 days of commercial activity. About US$40 million correspond to "old" debts of privatized utilities that are owed by the government. The balance corresponds to companies that are currently in receivership; if debt accumulates beyond a certain limit, a process for cutting off supplies is initiated. There is no immediate cause for alarm, but unless action is taken with respect to restarting the privatization process of these companies, the wholesale market's financial soundness may be undermined and customers may be subject to power cuts.

c) Coal Subsector

Colombia's coal reserves amount to 6,700 million metric tons (Mt), equivalent to around 40 percent of total reserves in South and Central America, (comparable only to Brazil's 5300Mt). Production is characterized by large export-oriented, open-pit mines in the Atlantic region, and small underground mines in the interior. Total production in 2000 amounted to 38Mt, of which 35.6Mt (94 percent) were exported. Most exports consist of thermal coal, with a small component of coking coal (0.8 Mt) originating in mines of the interior. The Cerrejón Zona Norte mine accounted for over 50 percent of all exports.

The public sector was initially involved in coal extraction through its participation in the Cerrejón Zona Norte mine, but the government sold its share to private shareholders and there are no longer direct public investment interests in coal production.

Internal consumption of coal in 2000 was concentrated in industry (77 percent) and in the power sector (22 percent). Prices are determined by the market and present a clear segmentation between supplies for export (around US$26/ton) and supplies in the interior (US$14/ton). International prices for coal show a trend in recent years toward lower values, from US$34/ton in 1996 to US$26/ton in 2000.

Issues surrounding the coal subsector center around supporting export-oriented mines by facilitating transportation and encouraging sharing facilities, such as the railways linking producing regions to the export ports. The government has been largely successful in arranging for economic sharing of the transport infrastructure
between coal-producing regions. As in the case of the other energy sectors, coal mines operate under the threat of terrorism, and coal-laden lorries are often targets of subversive groups. A solution to the social unrest problems would have a major positive impact on the coal subsector by encouraging the opening of new mines.

f) Energy and the Environment

Energy policy has increasingly taken into account environmental and social consequences of projects:

- Currently, UPME has introduced the environmental dimension into its planning process, particularly for power and mining sector projects, in coordination with MOE and DNP.
- There is cooperation with international agreements and agencies such as the Convention on Climatic Change (ratified in 1995) and the Global Environment Facility.
- The Ministry has participated with position papers in forums such as the Intergovernmental Committee on persistent contaminants, which determines international measures with respect to PCBs.
- The Kyoto Protocol was ratified by Colombia in December 2000.

Regarding specific implementation issues, UPME contracted the development of an information system to measure and estimate environmental impacts in order to support decisions for energy sector expansion. It also developed and applied a system of environmental cost indicators for the power subsector in order to estimate externalities associated with hydro and thermal plants, and transmission lines.

Environmental questions have been extensively addressed in several important projects:

- ISA has a methodology for environmental impact assessment and mitigation along transmission lines, including archeological recovery, which it has applied to its projects; this includes forestry compensation, reforestation activities, and conservation of a number of ecosystems.
- Hydro projects (such as San Carlos, Miel I, and Urrá I) have defined environmental management plans, including items such as forest conservation, management of solid residues, and treatment of residual water. Other socially oriented activities include local road conservation and cultural projects.
- Thermal projects (Termocentro combined cycle) have developed programs for control, monitoring, and treatment of residual water, solid residue management, emission, and air-quality control.
- Opportunities for developing environmentally friendly power plants through the Kyoto Protocol are being exploited: EPM is developing an 18.9MW wind facility and a small hydro plant (Amoyá); these facilities would be conces-
sionally funded through the Prototype Carbon Fund which would make up the difference between the projects' costs and the competitive (market) cost which would justify their development.

In the oil subsector environmental management plans have been required to obtain an environmental license prior to initiating exploration activities. Current legislation enables affected communities to be taken into account; for example, legal action initiated by indigenous people has been successful in influencing decisions regarding exploration.

On the whole, environmental questions are being taken into account through a responsible approach, particularly for those subsectors that can be directly influenced by government agencies such as MOE or UPME. Certain energy-related environmental issues that dovetail with ZNI initiatives include firewood use in rural areas and the associated health effects, which can be mitigated by the introduction of modern fuels. Perhaps the area where environmental standards have yet to be imposed effectively concerns emissions, particularly in large cities where many vehicles are still uncontrolled, despite legislation prescribing maximum emission levels.

II. Achievements and Issues

Against the background of energy sector development, achievements that can be highlighted are:

- The government, through ECOPETROL, has been relatively successful in maintaining the interest of oil companies in exploration, primarily by adjusting the association contract conditions to the evolving international scene and to local risks; it is worth noting that, ever since there have been international companies involved in oil exploration and production, successive governments, regardless of political orientation, have respected contractual conditions until expiration, thus providing reassurance to investors that the government takes its commitments seriously.
- The pricing of oil products has slowly evolved toward recognizing that the international price should be taken as a benchmark for pricing internal production; notably, Colombia has not followed the example of neighboring oil producers (Ecuador and Venezuela), which have historically subsidized internal consumption.
- The use of natural gas for power production has been encouraged (thereby implicitly recognizing its high netback value), while debunking the notion (prevailing until the early 1990s) that it should be hoarded for future, supposedly more valuable, uses. Furthermore, gas distribution throughout the country has been successful by putting in place the pipeline network and by setting
the institutional conditions for private distribution, thereby achieving one of the goals of the Gas Dissemination Program.

- The government's finances are no longer hostage to the power subsector: losses due to rash investments, unexpected conditions, or bad luck, are being absorbed mainly by private sector investors. This turnaround was achieved by a combination of privatization and putting in place competitive incentives.
- The 1998 El Niño episode was weathered without any supply curtailments.
- Despite its high volatility, prices of electricity to final consumers have remained stable since the inception of the wholesale market through the operation of the contracts market.
- The government has successfully disengaged itself from participating in the coal subsector as an investor and has concentrated on those aspects where State support is required.

Despite these achievements, there remain a number of issues to be addressed. The following selection focuses on those issues that have the greatest potential economic impact:

- Oil and gas questions associated with exploration and pricing
- Power sector regulation: generation and distribution
- Concluding the privatization of weak power companies
- Regulatory and supervisory institutions: strengthening or reforming CREG and SSPD
- Addressing the energy problems of isolated areas.

a) Issue 1: Oil and Gas Supply and Pricing

Running Out of Oil. The declining R/P ratio is one of the main worries of the oil subsector. A reduction in production and the consequent reduction of exports, together with an increase of costly oil product imports, could have serious economic consequences. The answer to this problem is simple: oil exploration must be increased. The obstacles to exploration are twofold.

- Risks involved in exploring for oil include nongeological factors such as kidnappings, ransom, extortion, and sabotage; the nongeological risk is a substantive factor, which depends on governance factors that are beyond the oil subsector's control.
- ECOPETROL's efficiency in discharging its dual function as an oil company and as a representative of the interests of the State.

The first question primarily concerns the economic conditions under which oil exploration is undertaken: increased risks should be compensated by better rewards if exploration is successful. ECOPETROL appears to have been very successful in
this respect as evidenced by 60 new exploration contracts that were concluded in 2000 and 2001 (equivalent to all similar contracts agreed during 1992–97). On the other hand, obtaining environmental licenses has become progressively more complex, thereby giving rise to complaints from companies engaging in exploration.

Whether ECOPETROL should continue to discharge state-related duties regarding exploration contracts is a more contentious question. On one hand, as an oil company engaged in exploration and production, the question is whether it would be in the country's best interests to have this function performed by a government agency, with ECOPETROL having equal status vis-à-vis other oil producers. In particular, the integrated nature of its operations would raise the issue of whether oil profits derived from exploration and production are subsidizing other activities such as refining. On the other hand, the resources commanded by the company have allowed it to put together a first-class team to address the complex questions surrounding oil exploration. It is at least doubtful whether a government agency would be able to maintain an equivalent level of professional qualifications given the limitations imposed by civil service constraints. Given that the company has the most powerful labor union in the country (with the strategic implications this implies) and the current state of unrest, it might be wise to postpone any major reorganization to more peaceful times.

RUNNING OUT OF GAS? The 25-year R/P ratio for natural gas would indicate, at first glance, that there is no cause for worry. However, gas reservoirs cannot be tapped at will to supply a given demand derived, for example, from higher fuel requirements for thermal plants. Additionally, beyond 2000 the power sector's facilities in the interior could require gas supplies that exceed the capacity of the existing pipeline. These supplies could be provided by the Custana field, which would require additional investments to treat the gas. So far, BP and ECOPETROL have denied that the gas could be provided economically at the current regulated price, which is linked to the export price of fuel oil. The fact that reserves are concentrated in two large fields, one of which (Custana) requires further investment before it can release its gas, indicates that further discoveries would be welcome and would provide greater flexibility to supply increases in demand. Achieving this objective requires incentives in the way of price, and a market for eventual discoveries.

Pricing incentives that have been under discussion center around setting free the regulated price from the two largest fields and allowing prices to fluctuate according to market conditions. This is a regulatory question that has been heatedly debated. On one hand, CREG's position has been that a duopoly would unreasonably raise prices in the short run, to the detriment of consumers. CREG has also insisted that present conditions, which do not regulate prices for new fields, should be enough for providing incentives to explore. Proponents of price liberation argue that it would be to everybody's advantage to have a dynamic market similar to the one in electricity, where prices would reflect the resource's true value. In particular, there is an argument for lifting regulation and ensuring that the measure is not revoked. potential entrants
fear regulating instability and, indeed, "opportunistic regulation" whereby once investments are committed, rules are changed to the producers' detriment.

The second aspect presents a clearer picture: if gas is discovered, internal demand might not materialize, and producers would like to be able to export to neighboring countries. One ready market for gas supplies would lie in Venezuela, which would require relatively modest investments; another would be Panama, which has considered the possibility of imports from Colombia's North Coast for fueling thermal plants. Current policies regarding exports have discouraged this alternative; gas supplies are seen as a limited resource that should not be "shared." This point of view ignores the benefits derived from having an export market, which would potentiate additional exploration. It is clear that a rational strategy for increasing supplies should allow for the development of such an export market.

**Oil Products: Getting the Prices Right.** Until 1998, Christmas and the New Year were noted for the announcement of the adjustment of prices for gasoline, diesel, and the minimum wage. January was traditionally a month of price increases with unsettling inflationary consequences. In December 1998 the government established a new methodology for establishing the prices of gasoline and diesel with the objective of allowing them to fluctuate according to market conditions. These measures were taken to eliminate the difference between ex-refinery prices and the opportunity cost signaled by the international market, to stimulate private investment in the downstream part of the industry, and to eliminate the association between fuel price adjustments and other prices. The ultimate purpose of the reforms would be to create competition with ECOPETROL's refining business by enabling the establishment of private import concerns and private refining interests. Due to price increases in the international markets, these measures were not applied consistently, and there has been a partial reversion to the "old" inflation-reflecting approach.

To evaluate this policy, a closer look at the price structure is warranted. As of early 2002, refinery-gate prices for regular gasoline in the Caribbean were below US$90/gallon. Retail prices at the pump in Colombia are, as noted, in the US$1.40 to US$1.50 range. Assuming an opportunity cost of US$1/gallon, which would provide a generous transportation, markup, and evaporation margin, it can be stated in no uncertain terms that gasoline consumers are not being subsidized, that is, the pricing scheme does not give rise to demand inefficiencies. The government's problem can be summarized as follows:

- The regulated ex-refinery price has been around 80 percent of the opportunity cost, it is this breach that it seeks to close.
- The price at the pump of a gallon of gasoline breaks down into (a) ex-refinery price: 46 percent; (b) taxes: 39 percent (sales: 7 percent, fuel: 17 percent, and local: 15 percent; (c) a regulated transport charge: 6 percent, and (d) wholesale and retail markups and allowed evaporation loss: 9 percent.
• Current prices are at a level where consumers are aware that they are paying more than in many other countries; Colombia’s oil-exporting status further exacerbates this perception; for instance, consumers complain that current gasoline prices exceed those in the United States and that, although international prices have declined by 25 percent since September 11, 2001, they have been reduced by only 2 percent internally.8

• Local taxes are nominally outside the government's control.

Under these conditions, the government can be seen as taking in through taxes what it loses in opportunity-cost pricing at the refinery gate. However, by doing so it foregoes the advantages that competition through independent importers or eventual refiners could bring in terms of product quality and transparent price formation.

If opportunity-cost pricing of oil products is to be achieved, the following measures suggest themselves:

• Currently, authority for price setting is vested in MME; if credible price formulas are to be implemented, this function should be performed by an independent entity, possibly CREG; only by dissociating the government from the price-setting function can the private sector react as expected, namely by establishing import facilities and perhaps new refining operations.

• The pricing formulas established in 1998 should be revised to take into account real transport costs and differential transport costs between cities.

• Ideally, the ex-refinery price should be competitively determined, with uniform excise taxes; thereafter government could decide on a final price level which is politically acceptable and, if necessary, adjust the intermediate tax elements over which it can exercise control to achieve it.

• Price differentials should reflect cost differences: the current difference in price between gasoline and diesel creates, as noted, an uneconomic incentive to "dieselize" the transport fleet with no basis in costs. The government expressed its concern with respect to environmental effects of excess diesel use and has announced its intention to increase diesel prices (21 December 2001).

b) Issue 2: Regulating Power Generation and Distribution

WILL MARKET PRICES ATTRACT NEW INVESTMENT IN POWER PRODUCTION? This is not a new question. Since the early days of restructuring, and during the process of setting up the wholesale market, there was uncertainty as to whether the price signals emanating from the market would induce new investment in generation. The question has not been resolved. The problem can be better understood by reference to a thermal system: as demand grows and reserve margins diminish, costlier plants are dispatched with increasing frequency, which shows up in pool prices in a relatively

8 Semana, 13 January 2002.
consistent manner. This signals the opportunity for more economical plants to come on line and benefit from the higher prices. In a predominantly hydro system, costs do not conform to a stable pattern, because they respond to hydrological conditions. During an El Niño year, prices shoot up when reservoir operators seek to store reserves for release during the high-price anticipated drought, and they tumble after some months, particularly if the high precipitation La Niña phenomenon appears afterward. In this type of system, it is conceivable that a thermal plant will be remunerated only through energy sales to the pool during widely spaced periods. Investors in such plants are in fact buying into a weather lottery—a gamble that many would rather avoid. One quick fix consisted of establishing a capacity charge (calculated on the basis of the capital cost of a gas turbine) of US$5.25/kW per month. This has provided a steady income to qualifying generators and created an incentive for the privatization of several power plants previously owned by the government.

The problems with the capacity charge are (a) its ad hoc nature—it is determined centrally by CREG—which does not respond to a market-generated signal; (b) the major role it now plays in generators’ income composition (it is no longer an additional charge as could be expected initially), as it currently accounts for over 50 percent of generators’ income, thereby involving around US$500 million per year; and (c) its role may be primarily financial rather than economic, that is, it does not operate as a signal reflecting current supply and demand conditions. Its management also consumes scarce human resources: CREG takes a month in determining its value and spends the rest of the year responding to objections filed by generators.

The capacity charge is an unsatisfactory nonmarket element, and market-driven alternatives have been examined. One of these involved a major study commissioned by CREG (known as the TERA proposals). The TERA proposals were not accepted by the industry and have been shelved. Criticism of the proposed mechanisms centered on the fact that (a) they involved an overly complicated contract market, and (b) they do not appear to solve the core problem regarding capacity expansion. Also, it may be surmised that the underlying reason for the reluctance of generators to change lies in that the well-known capacity charge assures a steady income stream, which may not be the case if a new and uncertain mechanism is adopted. CREG has been criticized for commissioning the study on the grounds that a futures market is a question to be developed by the sector’s participants. At face value this argument sounds sensible, but it ignores the government’s mandate to assure future power supplies, and a futures market is one way to address it, which justifies CREG’s initiative. This is not to say, however, that a solution should be the exclusive purview of CREG, and that working hand in hand with producer and distributor associations is not likely to achieve a more satisfactory and long-lasting result.

Despite the quick fix of the capacity charge, the central problem remains; that is, (a) will the market provide signals for investment, and (b) if it provides such signals, will they appear in time to avoid a major disruption of supplies? These are questions which have not been put to the test; several years of sluggish demand growth, together with the commissioning of plants whose construction was initiated in the
early 1990s have created a reserve margin such that the probability of shortages in
the short and medium term has remained acceptably low. This will change when
demand picks up. The problem is compounded by the legally mandated obligation
of the State to assure that power supplies are sufficient, and the precedents regard-
ing shortages, which are ominous: during the 1992 shortage, which coincided with
the worst drought on record, the government unleashed a veritable witch hunt
among power sector staff to ascertain responsibility. This human factor has not been
forgotten, and power-related staff in official positions will take all possible measures
to avoid having to live through something similar again. This has created a "State-
as-last-resort-generator" mentality, which means that putting the market to the test
may very well never happen, and that the government may be pushed, willingly or
unwillingly, into investing in new plants.

It is helpful to recall some of the lessons learned elsewhere. The most dramatic is
certainly the collapse of the market for electricity in California due to insufficient
investment, high demand, and, particularly, delays and indecisive action at the regu-
latory level. Although many of the problems were related to regulation of retail
prices, the major factors that contributed to this disaster were related to the whole-
sale market, including the nonexistence of forward contracts to allow utilities to
hedge their risks.

In Colombia, the power system has been able to avoid a similar crisis by allow-
ing hedging instruments, and also because it is going through a period of excess
capacity. However, this may not last, and if the incentives for adding new plants are
not evident, a cycle of high prices, tight supplies, and market power problems could
result in similar problems.

As to what strategy to follow, the sensible course would seem to recognize that it
is a highly technical question that requires further study, and that the sector is well
aware of its importance. Under such circumstances, the best recommendation con-
ists of supporting CREG's deeper analysis of the issue, which should include revis-
iting the TERA proposal and private sector point of view.

Grumbling from the Usual Suspects: Are Regulated Prices Too Low? Regu-
lated prices in the power sector comprise "wire" services (transmission and distri-
bution) and commercial margins. They have an immediate impact on regulated tar-
iffs, particularly at medium and low voltage. The current five-year regulating period
for these components will expire in December 2002, and all companies with regu-
lated prices have initiated a movement to obtain better terms for their services. Cur-
rently, prices are regulated according to "tariff formulas" which take into account the
wholesale price of energy, capital invested in the "wires business," admissible losses,
and commercial expenses. Complaints, and proposals for reform9 have centered on,
among other things:

9. Proposals emanating from the Colombian Distribution Companies Association (Asociación
Colombiana de Distribuidores, ASOCODIS), the distribution companies' association
• A substantive increase in the allowed return on assets (currently 9 percent) to 19 percent
• An increase in the allowed operation and maintenance costs as a percent of unit capital cost (they propose doubling it)
• Freezing the quality-of-service indicators at 2001 levels
• Basing the production component of regulated tariffs exclusively on each company's contracted purchases
• An increase in the allowed loss levels to the 16.5-to-18-percent range

These are largely technical questions on which a reasonable agreement is likely to be reached. In particular, elements such as the allowed loss levels must recognize that the last years of economic recession—stagnation and increased unemployment have made it more and more difficult for distribution companies to meter and bill, particularly in the poorer sectors and settlements of large cities. In addition to responding to reasonable requests, what makes the new tariff formulas particularly important is their effect on investor appetite for participating in those distribution companies that have yet to be privatized (see Issue 3).

c) Issue 3: Unfinished Business—Further Privatization of State-Owned Companies

The reform process in Colombia included the establishment of the wholesale market together with private participation in generation and distribution. The strategy that was initially adopted targeted for privatization a number of power plants that were owned by the government. This was largely successful, and at present the only major power production company owned by the government is ISAGEN, with an installed capacity of 1,460MW, the third largest in the system.

Privatization of distribution companies has been more protracted: the largest privatization effort was the “capitalization” of Empresa de Energía de Bogotá (EEB), which was broken down into a generation company, EMGES, and a distribution company, CODENSA. This process was hugely successful: the injection of private capital allowed its transformation from a practically bankrupt and inefficient company into a financially viable entity which has succeeded in reducing losses and turning around its commercial and technical operation through effective management.

Privatization of distribution was performed with the utilities on the Atlantic Coast, which were grouped into two large companies (Electrocosta and Electricaribe) This process was considered to be a major achievement because it involved the transformation of seven of the worst-performing distribution enterprises in the system. However, the subsequent performance of the two companies has been below expectations, not least because the deteriorated state of the enterprises required large investments from the private investors that took over (a consortium of Houston Industries and Electricidad de Caracas). The initial investors subsequently sold the companies to Unión Fenosa, a Spanish utility, at a significant discount. Current
expectations are that the new owner will undertake the required investments to rehabilitate the companies and turn them around financially.

When comparing the EEB and Atlantic Coast privatizations, a lesson emerges in that the EEB "capitalization" involved an injection of resources into the company, which allowed its subsequent rehabilitation, whereas the money paid for Electrocosta–Electricaribe was taken by the government (and used to pay off accumulated debts from the original companies). However, once they took over, the new investors were faced with large investment requirements in addition to what had been originally paid. Arguably, they may have paid too much originally, but the fact remains that the financial and technical situation of the two companies improved only marginally, and ultimately led them to withdraw and sell them off. Perhaps future privatizations should concentrate on channeling resources into the companies rather than on maximizing profits from an outright sale.

Finally, there remain about 20 companies that are owned by the central government in association with local governments (either municipalities or departments), not including EPM, the Medellín utility, which has traditionally been a well-managed enterprise. Most of the remaining electrificadores, essentially distribution companies, are in extremely bad shape. The largest is the Cali distribution company, EMCALI, which was taken over by SSPD due to its precarious financial condition.

In early 1999, the electrificadores were prepared for privatization, but the government did not follow through due, it is said, to having shifted its priorities toward the sale of ISAGEN, an operation which would have brought the government vastly greater resources than the sale of the smaller companies. In any event, ISAGEN's sale was not possible due to a dispute with EPM regarding the latter's possibility of buying it and the resulting concentration of market power. Simultaneously, given the imminence of their privatization, investment was reduced in the electrificadores, and their situation has deteriorated constantly during the last two years. The lack of political will in going through with this process has meant that the government is saddled with a large number of nonperformers the privatization of which has become progressively more difficult.

This is the most important issue facing the sector at present: the companies involved serve around 3.7 million users, or around 46 percent of the country's total, and some of them have been taken over by SSPD, which does not have the capacity to manage companies, such as EMCALI, for an extended period of time. The prospects of going ahead with the privatization are slim due to the local political interests that are involved, unless there is a clear will on the part of the government to face the problem. The likely consequences of postponing the process will be to reduce service quality and to increase debts of the companies with the wholesale market, which could ultimately lead to cutting supplies.

**Subsidies.** The subsidization scheme consists of classifying residential users into six strata and targeting subsidies primarily toward strata 1 and 2 (the poorest). Subsidy support (who pays for the subsidy) comes from strata 5 and 6 and from commercial
and industrial users; the law limits any subsidy-support surcharge to 20 percent of service costs. The World Bank's 1994 "Poverty in Colombia" report criticized this scheme and provided suggestions for eliminating the major distortions of the stratification scheme. The public services law of 1994 placed a limit on contributions and otherwise mandated a readjustment of reference tariffs to economic costs. Since then, there has been a gradual elimination of subsidies, together with a targeting toward the poorer strata. Evidence can be seen from billing statistics. In 2000 average prices were $US 4.5¢, 5.0¢, 6.2¢, 7.4¢, 8.6¢, and 8.7¢/kWh for strata 1 through 6, respectively. With a reference cost of US $7/kWh, subsidies have clearly been limited to the three lower strata. Gross subsidies to these strata can be estimated to have been around US $180 million in 2000, equivalent to about 9 percent of total billing.

The mandated cross-subsidization scheme for electricity operates smoothly as long as there is a balanced composition of users; for smaller and weaker companies this does not happen, and they have become saddled with comparatively large subsidies, which should be compensated by the government. Government payments for subsidies are often delayed and insufficient, which further weakens the enterprises. Many of the enterprises that remain in public hands correspond to these characteristics, and the subsidization policy appears as an additional obstacle to their privatization. In addition, a low correlation between stratification and income, indicates the need to either eliminate the stratum concept altogether or to try to define it better, avoiding classification errors, and to shift subsidies to fixed-cost elements (such as the connection charge or the fixed charge) to avoid distorting the energy price.

d) Issue 4: Reforming or Strengthening the Regulatory and Supervisory Institution

Effectiveness of the Public Services Superintendence. The Public Services Superintendence (SSPD) was created to enforce regulations and to supervise public service providers, with a mandate to take over failing companies before their weakness imperils consumer supplies. This is a huge task considering the number of companies involved, which include power, water, telecommunications, and gas enterprises. One of its functions consists of receiving and investigating appeals of consumer complaints after they have been processed by the service companies, which overwhelms its operational capacity. Needless to say, the human infrastructure required to perform these functions has converted SSPD into a prime political appointment target.

When SSPD was initially organized the difficulties were realized and a decentralized supervision structure was put in place. In particular, independent audits would be conducted to assess enterprise performance. However, SSPD's functions intersect with those of a number of other government organizations, such as the Comptroller General's office and the Industry and Commerce Superintendence, which is responsible for detecting and correcting undue market power. In practice, the independent audits have not been satisfactory, and SSPD's interventions have not been successful in bringing about better management of the supervised enterprises.
Ultimately, the problems faced by SSPD reduce to well-known management problems: once it takes over a nonperforming enterprise, it can hardly be expected to resolve imbedded weaknesses with its scarce resources. To bolster the agency's resources, MME, through UPM and CREG, has provided some support in managing the companies that were taken over, without any visible success. The only effective alternative in most cases is to liquidate and seek a buyer willing to undertake the required investments and reforms. This requires political backing from the government in order to prevent inherited interests from blocking decisive action.

What course of action to take is uncertain: it is not clear that strengthening SSPD would be an effective long-term solution; in fact, serious consideration should be given to rethinking and reforming the way the supervision task is to be accomplished. Other superintendencies, such as the one that supervises banks and financial institutions, appear to operate efficiently, but their scope is considerably more focused. An in-depth study of the problem is required, but who is to undertake it is not clear (SSPD itself? another government agency?). This is a matter for further discussion.

BACK TO BASICS: STABILITY AND CREDIBILITY OF CREG. CREG's regulatory functions were initially conceived as those of a "rule-setting" agency. The actual compliance with the rules was to be the domain of SSPD, with CREG accomplishing a more long-term function. In practice, CREG's Olympian status, which would have kept it out of the daily fray, has not been maintained. Given the lack of experience with the complexities of the regulatory function, this is not surprising. However, although setting long-term rules and "letting the chips fall where they may" may not be feasible in practice, there is a widely held perception that CREG has increasingly undertaken short-term regulation. As prime evidence of the latter, CREG produced Resolution 26 of 2001 in which it established that information regarding reservoir levels and the state of the transmission network were to be kept secret! Further charges have been made in the sense of "opportunist regulation," where incentives upon which agents have acted were then repealed. This would appear to be the case of certain plants that have been operating for the explicit purpose of supplying areas where network bottlenecks have developed (and reaping the benefits thereof).

Establishing an equilibrium between short-term intervention to avoid major difficulties and taking a long-term view and letting the rules apply without modifying them is not easy. In this sense it is convenient to quote a recent analysis of the California power market collapse: "All electricity market reform programs have experienced some problems at the outset. Mid-course corrections have almost always been necessary to mitigate market performance problems. When market performance problems emerge, government officials must act quickly and decisively to fix the problems. Ongoing market reforms and regulatory 'mitigation' initiatives designed to remedy serious market performance problems should be an expected feature of the process of creating efficient competitive wholesale electricity markets" (Joskow 2001). Nevertheless, CREG should act judiciously when reacting to short-term
questions: there is a perception that the Commission tends to overregulate by scrutinizing details that have to be revisited soon after. If it is to maintain and regain credibility, its interventions should avoid those aspects of market operation that are best left to producers’ choices.

Whatever the merits of the criticisms levied against the regulator, it would not be realistic to ignore the fact that CREG has faced some daunting situations where rules which were originally set up to deal with specific and infrequent disruptions have to be revisited. The original rules governing network bottlenecks were conceived to deal with disruptions and outages arising mainly from natural causes, such as lightning, and their application to contingencies arising from massive network disconnections due to terrorism was not envisioned. Constraint costs increased to a point where CREG intervened and capped them. Although this has limited price increases, it has also created doubts regarding the stability of CREG regulations. Generators that purportedly installed capacity to take advantage of such price constraints have filed complaints against these interventions.

CREG also suffers from a weakness regarding its conception—the reforms which culminated with the wholesale market and the privatizations were implemented under the frame of reference of the Constitution of 1991, which does not establish a very good basis for a market-oriented economy. In a sense, embedding a regulatory agency together with private sector participation and competition into the provision for public services corresponds to fitting a square peg into a round hole. Those who were responsible for drafting the laws that govern the energy sector at present assumed that time and experience would render the concept of independent regulation more acceptable. This has not happened, and, in fact, there have been opinions emitted from the Courts that reiterate that the regulatory function must be embedded within the existing frame of reference of the government, thereby precluding the regulatory commissions from becoming autonomous and independent, as in the case of CREG from MME. Other opinions have indicated that the commissions should take into account government policy in their decisionmaking. Although there are no explicit guidelines in this respect, it does not contribute toward strengthening the independence of the commissions.

CREG faces difficulties in retaining qualified staff. A regulator’s job implies a full-time commitment under highly stressful conditions. Remuneration for regulators, despite being among the highest in the civil service, does not compare favorably with potential earnings in the private sector. Furthermore, when regulators leave the Commission they face a year of incompatibility during which they are prevented from engaging in activities that could have been related to their regulatory functions. In effect, this adds an additional cost to the already demanding standards of their office, and limits the possibility of finding qualified candidates.

A suggested approach to this issue would consist of:

- A hands-off policy that would allow CREG to seek solutions to technical problems, such as the capacity charge and the tariff formulas, through a dia-
logue with the interested parties. This would apply to issues such as the deregulation of wellhead prices for gas, which also falls into the technical category.

- A thorough review of CREG’s limitations and an identification of possible strengthening measures.
- Political action at the legislative level to avoid "regulation through legislation."

Given CREG’s polemical stance on many issues, which gives rise to doubts about its capacity to address them, an institutionalized and independent review of its performance by recognized international authorities on a periodic basis (for example, every two years) would provide both a rational procedure for addressing its weaknesses and a logical argument for addressing the legislative initiatives which seek to reform the Commission. This procedure has been tried elsewhere (Panama) and can be seen as part of a quality-control process that would help assuage private sector fears regarding CREG’s competence. On the other hand, Stephen Littlechild, initial head of electricity regulation in the United Kingdom, notes that “[regulators] have to cope with many official and quasi-official reviews, often trying to second-guess the regulator’s decisions. Whether these reviews tend to generate heat or light is debatable, but they certainly take up considerable regulatory time and effort.” If a review procedure is implemented, it should have a well-defined scope and it should be infrequent (every two years, as suggested, or even less frequently) to avoid, as Mr. Littlechild suggests, generating more heat than light.

e) Issue 5: Energy, Poverty, and Peace

Policies oriented toward favoring the poor include, notably, the provisions regarding cross-subsidization between industrial, commercial, and higher-income residential users, and lower-income domestic users for electricity and natural gas. However, there are other, and arguably more significant, policies to complement the latter, such as the diffusion of natural gas as a substitute for high-cost electricity, and hazardous liquid fuels used for cooking.

These are successful approaches that have their major impact within urban settings, but less so in a rural context. As noted in the Background section, the ZNI exhibit a number of problems that, despite not being too significant within the national context, have a major impact in overall terms of social welfare: dispersed populations, a predominance of violence associated with warfare between insurgent groups and the army, and poor coverage and poor quality of service in those areas. In 2000 a levy of Col$1/kWh dispatched in the wholesale market during 2001–07 was imposed as a contribution to a fund for supporting ZNI initiatives. The levy is expected to generate enough resources to fund projects on the order of US$120 million.

However, the problems associated with the ZNI are not so much a matter of resources as a question of effectiveness and sustainability of solutions. The government has addressed the issue by creating an association involving communities in
the ZNI that has been operating since September 2000. To be effective, a holistic approach is called for, involving not only infrastructure such as grid extensions, but also the availability of other energy products (gasoline, diesel, LPG) in order to reduce the cost of energy in these areas. Typically, prices for gasoline or diesel can be double what they are in urban centers. Other off-grid solutions should be investigated, such as renewables based on solar or wind power, and small hydro plant. The pioneering efforts associated with taking advantage of the Kyoto Protocol should be closely followed with a view to replicating them in the context of the ZNI.

On the other hand, the coordination of multiple agencies involved in many sectors can be cumbersome and inefficient. As an example of a focused alternative, a noteworthy initiative is being funded by ISA, which consists of providing electricity service to communities within a 4-kilometer-wide band spanning its transmission lines. This program includes providing materials for rural electrification and the internal installations of community centers, health centers, and sports facilities. Since its inception in 1991 ISA's initiative has benefited 21,000 households. In 2000 ISA concluded agreements with 26 municipalities to benefit 2,200 households, with an investment of around US$2.2 million. Following up the effectiveness of this and similar initiatives should point the way for multiple paths to the common goal.

III. Summary of Recommendations and Next Steps

The conclusions that flow from the preceding issues and the respective discussion indicate the following areas where government action is required:

- Decisions for redefining public–private roles in production and commercialization in the hydrocarbon sector (oil and natural gas)
- Decisions about the future of remaining privatization: ISAGEN and the distribution companies that are still in public sector hands
- Redefining the role, scope of functions, and organization of SSPD
- Defining a policy for conducting the dialogue between CREG and the government while preserving the former's independence
- Defining the scope of CREG's purview, its focus, and performance
- Implementing public–private solutions to energy supply services to rural and isolated (not interconnected) areas.

Liberalizing the Market for Oil Products. The government has gone a long way in liberalizing the market for electricity, a nontraded commodity that represented a considerable challenge at the time. By comparison, oil products are a traded commodity, and liberalizing the market should prove considerably less demanding. The government's initiative in allowing "competition at the pump," and its policy of seeking to reflect opportunity costs at the refinery gate, are steps in the right direction. They should be complemented with additional measures, such as:
• Allowing the establishment of private import businesses with unfettered access to the pipeline network
• Gradually removing price controls for ex-refinery supplies
• Regulating those facets of the market, such as pipeline transmission prices, where competition may be delayed
• Establishing a tax policy for oil products which does not create uneconomic incentives (for example, such as dieselization)
• Deregulating intermediate wholesaler and retailer markups
• Pulling out the residual regulatory functions from MME and vesting them in an independent agency such as CREG, to provide reassurance to prospective private investors in the sense that short-term political interests remain in check.

Although conceptually simple, these measures require careful preparation for their implementation. It is worthwhile recalling that such preparation in the power sector was crucial to the success of sector reform. The initial steps in this direction should be a study examining the underlying legal structure and the requirements for reaching the target sectoral composition, and providing an implementation plan and addressing the sensitive questions of public acceptance when following it.

Liberalizing the Natural Gas Market. As is the usual case with nontraded commodities, this is a trickier problem. The main question resides in the deregulation of wellhead supplies, and it is essentially a timing problem; whether or not to do it should not be open to debate, and its occurrence is currently subject to CREG’s decision on whether adequate competition exists or not. However, for competition to develop requires incentives for searching for new supplies, which may not be feasible under current regulatory conditions. It is also necessary to consider new gas demands in the power sector that may be required by 2005. Under these circumstances, CREG should consider revising the rules currently regulating gas prices at the wellhead in order to induce a broadening of supplies through treatment and bringing to market of the Custana gas.

Where natural gas deregulation is most necessary is in exports. Given the pipeline bottlenecks in the system, offshore exploration can be justified by a private company only if a market for its product is readily available. The government and CREG should evaluate current obstacles to the export of natural gas and propose an action plan for allowing it.

Finalizing Power Sector Privatization. The privatization of the distribution companies needs short-term action. The problem is sufficiently urgent to warrant action as soon as possible. It must be emphasized that following through with these privatizations is essentially a question of political will, as the groundwork has already been done and requires only relatively straightforward updating.

Contrary to the priorities for privatization in 1999, ISAGEN would take second place, despite the attractive opportunity of obtaining public funds through its sale.
On one hand, prior to undertaking a new privatization attempt of ISAGEN, the political and legal obstacles that initially appeared should be smoothed out. On the other hand, the risks of supply curtailments arising from a failure to privatize the distribution companies, and the financial drain they represent at present, call for an all-out priority effort to transfer them to the private sector.

Institutional Reform: SSPD. SSPD’s problems can be attributed to the institution’s inability to carry out its functions, or to the excessive breadth of the functions themselves or, most probably, to a combination of both. Whatever the root cause for the current situation, it is a fact that the institution cannot continue along the present path. Reorganizing SSPD and enabling it to become effective in the energy sector will require an in-depth study, based in good measure on the experience to date with SSPD’s track record. This is an activity that is likely to require an examination of constitutional questions, and reassessing the role of different control organizations within government vis-à-vis companies delivering public services. The implementation of resulting recommendations will probably require parliamentary endorsement and may call for very tactful political maneuvering. In any case, the first step consists of obtaining a perceptive diagnostic of the institution’s weaknesses and proposals for accomplishing the functions vested in it.

Institutional Reform: CREG. Establishing rules for the interaction between MME and CREG should be a priority in order to avoid confrontations such as those surrounding natural gas deregulation. In particular, CREG should be free to address regulatory questions without undue government influence, thereby reassuring investors. In this sense, avoiding a “pocket commission” should be an overall policy consideration. In strengthening CREG, and in addressing questions related to pricing of oil products, the government should study the possibility of divesting MME from this responsibility and awarding it to an independent institution.

Taking a hands-off approach to CREG does not necessarily mean avoiding a critical look at its performance. In this sense, CREG should examine the focus of its activities and its reaction to complaints of opportunistic, or at least unstable, regulation. This should take the form of an open dialogue within the Commission (that is, the executive level conformed by the government representatives and the commissioners) in order to redefine the scope of CREG’s actions in the future. Additionally, the Commission should consider institutionalizing a periodic review of CREG’s performance, to be conducted by outside experts. A first review would provide a good starting point toward providing better focus to CREG’s interventions.

Finding adequate funding for strengthening human resources at the level of CREG is a problem that presents greater obstacles. Whereas funding for world-class consultants can be devised, mechanisms for remunerating high-level and experienced CREG staff other than through budget increases are not available. The government should give serious consideration to the fact that the workload, responsibilities, and level of expertise of a CREG commissioner are easily comparable to that
of top-level public servants such as those on the Board of the Central Bank, and should be compensated accordingly.

**Revisiting the Subsidization Scheme for Public Services.** Despite recent advances regarding reform of the subsidization scheme in Colombia, and in particular the increase of electricity prices to cost-reflecting levels, cross-subsidization involves a magnitude of resources that justifies trying to narrow the beneficiaries to the very needy population and avoiding creating consumption inefficiencies. The following actions are suggested:

- A periodic revision of the stratification scheme, including the quantification of proxies used for strata definition, and their application for the purpose of reclassifying consumers in order to correct categorization errors
- Exploring the possibilities for following the 1994 World Bank poverty report recommendations in the sense of maintaining energy charges for electricity as closely as possible to the “true” cost, and introducing subsidies through fixed charges, which are more explicit and introduce less distortion to consumer choices.

**Rural Energy.** Rural energy questions should be considered a priority, given their potential to address some of the more pressing social issues in zones prey to violence. Some of the considerations that should be given to this issue include:

- Developing an interinstitutional system for managing rural energy solutions, including local government, local organizations, and nongovernmental organizations
- Taking a holistic approach to energy supply in these areas, including electricity and oil products, and other infrastructure services
- Designing financing schemes for rural energy solutions
- Taking advantage of opportunities offered by the Kyoto Protocol and the Prototype Carbon Fund to finance off-grid solutions, such as those being developed by EPM (wind, small hydro plant).

At present the wholesale electricity market is generating sizable funds for supporting ZNI rural energy initiatives. The issue is effective implementation and coordination of multiple agencies and benefiting from successful experiences in other countries.

In sum, most of the proposed sector recommendations are oriented toward institutional actions that mainly require competent studies and human resources for their development. However, although the resources may be modest relative to those required for infrastructure investment projects, and despite the fact that they may have far-reaching consequences, it often is the case that the public budgets allocated for this purpose are dismally small.
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Information and Communications Technology Sector

This Chapter was written by Eloy Vidal.

I. Background

a) Information and Communications Technology and Development

Knowledge has become the fundamental driver of increased productivity and global competition. It is seminal to invention, innovation, and the creation of wealth. Information and communication technologies (ICT) provide a foundation for building and applying knowledge in the private and public sectors. Countries with pervasive information infrastructures (II), robust policy frameworks, and innovative ICT applications possess enormous advantages for sustained economic growth and social development.

In this rapidly evolving environment, the opportunity costs of delaying greater access to and use of ICT in developing countries are high, especially since ICT:

- Offers major opportunities for development and global integration while retaining the identity of traditional societies
- Increases the economic and social well-being of poor people and empowers individuals and communities
- Enhances the effectiveness, efficiency, and transparency of the public sector (including the delivery of social services).

Because of this, ICT is central to building the climate for investment and sustainable growth, and empowering and investing in poor people. Growth of ICT use in developing countries during the 1990s has been impressive but inequitable among and within countries. While the gap in fixed and mobile telecommunications has narrowed, a "digital divide" has emerged in more advanced ICT, and is still
growing. The recent collapse of telecommunications and technology equity markets, a shrinking pool of global investment capital for innovation, and a number of failed privatization efforts have induced lower tolerance for risk, and reduced private-sector-led infrastructure investments and lending for emerging markets.¹

Figure 1 shows the telecommunications infrastructure and its contribution to the gross domestic product (GDP) (usually 2 to 3 percent). The computer network and its different applications contribute another 2 to 3 percent to the GDP. But the real impressive contribution comes from the use of these applications for education, health, government, and business. Different sources estimate it contributes from 20 to 30 percent of GDP, depending on the state of development of the applications and the country's overall development. There is a tremendous opportunity for countries like Colombia to use ICTs to insert themselves into the global economy. Colombia has a basic telephone network infrastructure. It has a good pool of human resources. We will now review the state of development of Colombia's ICTs, starting with a review of telecommunications sector reform and liberalization.

b) Sector Reform and Liberalization

Colombia increased the number of fixed telephone lines in service from 2.6 million in 1990 to 8.4 million at the end of 2000. Teledensity increased from 6.5 lines per 100 inhabitants in 1990 to 16.5 per 100 in 2000 (Figure 2). Even though Colombia has more lines per 100 people than other countries with a similar GDP, this forms only the basic infrastructure, and the country has not capitalized on it.

A number of changes in the telecommunications regulatory framework in the 1990s explain this increase. (a) Law 72 of 1989 and Law 1900 of 1990 established the principles of sector liberalization, introducing the possibility of competition in a sector that was characterized as a total monopoly of the public enterprises before that year; (b) Law 1794 of 1991 opened value added and telematic services to competition; and (c) Law 37 of 1993 opened cellular service to competition and determined the general conditions for its operations.

All these changes derived from the new Constitution of 1991, which established that private, public, and mixed companies could provide public services previously reserved to the State, and that the regulation and control of these companies was the exclusive role of the government. Finally, Law 142 of 1994 established the general regulatory framework for the sector, and created the Telecommunications Regulatory Commission (CRT) as the Regulator of the Sector. As a result of these changes, a number of new private companies entered the sector in the value added and cellular services, and a series of Build Operate and Transfer (BOT) arrangements between the public enterprises and private suppliers was created to expand local service.

Figure 1. ICTs Are the Basis of the Knowledge Economy

<table>
<thead>
<tr>
<th>% GDP</th>
<th>Schools</th>
<th>Health</th>
<th>E-Gov</th>
<th>E-Business</th>
</tr>
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<tbody>
<tr>
<td>+</td>
<td>![Image]</td>
<td>![Image]</td>
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<td>20 to 30%</td>
<td>![Image]</td>
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<tr>
<td>or more</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

Computer Networks and Applications

| +           | ![Image] | ![Image] | ![Image] | ![Image] |
| 2 to 3%     | ![Image] | ![Image] | ![Image] | ![Image] |

Telecommunication Networks

2 to 3%
The liberalization of long-distance and international service was introduced by Law 2542 of 1997. As Empresa de Telefonos de Bogotá (ETB) and Empresas Públicas de Medellín (EPM) started to compete against telecom in long-distance services, prices went down and the number of calls skyrocketed. The liberalization initiative had a severe impact on telecommunications finances, as the government-owned carrier plus rural–local service providers struggled to make a profit. This situation affected the BTOs that suppliers created with telecommunications to provide local service. Many of the companies are now demanding compensation from the government for their losses.

The number of cellular phones increased from 0 in 1990 to 2.9 million in 2001. This may seem impressive, but Figure 3 shows that compared to other Latin American countries, Colombia is behind the rest in cellular penetration, with the exception of Peru, with only 7 lines per 100 inhabitants. There are only two providers of cellular services in Colombia, and their services and prices leave much to be desired. This is an area where the government should prioritize development by stimulating the private sector to invest in mobile networks.

The government imposed a 16 percent tax on long-distance service. A new Telecom Law, currently under congressional debate, also proposes a new tax of up to 5 percent of gross revenues on operators for universal service. This tax is one of the largest we have ever seen, and would send the wrong signal to investors in the sector.
**c) Privatization Attempts**

The government tried to privatize telecommunications in the early 1990s, but failed due to labor union opposition. A strike by the unions caused the interruption of service for an entire week, and the government had to give up. Later, during 1998–99, some municipal governments tried to privatize their local telephone companies, but failed. The largest and most important privatization attempt was that of ETB, the company that serves Bogotá. Labor unrest, the poor financial condition of the company, and general public opposition (they perceived ETB as the city’s "crown jewel") finally stopped the transaction.

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**II. Sector Issues**

**a) Low Private Sector Participation**

Today, only 3.4 percent of Colombia’s telephone lines are in the hands of private companies, compared to 85 percent for Latin America as a whole. In general, telecommunications is considered to be a private sector business throughout the Region, and only a few countries have a situation similar to Colombia. One could argue that the reason for this is the generally high perceived risk of investing in Colombia, but there are other sectors in which this is not the case (for example, the power sector, where the majority of business is in private hands). The high invest-
ments needed in the sector impose a heavy burden on local and national governments, taking the space and priority that social investments should have to reduce poverty. The government could take measures to improve the climate for investment in the telecommunications sector to attract private investors, as we will see below.

b) Fragmentation of Regulatory Institutions

As mentioned, Colombia’s regulatory institutions are fragmented. The Commission for Television oversees the television subsector. The Ministry of Communications manages the radio frequency spectrum, assigns frequencies for different use, and controls the radio subsector. The Telecommunications Regulatory Commission dictates the fundamental technical plans and manages other scarce resources for the telecommunication operators. The Superintendency of Industry and Commerce regulates anticompetitive operator behavior. The Superintendency of Public Domiciliary Services supervises the relations between customers and operators.

The new proposed Telecom Law Project does not address this issue. In fact, the new Law Project proposes the creation of another entity, the User’s Defender, to solve disputes between users and operators. It also proposes the elimination of the Commission on Television, which is guaranteed by the Constitution, a very difficult task. The fragmentation of the regulatory institutions impedes proper management of the sector, because private sector companies are confused and concerned about this fragmentation.

c) Subsidies and Tariffs

Compared with other countries and the rest of Latin America, rates in Colombia are below the average, and in some cases, below the cost, of providing the service (Figure 4). This is because Colombia has a differentiated tariff system, by income strata. Residential subscribers are classified by income; the lowest income corresponds to Strata 1, and the highest income to Strata 6, according to the neighborhood’s overall quality and size of housing. Subscribers of Strata 5 and 6 and Commercial (the richest) pay, on average, 21 percent more than costs to subsidize 40 percent, 30 percent, and 4 percent of costs of subscribers in Strata 1, 2, and 3, respectively (Stratum 4 is neutral). In addition, the lower rates have stimulated demand for Stratum 1 subscribers to take on service. Their number has increased 42 percent in the past five years, compared to 9 percent growth of the commercial lines. This system has produced a deficit of 102,000 million pesos in the past three years. If the telecommunications deficit of 68,000 million pesos is added to this number, the total is about US$74 million. The subsidy system is causing companies to go bankrupt and is creating an immense problem for the government. Table 1 shows that the com-

Figure 4. Local Subscription Rates in Selected Latin American Countries

Local Rates—Colombian Operators

Local Rates—Average Monthly Subscriptions

<table>
<thead>
<tr>
<th>Local Operators</th>
<th>Average Colombia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Monthly Subscription</td>
<td></td>
</tr>
</tbody>
</table>

- Latin America
- Average Colombia

<table>
<thead>
<tr>
<th>Local Operators</th>
<th>Average Monthly Subscriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>40</td>
</tr>
<tr>
<td>Argentina</td>
<td>40</td>
</tr>
<tr>
<td>Venezuela</td>
<td>30</td>
</tr>
<tr>
<td>Brazil</td>
<td>20</td>
</tr>
<tr>
<td>Colombia</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 1. Finances of Colombia's Telecommunications Companies

<table>
<thead>
<tr>
<th></th>
<th>Telecom</th>
<th>ETB</th>
<th>EPM</th>
<th>EMCali</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>557.9</td>
<td>546.1</td>
<td>229.6</td>
<td>126.7</td>
</tr>
<tr>
<td>Net Income</td>
<td>-106.7</td>
<td>131.8</td>
<td>131.9</td>
<td>68.5</td>
</tr>
<tr>
<td>Assets</td>
<td>5763.2</td>
<td>3544.4</td>
<td>2431.3</td>
<td>1567.9</td>
</tr>
<tr>
<td>Liabilities</td>
<td>5135.2</td>
<td>1836.2</td>
<td>649.8</td>
<td>662.5</td>
</tr>
<tr>
<td>Equity</td>
<td>628</td>
<td>1708.2</td>
<td>1781.5</td>
<td>905.4</td>
</tr>
<tr>
<td>Income/Assets</td>
<td>-1.85%</td>
<td>5.72%</td>
<td>5.43%</td>
<td>4.37%</td>
</tr>
<tr>
<td>Debt/Assets</td>
<td>89.10%</td>
<td>51.81%</td>
<td>26.73%</td>
<td>42.25%</td>
</tr>
<tr>
<td>Net Income/Debt</td>
<td>-2.08%</td>
<td>7.18%</td>
<td>20.30%</td>
<td>10.34%</td>
</tr>
</tbody>
</table>

panies are in poor financial condition, and even the best (EPM) does not make returns on investment comparable to industrywide averages.

d) Low Internet Penetration

Colombia has only 0.54 Internet hosts per 1,000 inhabitants, well below countries of similar GDP per capita, and below Argentina, Brazil, and Mexico (Figure 5). The metered tariff system (per-minute local call charges) and the low number of computers (only 34 per 1,000 inhabitants) are the main reasons. There are other important reasons: (a) the low level of computer skills of the population in general, which correlates with a low level of performance in mathematics education;3 (b) limited useful content; and (c) a very limited number of sites in Spanish in general (80 percent of information of the Internet is in English, compared to only 4 percent in Spanish).

e) Reduced Role of Colombia in the Information Society and the Global Economy

Although the Pastrana Administration's "Connectivity Agenda"4 has made an impressive contribution to furthering the insertion of Colombia into the information society, much remains to be done. There are still too few computers in Colombia, fewer Internet connections than in other Latin American countries, and lower use of ICTs for development. The recent adoption of a flat rate for Internet connection of about $10 per month of unlimited use, combined with the about $15 per month for Internet access, adds up to $25 per month for unlimited access. This new

3. Third International Study on Mathematics (TIMSS-97) showed that Colombian children age 15 (8th grade) had position 40 out of 41, and that the results (385) were lower than those for Singapore (643) and Ireland (527).

rate, introduced in 2001, has dramatically increased the number of users, and was a move in the right direction.

However, there are towns that do not have Internet access, and others that need public access (telecenters). Recently the government expressed its intention to bid out the installation of 550 telecenters, funded under the Compartel initiative,5 to be located in municipalities and main rural towns. This is a good initiative that would reduce the "digital divide" between the urban wealthy and the rural poor by giving the poor access to the Internet at low costs.

III. Options for Solutions

a) Increased Private Sector Participation

There is no reason why the national and local government should provide telecommunication services. They should focus on regulation of private operators. We propose that the governments sell their telephone companies, which can be run better by private companies. To do that, however, several measures need to be taken simultaneously, to guarantee a vibrant and competitive sector. First, the tariff issue needs

to be resolved. Second, the government needs to consolidate the regulatory institutions and create a single instruction to regulate the sector. Third, the government needs to provide incentives to the local companies to compete with each other. Details of these measures follow.

b) Tariff Reform

Local telephone tariffs need to be liberalized, and subject to a price cap system to stimulate investments in local service. Under this system, companies would be free to set their own tariffs as long as they are under the price cap regime, which would be set at a level that is high enough to guarantee a reasonable rate of return to companies that invest in networks to provide new telephone lines. An international benchmark system could be used to set the price cap. The system of stratification of subscribers needs to be abolished and replaced with a lifeline service if the government wants to protect individuals that cannot afford to pay the of basic service (poor health or too old to work, disability, and so forth). In those cases, subscribers would receive a telephone line for a lower monthly payment, and would pay for each call through the use of a prepaid card. This card would give them the right to make a few calls. If they wished to make more calls they should buy new card at market rates. But all incoming calls would be free. This would be a targeted subsidy, limited to those that really need it.

The government should consider reducing the taxes imposed on long-distance calls. The new proposed tax for universal service is too high, and a more reasonable fee should be imposed.\(^6\)

c) Consolidation of Regulatory Institutions

It is very difficult for a private company to report to several government entities with overlapping roles. Similarly, it is difficult for overlapping government entities to determine who is in charge of each issue. We recommend the creation of a single regulator for the sector. This entity should have all the powers to regulate existing and new licensees of services, to assign spectrum, and to control its use. The government, through the Ministry of Communications, will retain the policymaking initiative and will carry out the government policies in the sector. The proposed new Telecom Law needs to be completely modified in this respect.

d) Incentives for Local Telephone Companies to Compete With Each Other and Flexibility to Merge

For the private sector to invest in local companies, they should be allowed to provide mobile services. These services (like cellular and Personal Communication Ser-

\(^6\) In Latin America 1 percent on gross revenues is the usual
vice, “PCS”) are the ones that are growing today, and there is a need to invest millions of dollars in their deployment. Also, the Third Generation of mobile services will require the replacement of the existing mobile telephony plant. Colombia needs to expand these services. Fortunately, Colombia has all the PCS spectrum in the 1900 MHz band available (the North American Standard). In addition, the government could make available the 1800 MHz band (the European Standard). Every major company, like ETB in Bogotá, EPM in Medellín, and EM Cali, should have a frequency band to provide mobile services. The allocation of these bands could be made as an incentive to participate in the auctions for these companies. Private companies could then compete in open, public auctions to purchase the local companies and simultaneously receive the right to use the frequency band for mobile services. At least three new competitors will enter the mobile market to compete against the two incumbents. This will improve service and lower prices.

Further, the government should allow companies to merge and consolidate. It does not make sense for Colombia to have so many small companies. They are simply not viable. If the market is created, the government should allow them to consolidate into larger viable units. However, anticompetitive rules need to be created to avoid the creation of a national monopoly. For example, a merger of the largest three operators should not be permitted.

IV. Colombia in the Information Society

The government should increase the efforts initiated under the Pastrana Administration to insert Colombia in the information society and knowledge economy. For this to happen we recommend three measures. First, the government should create a separate Ministry or Institutions to consolidate the ICT policy agenda. Second, the government should redirect all the moneys collected through the Telecom Fund to ICT development. Third, the government should increase efforts to foster the development of applications and content in both the public and private sectors. Details follow.

a) Ministry of Information and Communication Technology

The government should consolidate the efforts of the many institutions involved in the development of ICTs into one single ministry that would formulate policies and oversee their implementation. This does not mean that the new ministry (or the existing one with new functions) will be a “superministry,” but that it would be able to sit next to the Education Ministry, for example, and work with it to develop

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7 The Third Generation is the name given to a mobile telephone system that provides fast Internet access for data, voice, and video.

8 Or, alternatively, delegate this function to the Ministry of Communications.
the education ICT agenda (similarly with the Health Ministry, and so forth). The consolidation into a single ministry would bring focus to its role and help the government control the execution of its agenda to insert Colombia into the knowledge economy.

\textit{b) Telecom Fund}

The government should redirect all the moneys collected from operators (the Telecom Fund) and use them to fund the development of ICTs for development purposes. It should stimulate operators to invest in infrastructure by liberalizing tariffs, but use the Fund to invest and promote investment in development of ICTs. Education, health, and e-government should be priorities. The government should also outsource the provision of ICTs to the private sector instead of developing and operating the services by itself.

\textit{c) Developing and Promoting the Use of ICT Applications}

One of the main reasons for low Internet use is the lack of applications relevant to the Colombian population. The government should provide incentives to create local content and increase the e-government initiatives at the National, Department, and Municipal levels. E-government will not only reduce costs and increase the availability of services to the population, but will also increase transparency of the institutions. All schools should have access to computers connected to the Internet, as should health clinics. By fostering the development of ICT applications both in the public and private sectors, Colombia could insert itself in the global economy, attracting investments and jobs to the country and exporting more services to the world. The government should also promote training of individuals in the use of ICTs, by creating incentives for private companies to train their staff and requiring civil servants to use the new technologies.
15

Urban Water and Sanitation Sector

This Chapter was written by Menahem Libhaber and Vivien Foster.

I. Summary

This Chapter proposes policy recommendations and actions in the water and sanitation sector that would:

- Improve water supply and sanitation services in medium-size cities and small municipalities
- Improve water supply and sanitation services in the rural sector
- Initiate activities for adequate management and disposal of municipal wastewater
- Provide government guidance regarding the concepts of major water and sewage projects in large cities to help prevent adoption of inadequate concepts or capture of public interests by private interest groups
- Improve the regulatory framework of the water sector.

Following is a summary of those recommendations:

- Focus on improving water supply and sanitation services in medium- and small-size municipalities because the level of services for about 13 million inhabitants in such municipalities lags behind that of major cities, and because in the past, government provided less support to those types of municipalities and focused on providing support to the major cities. To improve services in medium- and small-size municipalities, continue to apply the policy developed by the Ministry of Economic Development (MED) to support those types of municipalities, based on institutional improvements of utilities through private sector participation (PSP) and on provision of subsidies to the reformed utilities based on the principle of minimum requested sub-
sidely by the private sector and directed exclusively to benefiting the poor. Provide support to major cities only if it has substantial added value in terms of institutional development (mainly through PSP).

- **Develop and implement a policy for increasing water and sanitation coverage and level of services in the rural sector.** During the past 15 years, the level of services in rural areas has continuously deteriorated and government support to this sector has declined. Currently, the level of services for the 12 million inhabitants of the rural sector is the lowest in the country, lagging well behind those of the urban sector.

- **Institute activities for adequate management and disposal of municipal wastewater by** (a) harmonizing the environmental legislation related to the water and sanitation sector, to ensure consistency within the legislation and establishment of attainable treated wastewater quality standards; (b) identifying municipalities of high priority in terms of their need for wastewater management to prevent public health risks and degradation of water resources; (c) providing government financial support to those municipalities included in the priority list, which comply with a series of eligibility criteria including providing proof of sustainable operation of the constructed treatment installation or agreeing to institutional reform which would ensure such sustainability, agreeing to adopt a government-recommended treatment alternative based on one of the appropriate technology options which would be developed by the government, and agreeing to participate in financing part of the involved investments through tariff increases or from other municipal sources. With regard to wastewater management, provide support even to major cities if they comply with the mentioned eligibility criteria.

- **Provide government guidance regarding the concepts of major water and sewerage projects in large cities to** (a) help prevent adoption of inadequate concepts which might lead to utility bankruptcy and the need for government bailout; or (b) when adequate concepts have been adopted, help in ensuring successful implementation and in preventing capture of public interests by private interest groups which sometimes try to derail sound projects.

- **Delay and revisit the need for implementing the water sector regulation reform proposed by the Water Regulatory Commission (Comisión Reguladora de Agua Potable y Saneamiento Básico, CRA) regarding open access and interconnection to the water networks,** since it is hard to see how this reform would contribute in any way to resolving the key issues of the sector regulation. It is also doubtful that this experimental regulatory principle would achieve its expected objectives. Move to implement a much simpler series of improvements in regulation, geared to overcome difficulties with distribution of regulatory functions among various institutions, the atomized and heterogeneous nature of the service providers, the current framework of tariff regulation, financial gaps in the cross-subsidies system, and quality-of-service regulation.
II. Background: Sector Status and Issues

a) Sector Context

In 1986 the Decentralization Law transferred the responsibility for operating and managing the water and sewerage systems to the municipalities. Decentralization has been a major force in shaping the water and sanitation sector’s structure. Colombia consists of 1,091 municipalities and about 1,700 registered water and sanitation service providers, including municipal departments, utilities (public, private, and mixed), and other authorized organizations.

In 1991 a new Constitution was installed in Colombia, in which the right of municipalities to provide water and sanitation services was confirmed, including the power to grant concessions or other forms of private sector participation in the provision of the water and sewerage services. The Constitution provided the legal framework to introduce more aggressive reforms in the water sector by clearly separating service provision and policymaking, and by allowing private sector participation in the infrastructure sector. Law 142, enacted in 1994, established a legislative and regulatory framework for the sector that emphasizes efficiency of service provision through the introduction of competition and the promotion of PSP in the sector.

The Ministry of Economic Development (MED) is responsible for the water sector at the national level. The responsibilities for the sector have been assigned to different institutions within the Ministry. The Potable Water and Sanitation Directorate (DAPS) oversees the water and sanitation sector, formulates sector policies, and plans sector development. The Water Regulatory Commission (CRA) promotes competition among service providers, controls monopolies, defines tariff-setting methodologies based on standard formulas and on investment plans submitted by the operating companies, and sets quality-of-service and technical standards to be followed by utilities. In addition, the Superintendency of Domiciliary Public Services (SSPD) is responsible for monitoring and supervising the adequacy and efficiency of the operations, for establishing uniform accounting systems, supervising the administration of subsidies, and monitoring the general administration of public services companies. Environmental regulation is handled by Autonomous Regional Corporations (CARs).

Over the past decade, Colombia, with a population of about 40 million, of which about 28 million live in urban areas (15 million in major cities and 13 million in medium- and small-size municipalities), and about 12 million in rural areas, has made impressive progress in the expansion of water and sanitation services in urban areas. Approximately 90 percent of the urban population was connected to water supply systems in 2000, compared to an average of 86 percent for the LAC region.¹

About 89 percent were either connected to public sewerage or had individual in situ installations in 2000.\textsuperscript{2} Rural coverage was lower, with about 40 percent of the 12 million rural population connected to a public water supply, and an additional 30 percent or so having easy access to a water supply source. Only about 16 percent of the rural population was connected to public sewerage and about 35 percent had individual in situ installations in 2000.\textsuperscript{3}

While the water and sanitation coverage rates in Colombia are higher than the average in Latin American and neighboring countries, the increase in coverage rates masks shortcomings in the quality of service. Water rationing and intermittent supplies are common in most water supply systems. Only about 50 percent of all drinking water is treated\textsuperscript{4,5} and, as a result, the drinking water quality in many systems is substandard. Sufficient pressure in the water supply systems is lacking, adding to the risk of bacterial contamination. Sewage collection systems do not have sufficient hydraulic capacity to handle wastewater flows, especially in poor neighborhoods, resulting in overflow problems. The share of generated municipal wastewater receiving any kind of treatment is about 7.7 percent, which is low for a middle-income country like Colombia.

The enactment of Law 142 paved the way for private sector involvement in the water sector in Colombia, which began in 1995 in Cartagena. Since then, some 20 large and medium-size water companies, and about 35 smaller ones, with populations of up to 50,000 each, have managed to involve the private sector through various types of models, mainly mixed capital, and concession and management contracts, and the numbers are constantly increasing. The demand for PSP is substantial, probably because of government policy that encourages it and provides incentives to mayors that adopt this type of reform. PSP is emerging as the preferred approach to institutional reform by local authorities for improving the water and sewerage services in Colombia.

\textit{b) Main Sector Issues}

Main sector problems are poor performance of the water utilities, unequal distribution of investments, large regional and urban–rural disparities in coverage and level of service, high investment needs, low private capital investment and credit to the sector, low wastewater treatment coverage, limited subsidies to the poor, regulatory framework issues, and coordination problems among central government agencies.

\textbf{Poor Utility Performance.} As reflected by operational and financial performance indicators, the performance of most of the service providers, excluding those of

\begin{enumerate}
\item Ibid.
\item Ibid.
\item "Política Pública para el Sector de Agua Potable y Saneamiento Básico de Colombia," Minesarrollo, October 2000.
\item Acodal, "Estado del Sector de Agua y Saneamiento," 24 July 1998
\end{enumerate}
large cities, is unsatisfactory. Most of the utilities have operational deficits that require fiscal support, inadequate commercial systems, low billing and collection, and inadequate maintenance. The main reason for poor utility performance is inadequate management capacity, which is a result of political intervention in management, political nomination of managers, and their frequent replacement for reasons not related to their performance.

LARGE URBAN–RURAL AND REGIONAL DISPARITIES IN COVERAGE AND LEVEL OF SERVICE. As an indicator of sector performance, coverage rates of water and sewerage in municipalities of various sizes are presented in Table 1.

Coverage rate values do not reflect the real quality of service. A better performance indicator is the effective water service coverage, which takes into account continuity of service and water quality, in addition to physical coverage. Table 2 shows the effective water service coverage in Colombia, which reflects 24-hour-a-day coverage with water quality that complies with drinking water standards.

These data indicate that (a) utility performance in the country, on average, is less than satisfactory, (b) utility performance in medium and small municipalities is deficient; (c) there are great disparities between major cities and the rest of the country—larger cities tend to have better coverage indicators (both in quantity and quality) than small cities and rural areas; and (d) the rural population, which accounts for about 30 percent of the national total, has the lowest coverage rates.

About 13 million inhabitants of small municipalities and medium-size cities, and about 12 million inhabitants of rural areas, are exposed to unreliable, poor water supply and sanitation (WS&S) services. The regional distribution of water and sewerage coverage rates is presented in Table 3.

### Table 1. Coverage of Water and Sewerage in Colombia

<table>
<thead>
<tr>
<th></th>
<th>Major Cities</th>
<th>Medium Cities</th>
<th>Small Municipalities</th>
<th>Rural Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(percent)</td>
<td>(percent)</td>
<td>(percent)</td>
<td>(percent)</td>
</tr>
<tr>
<td>Water</td>
<td>96*</td>
<td>87*</td>
<td>82**</td>
<td>40***</td>
</tr>
<tr>
<td>Sewerage</td>
<td>88*</td>
<td>87*</td>
<td>60**</td>
<td>16***</td>
</tr>
</tbody>
</table>

* Source: SuperCifras, Publicación de la Superintendencia de Servicios Públicos Domiciliarios, Revista No 5, 2001, data from 2001

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6 “Política Pública para el Sector de Agua Potable y Saneamiento Básico de Colombia.” Mindesarrollo, October 2000
7 SuperCifras, Publicación de la Superintendencia de Servicios Públicos Domiciliarios, Revista No. 5, 2001 7
Table 2. Effective Water Coverage in Colombia as Indicator of Level of Service

<table>
<thead>
<tr>
<th>Major Cities</th>
<th>Medium Cities</th>
<th>Small Municipalities</th>
<th>National Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>82%</td>
<td>46%</td>
<td>27%</td>
<td>&lt; 50%</td>
</tr>
</tbody>
</table>


Table 3. Regional Distribution of Water and Sewerage Coverage Rates

<table>
<thead>
<tr>
<th>Region</th>
<th>No. of Municipalities</th>
<th>Urban Coverage Rate in 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Water</td>
</tr>
<tr>
<td>Amazonia</td>
<td>37</td>
<td>76.4</td>
</tr>
<tr>
<td>Central East</td>
<td>451</td>
<td>96.9</td>
</tr>
<tr>
<td>Atlantic Coast</td>
<td>181</td>
<td>87.9</td>
</tr>
<tr>
<td>West</td>
<td>342</td>
<td>95.7</td>
</tr>
<tr>
<td>Orinoqua</td>
<td>80</td>
<td>87.1</td>
</tr>
<tr>
<td>Total</td>
<td>1091</td>
<td>94.1</td>
</tr>
</tbody>
</table>

Source: “Política Pública para el Sector de Agua Potable y Saneamiento Básico de Colombia,” Mindesarrollo, October 2000

These data indicate that the Atlantic Coast (Caribbean region), Orinoqua, and Amazonia regions have the lowest coverage rates for both services. These disparities result from asymmetries in economic development among major and other cities, and among different regions, and probably from enhanced government support to major cities in the past.

High Investment Needs. In the past few years, annual sector investments reached a value of about 0.7 to 0.8 percent of GDP, or around US$0.6 billion. A similar level of investment will be required over the next decade to reach coverage rates of 96 percent for water and 90 percent for sewerage in the urban sector, and 70 percent for water and 50 percent for sewerage in the rural sector, and to rehabilitate deteriorating infrastructure. It is estimated that an investment of about US$6 billion to US$8 billion would be required over the next decade to reach these coverage rates and to treat 50 percent of the wastewater. In the past, funding of almost 60 percent of sector investment has come from government resources, but given the current economic situation, the government can no longer continue to provide that level of support. Consequently, there is a need for increasing cash generation from utilities and for attracting private sector investment.

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8 An estimated annual investment of 0.6 percent of GDP for water supply and sewerage, totaling about US$6 billion in 10 years, and an additional US$2 billion for treatment of 50 percent of the wastewater.
LOW PRIVATE CAPITAL INVESTMENTS. In spite of expectations, only modest private investment has been channeled to the water and sanitation sector in recent years (about 6.7 percent of total investments). The reasons for such a low level of private investments are (a) although PSP in the water sector is growing, it is still at an early stage; (b) security conditions in the country deter the private sector from investing; (c) private sector investments need to be accompanied by matching public sector investments. An adequate respective policy, which would encourage private investments, has only recently been developed.

LIMITED SUBSIDIES TO THE POOR. Cross-subsidies are part of the design of the tariff structure in Colombia and have proven to be an effective mechanism for income redistribution in large urban areas. However, as the number of municipalities in which the entire population classified in the lower-income strata has grown, the cross-subsidy mechanism has become less effective. A specific mechanism, the Solidarity Funds, was proposed to allow better service to low-income groups while helping utilities achieve financial sustainability by providing an additional direct subsidy to the service provider. However, these funds are supposed to be financed by municipal resources. Because of budget shortfalls, the municipalities do not have resources and the Solidarity Funds concept has not been put into practice.

LOW MUNICIPAL WASTEWATER TREATMENT COVERAGE. Only about eight percent of the municipal wastewater generated in the country undergoes any kind of treatment, while the rest is discharged without any treatment, thereby contaminating a significant part of the natural water resources. Environmental legislation related to the water and sanitation sector is inconsistent and not conducive to encouraging utilities to treat wastewater. There is no clear mechanism for financing municipal wastewater treatment plants, and contributions from the central government for water pollution control are normally assigned on an ad hoc basis, not on the basis of an adequate policy.

WEAKNESSES IN THE REGULATORY SYSTEM. The regulatory and supervisory agencies (CRA and SSPD, respectively) have oversight responsibility for over 1,700 service providers in the country. This situation makes the regulatory activity difficult and costly. For instance, in theory large utilities serving over 6 million inhabitants like Bogotá should be regulated in the same way as those serving 2,000 inhabitants. Current regulation is based on tariff-setting formulas that were designed to provide incentives for efficient services, but have not been fully successful in promoting efficiency, since in most cases, tariff levels are still too low due to political considerations adopted by mayors that override sector incentives. There is still a long way to go before having in place an effective system of quality-of-service regulation to ensure that a minimum standard of service is provided to customers. Users are still not sufficiently involved in the regulatory process to be able to defend their interests. The spreading of the responsibility of different aspects of the regulatory process
across three different institutions—MED, CRA, and SSPD—requires further coordination and clarity.

Limited Coordination Among Central Government Agencies. There are many actors in the sector, some with overlapping functions in certain areas, most notably MED, responsible for setting sector policies and strategy, and DNP, responsible for overall economic planning (including the water and sanitation sector) and designing sector policy to be included in the Law of the Development Plan. They both participate in the CRA, and both design, evaluate, and implement programs and projects, and participate in the allocation of funds for the sector. With these similar functions, coordination efforts are a must. Utilities frequently complain about the large amount of information requested by the government, and about the costs associated with generating it.

While there are obviously many challenges facing the water and sanitation sector, several positive points need to be mentioned.

Adequate Sector Policy Framework. The government of Colombia has always been a pioneer in adopting sound water sector policies. The decentralization policy was enacted long ago, and promotion of PSP is a key sector policy issue. Decentralization and PSP promotion are advanced policies that provide opportunities for improvements in sector performance. The government has also steadily provided financing to the sector and continues to do so.

Satisfactory Service in the Large Cities. The water and sewerage services in the five large cities (Barranquilla, Bogotá, Bucaramanga, Cartagena, and Medellín), which serve a population of about 12 million, are good, although not in all cases the most efficient. The exception is Cali, which is undergoing a crisis in the water and sewerage services.

Successful Performance of Utilities with PSP. The experience with the privatized utilities (Barranquilla, Cartagena, Girardot, Monteria, Palmira, Riohacha, Santa Marta, Tunja, and others) is encouraging. The performance of all of them has greatly improved, customer satisfaction is increasing, and they provide good examples for successful resolution of the water sector problems. Consequently PSP is emerging as a methodology that tends to be adopted by mayors who are interested in improving water sector performance. The utilities that were first to incorporate the private sector, like Barranquilla, Cartagena, and Tunja, are now well-run utilities that enjoy a high degree of customer satisfaction. The improvement in their performance is demonstrated in Table 4. In spite of a favorable government policy, PSP in the water sector is still not widespread and is lower than expected. The reasons for the slower-than-expected spread of PSP are twofold: first, security problems in the country deter foreign operators and investors; and second, carrying out PSP processes is complex and difficult, and needs government technical assistance and financial support to be successful.
<table>
<thead>
<tr>
<th>Indicators</th>
<th>Cartagena Before PSP</th>
<th>Cartagena After PSP</th>
<th>Barranquilla Before PSP</th>
<th>Barranquilla After PSP</th>
<th>Tunja Before PSP</th>
<th>Tunja After PSP</th>
<th>Common Values in Industrial Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>1,300</td>
<td>272</td>
<td>929</td>
<td>813</td>
<td>117</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Number of employees per 1,000 connections</td>
<td>15</td>
<td>2.3</td>
<td>5.5</td>
<td>3.3</td>
<td>5.0</td>
<td>3.7</td>
<td>2</td>
</tr>
<tr>
<td>Water coverage (percent)</td>
<td>68</td>
<td>91</td>
<td>89</td>
<td>94</td>
<td>89</td>
<td>98</td>
<td>100</td>
</tr>
<tr>
<td>Sewerage coverage (percent)</td>
<td>56</td>
<td>72.4</td>
<td>74</td>
<td>78</td>
<td>87</td>
<td>92</td>
<td>100</td>
</tr>
<tr>
<td>Percent of domestic metering (percent)</td>
<td>30</td>
<td>99</td>
<td>25</td>
<td>60</td>
<td>90</td>
<td>99</td>
<td>100</td>
</tr>
<tr>
<td>Number of connections</td>
<td>84,143</td>
<td>117,194</td>
<td>180,717</td>
<td>241,902</td>
<td>23,308</td>
<td>26,139</td>
<td>100</td>
</tr>
<tr>
<td>Unaccounted for water (percent)</td>
<td>60</td>
<td>41</td>
<td>46</td>
<td>42</td>
<td>53</td>
<td>43</td>
<td>25</td>
</tr>
<tr>
<td>Production capacity (m³/sec)</td>
<td>1.6</td>
<td>3.1</td>
<td>7.5</td>
<td>8.2</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Continuity of service (hrs/day)</td>
<td>7</td>
<td>24</td>
<td>18</td>
<td>24</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Response to complaints (days)</td>
<td>6</td>
<td>1.3</td>
<td>2</td>
<td>1.7</td>
<td>1.5</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Connections in poor areas (strata 1 and 2) as percentage of new connections installed in 1995–99 (percent)</td>
<td>98</td>
<td>86</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The water utility of Barranquilla incorporated private sector management first in 1993, when utility management was undertaken by local entrepreneurs. In 1995, an experienced foreign private operator was hired. Comparison of the current performance with the performance of the public utility before 1993 would reveal more impressive progress than presented in the table.*

Source: Ministry of Economic Development
III. Policy Recommendations

a) Improving the Water Supply and Sanitation Services in Medium-Size Cities and Small Municipalities

As seen in Tables 1 and 2, the level of services in medium-size cities and small municipalities lags behind that of major cities. In the past, the government focused on providing support to the major cities. Financial support to medium- and small-size cities, when provided, was not accompanied by sustainable institutional improvement of the poorly performing utilities and, consequently, the expected benefits from the constructed infrastructure were, in most cases, not achieved. It is recommended that the government focus on improving the WS&S services in the medium-size cities and small municipalities, which serve a total population of about 13 million, and which did not receive sufficient support in the past. To obtain the benefits of rehabilitation and expansion of infrastructure in these types of cities, it is essential to reform the utilities and ensure the improvement of their performance.

Recently, DAPS developed a policy for improving the performance of medium-size and small water utilities through PSP. Such cities cannot, in most cases, generate all their investment needs from the tariffs, and a public sector subsidy is needed in these cities to provide for the poor. In the absence of the Solidarity Funds, the government would provide the subsidy, which is different for each city, on condition that the municipal utility undergoes a PSP reform. According to the DAPS policy, government support is demand driven and only municipalities that comply with defined eligibility criteria can participate in it. Two types of PSP models have been developed: (a) the “Operation with Investment” model for medium-size cities, and (b) the “Constructor-Operator” model for small municipalities. The selection of the private service providers in both cases is based on the criterion of the minimum subsidy requested. The Constructor-Operator model also incorporates a mechanism to create a large number of small providers needed to respond to the demand of about 500 small municipalities.

The policy, the concepts of which are detailed in Annex 1, incorporates interesting principles for improving water supply and sanitation services in medium- and small-size cities and introduces transparent and sustainable financing mechanisms under which central government financing is used to ensure transition to private operators, provision of matching financing by the operators, financial self-sufficiency, application of appropriate tariff policies, and provision of subsidies only to consumers that are too poor to afford full tariffs. However, the amount of funds currently allocated to implement this policy (about US$70 million) is small in relation to the demand. It is recommended that the incoming government adopt the DAPS policy and its principles and provide additional funds to extend its activities, in an amount that would result in a significant impact on the service customers in medium-size cities and small municipalities as a result of applying this policy.

The recommendation to focus on support to medium-size cities and small municipalities means, among other things, limiting support to major cities, since
they have received their share of support in the past. However, support to such cities is justified for one of the following reasons: (a) if it has substantial added value in terms of institutional development (mainly through PSP); and (b) to help in wastewater management and adequate wastewater disposal, if the large cities comply with the eligibility criteria mentioned in the section on management and disposal of municipal wastewater presented below.

The implementation of this policy recommendation is a combined responsibility of the central government, through the Ministry of Economic Development, and of participating municipalities. The fiscal impact of the recommendation would be the allocation of an adequate amount (US$100 million to US$200 million seems a reasonable amount) as a government subsidy for the water and sanitation sector in medium-size cities and small municipalities. The implementation of the policy would result in a marked improvement of the water and sanitation services in the participating municipalities and in the water sector as a whole. This Chapter suggests initiating the proposed activities immediately. All the concepts, principles, and procedures of the policy have already been developed by MED and pilot projects have been carried out, so the risks and expected problems are moderate.

It would be advisable to reassign existing funds of direct and indirect royalties and other existing government funding programs to finance activities related to the recommended policy. Distribution of royalties funds set forth in Law 141 of 1994 gives priority to investment in the conservation of wilderness areas, reforestation, or the promotion of mining activities, over investment in the water and sanitation sector. We think that investments in water and sanitation are of higher priority for the improvement of health and for poverty alleviation, and thus propose to temporarily modify the royalties law so as to reallocate funds from generic destinations to investments in water and sanitation infrastructure. We estimate that if all indirect royalty funds were allocated to the water sector, it would receive a minimum amount of US$250 million annually, which would meet, in the short term, the water and sewerage investment needs for medium-size cities and small municipalities. This could lead to reaching full coverage of water and sewerage services in such municipalities within a period of several years.

b) Improving the Water Supply and Sanitation Services in the Rural Sector

Another important feature seen in Tables 1 and 2 is that the level of water and sanitation services for the 12 million inhabitants of the rural sector is the lowest in the country, lagging well behind those of the urban sector. Until the late 1980s, Colombia had high coverage levels of water and sanitation in rural areas, achieved by support of national entities such as the Instituto Nacional de Salud (INAS), which promoted self-construction of water networks in rural areas. During the past 15 years, the level of services in rural areas has continuously deteriorated, due to administrative, financial, and organizational difficulties in small municipalities and with local authorities in charge of rural areas, and due to the decline of government support
programs to this sector, which was an outcome of the water sector policy evolution and perhaps also of the marginal political importance of the rural sector.

At present, there is no central agency such as the División de Saneamiento Básico Rural in INAS, which existed until 1987, with the exclusive objective of supporting the improvement of water sanitation services in rural areas. Because of the neglect during past years, it is now necessary to develop a clear policy for improving rural water and sanitation. The new policy should be based on modern concepts such as a demand-driven approach, intense community participation with decision power in all stages, municipal and user financial contribution to investments, and provision of all operation and maintenance expenses, private sector participation when feasible, and so forth.

As part of its sector responsibilities, the Potable Water and Sanitation Directorate (DAPS) in the Ministry of Economic Development (MED) is also responsible for rural WS&S. It is now undertaking the development of rural water and sanitation sector policy, strategy, and methods for increasing water and sanitation coverage in the rural sector. It is recommended that after developing the mentioned policy, the government should proceed immediately to implement it. It is estimated that by May 2003 the development of the rural WS&S policy will be advanced. It is recommended that government then allocate adequate funding, estimated at US$100 million, to initiate investments in rural WS&S infrastructure, accompanied by institutional improvements, which might also involve PSP.

c) Management and Disposal of Municipal Wastewater

Only about 8 percent of the municipal wastewater generated in Colombia is subjected to treatment, mostly in lagoon systems. A minor part undergoes treatment in activated sludge plants, trickling filters, Upflow Anaerobic Sludge Blanket (UASB) reactors, and primary treatment installations. The majority of the urban wastewater is discharged without prior treatment into the country's watercourses, lakes, and shorelines. Municipal and industrial point-source pollution accounts for about 25 percent of the total contamination of receiving water bodies in terms of organic loads, whereas agricultural nonpoint pollution sources accounts for the balance of 75 percent. However, in the vicinity of major urban centers, municipal wastewater is the main source of organic matter pollution of receiving bodies of water. Also, in terms of pathogenic contamination, which represents the major risk to public health, sanitary municipal wastewater is the main pollution source. Consequently, treatment of municipal wastewater is of major importance in reducing the public health risk and reversing the environmental degradation of natural water resources.

The low percentage of wastewater treated results mainly from sector priorities, which emphasize water supply and sewerage coverage over wastewater treatment, and from inconsistencies within the current environmental legislation related to the water sector (mainly between Decrees 1594 and 901, which sets water quality standards and pollution charges—tasas retributivas—for water contaminants dis-
charges). This sends mixed messages to the water utilities and generate confusion and resistance to complying with the current legislation. Decree 1594 of 1984 is command and control legislation that requires that all wastewater be immediately treated for removal of at least 80 percent of biochemical oxygen demand (BOD) and 80 percent of suspended solids (SS). As a practical matter, such high removal levels on a continuous basis and in a reliable manner can be achieved only by activated sludge or equivalently sophisticated processes. The investment costs associated with such a level of treatment for all the municipal wastewater generated in the country is estimated at US$4 billion. It is doubtful that imposing too-stringent standards without the provision of adequate funding, and lacking the concept of graduality, which is what the current environmental legislation does, is bound to encourage the construction of wastewater treatment plants and thereby achieve positive results in reducing contamination of natural water bodies. Setting too-stringent standards usually results in paralysis of activities for achieving the goal. In a developing country like Colombia, which is almost totally lacking in wastewater treatment, a better strategy than imposing stringent removal standards, which in many cases is not necessary, would be to determine for each case the specific level of treatment required to prevent contamination of the receiving water body in accordance with its use, and tailor the treatment installations accordingly.

It is therefore recommended that the government adopt a policy based on the following principles:

- **Consider amending Decrees 1594 of 1984 and 901 of 1997 to ensure consistency within the environmental legislation.** This would also include amending Decree, 1753 of 1994, the environmental licensing Decree, to simplify the licensing process and thereby boost implementation. Base effluent quality standards on the principle of preventing contamination of receiving water bodies in accordance with their use, thus tailoring the treatment installations to fit the respective level of treatment.
- **Conduct a study to identify the priority cities in Colombia for which municipal wastewater treatment installation is urgently needed to reduce severe public health risks or preserve endangered ecosystems.** For example, Cartagena can be considered a high-priority city since it is surrounded by bodies of water contaminated by municipal wastewater, which poses a great risk to the health of inhabitants and tourists, and causes degradation of marine and coastal lagoon ecosystems. In contrast, a city in the Andes that discharges its wastewater to a mountain river flowing downstream of the city into a canyon with difficult access is a lower priority city since the public health risk in that case is minor, and the self-purification capacity of a steep slope mountain river is significant.
- **Conduct a study for selecting low-cost, appropriate wastewater treatment technologies for various-size cities and treatment levels.** These could include various

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9. Based on an estimated investment of US$100 per capita.
types of lagoons, anaerobic processes such as UASB, anaerobic filters, seasonal stabilization reservoirs for agricultural reuse, enhanced primary sedimentation followed by filtration, pretreatment for submarine outfalls, and so forth. Design criteria for these types of processes and cost estimates as a function of city size and level of treatment.

- **Consider establishing a fund, managed by DAPS of MED, which would provide grants to support investments in wastewater treatment installations for high priority cities.** Royalty funds or multilateral loans could be used to finance this fund. Industrialized countries (such as the United States, European Community [EC] member countries, Japan, and others) have reached high treatment levels only after many years and with the support of heavy subsidies for wastewater treatment plants (in the United States, 75 percent of investments; in the EC, in many cases up to 100 percent). It is doubtful that Colombian cities, especially large ones, would be able to finance wastewater treatment installations from internal cash generation, and it is well justified that the government provide support for priority cases. Setting effluent quality standards needs to be accompanied by adequate funding, without which the standards will not be attained (as happened under current legislation which ignored financing issues). The fund would provide support on a grant basis, and to access such financial support a city would need to comply with eligibility criteria, which need to be worked out but could include:
  - The participating city is on the priority list.
  - The city can provide proof of sustainability of the operation of the constructed treatment plant, or agrees to undergo an institutional reform that would ensure such sustainability. This is required in order to avoid the situation of the cities of the upper basin of the Bogotá River, for which the central government constructed 23 wastewater treatment plants that have never been operated. If an institutional reform is planned, it could involve PSP under the principles of the Water Sector Reform Assistance Project. Cities that would accept PSP might be eligible for a higher subsidy.
  - The city accepts the requirement to adopt a wastewater management alternative recommended by the government, based on one of the developed appropriate technology options.
  - The city agrees to increase tariffs and to finance part of the investment.

Government should allocate adequate funding, estimated at US$200 million, to initiate investments in wastewater treatment infrastructure. It is estimated that matching municipalities funding would reach a similar amount, and that an investment of US$400 million over four years would have a meaningful impact on resolving priority water pollution problems in the country. The fiscal impact would be the allocation of about US$200 million as a government subsidy. It is suggested to immediately establish an implementation unit in DAPS and to initiate the studies to identify priority cities and select appropriate technologies. The task force to
amend environmental legislation is about to initiate its activities, and hopefully will soon see positive results, which would enable it to embark on investment activities.

d) Guidance for Major Projects in Large Cities

Although municipalities are responsible for providing water and sewerage services, it is recommended that the central government be involved and provide guidance to large cities in dealing with major water supply, sewerage, and wastewater treatment projects. In large cities, the cost of these types of projects is high. Experience has shown that in certain cases, inadequate decisions are taken and inadequate concepts are adopted in large cities, leading to the implementation of major projects that the involved utilities have no capacity to finance. Sometimes such inadequate decisions drive utilities into bankruptcy, in which case the central governments has to step in and bail them out, since large cities cannot be left without water supply or sewerage services. It would therefore be advisable for the government to get involved in such projects and provide guidance to the utilities to ensure that sound concepts are adopted at the outset. The wastewater management project of Bogotá can be cited as an example of such a case (see details in Annex II).

It is also recommended that in cases where adequate concepts are adopted in large cities, the central government extend its support shielding them from capture by private interest groups that act against the public interest. The case of the wastewater project of Cartagena (see details in Annex II) can be cited as an example. The utility of Cartagena has adopted a sound strategy and is implementing a project that will provide many benefits to the city and to its poor population, however, powerful local private interest groups are trying to derail the project.

e) Improving the Regulatory Framework of the Water Sector

In the years following the promulgation of Law 142/94, efforts focused on the adoption and implementation of new regulatory principles. (a) achievement of financial self-sufficiency; (b) rebalancing of surcharges and subsidies, that is, limiting a surcharge to be applied to higher-income groups; and (c) determination of performance targets. Success has not been complete.

To mark five years since the inception of the new regulatory model, the CRA decided to conduct an interim evaluation of the regulatory framework, with the assistance of an international adviser. The evaluation identified a number of weaknesses in the current regulatory framework, in particular (a) the use of rate-of-return price regulation based on reported rather than efficient costs, (b) the use of average cost rather than marginal cost pricing, (c) the lack of solidarity funds to ensure the financial equilibrium of the subsidy system, and (d) the lack of incentives for operators to meet quality-of-service targets.

The proposed response is to move toward a radically new sector model based on open access to water (and sewerage) networks allowing competition between opera-
tors producing treated water (and treating sewage). This follows current international practice in the electricity sector, where generators have open access to transmission networks and compete among themselves to provide the cheapest power to consumers. Recently the CRA produced the draft regulations that would support the proposed new system, and these have been the subject of major consultations with the water industry. The key features of these regulations are as follows:

- Full separation of accounts between water treatment, water distribution, sewerage collection, and sewage treatment.
- A requirement of all operators to provide open access to their distribution networks on nondiscriminatory terms.
- The terms of interconnection must be agreed freely through bilateral negotiation between parties, subject to price ceilings to be determined by the CRA.
- Interconnection agreements to cover all costs, including leakage and network expansion, and allocation of risks relating to water quality and continuity of service.

In addition, the proposed new regulatory framework would incorporate important changes with respect to quality-of-service regulation and eligibility for solidarity funds.

The practical difficulties in establishing truly contestable interconnections in the different parts of the water supply system, and several associated technical problems, would not make it practical for Colombia to shift to such a new model, at least anytime in the foreseeable future. To understand the problems associated with the interconnection regulations, it is helpful to put them in a wider intersectoral and international context (see Annex III for more details). Such a comparison illustrates that oversight of interconnection arrangements has proved to be one of the most complex and challenging areas of regulation.

However, beyond the technical difficulties of implementing the proposed new model, the emphasis on introducing competition would not in any way help to solve what in our view are the basic problems facing the Colombian water sector today. The five key problems, described below, are more simple in nature and have to do with deficiencies in the institutional and financial framework of the sector.

- **Institutional Framework.** The new institutional framework has effectively spread the responsibility for different aspects of the regulatory process across three different institutions—MDE, CRA, and SSPD—making it difficult to regulate in a coherent manner. Moreover, the central regulatory institution for the sector—CRA—has been given a relatively limited role that is somewhat removed from the day-to-day practice of regulation. In some respects, this creates perverse incentives for the agency to keep issuing new regulations rather than focusing on implementation.

- **Sector Structure.** The atomization of the sector into more than 1,700 operators makes it extremely costly and labor intensive to apply traditional
“natural monopoly” regulation from the center. The splintering of the industry has also weakened the institutional capacity and financial viability of the service providers.

- **TARIFF REGULATIONS.** Although the current tariff regulations have served an important purpose in terms of moving the sector toward financial sustainability, there is scope for improving the framework to enhance incentives for economic efficiency, so that water operators produce at least cost and water consumers economize on their use of the resource. There are also some concerns that the current tariff regulations may provide excessive remuneration for capital costs, particularly given that the asset life of seven years used for depreciation purposes is much shorter than the true economic life of the assets.

- **SUBSIDY SYSTEM.** Although Colombia has a well-conceived system of subsidies to keep services affordable to the poor, the transition toward the new ceilings established in Law 142/94 will be very difficult to achieve from a social perspective. This is because it entails a very substantial rebalancing of tariffs between socioeconomic groups, with tariff increases falling disproportionately on the poor. Moreover, given that 89 percent of the population belong to socioeconomic groups that are eligible to be subsidized, and that a significant proportion of municipalities do not have any consumers in the highest socioeconomic groups, the new policy will create a significant financing shortfall that needs to be systematically evaluated and addressed.

- **QUALITY OF SERVICE REGULATION.** There is no effective system of quality of service regulation to ensure that a minimum standard of service is provided to customers. Nor are consumers sufficiently involved in the regulatory process to be able to defend their interests. For example, a joint report by the Ministry of Health and the Pan-American and World Health Organizations found that only 22 percent of municipalities in Colombia (accounting for 55 percent of the population) were chlorinating their water supplies.

The solution to the current problems with the regulation of the water sector are more likely to be found in the following kinds of measures, rather than in a sudden move toward competition:

- **INSTITUTIONAL FRAMEWORK.** There are two basic measures that could improve the functioning of the institutional framework.
  - To revisit the distribution of regulatory functions among sectoral institutions. In particular, responsibility for approving the Planes de Gestión should be transferred from MDE to CRA, and these should be fully integrated with the tariff-setting process and the eventual framework for quality-of-service regulation (see below). A system for the monitoring and enforcement of the targets contained in the Planes de Gestión should also be developed in coordination with SSPD.
• One way of improving the coherence of regulatory actions would be to provide some common membership between the boards of the two main regulatory agencies. At present, SSPD is represented on the Board of the CRA, but there is no representation from the CRA in the governance structure of the SSPD. A possible option would be for one of the members of the CRA Board (for example, the representative of DNP) to be incorporated into the SSPD Board, to provide a point of articulation between the two institutions.

• Sector Structure. There is an urgent need to develop a regulatory strategy for dealing with the atomized and heterogeneous nature of the service operators. A practical approach may be to group the operators into three tiers (small, medium, and large) and to define alternative regimes for each. The greatest impact from limited regulatory resources will come from focusing efforts on the effective regulation of the largest operators, where most of the population is concentrated. In the case of smaller operators, a possible approach would be to do random regulatory checks of a sample of operators each year and publish the findings. It would also be desirable to promote greater consolidation of small-scale water operators, for example by providing positive financial incentives for the creation of multimunicipal companies (or mancomunidades such as Acuavalle).

• Tariff Regulations. There is still significant scope for improvement on the current framework of tariff regulation. First, a system of benchmarking needs to be developed so that companies are not simply allowed to pass inefficiencies on to their customers. Second, there is a need to develop the regulatory instruments that would support the application of the tariff regulations. These should include a system of regulatory accounting guidelines and auditing procedures to ensure the consistency and transparency of financial data, and a standardized financial model to permit sensitivity analysis to alternative tariff scenarios. Finally, there may be some need to review the way in which capital costs are recovered through tariffs. The current regulations appear to give operators the possibility of being rewarded for all past investments at the approved cost of capital (in the 9-to-14-percent range). Given that most of the historic investments were subsidized by the State, it may not always be appropriate to provide this level of remuneration.

• Subsidy System. It is increasingly urgent that a detailed modeling exercise be undertaken to quantify the financial deficit and the distributional impact that will result from applying the new legal ceilings on subsidies and surcharges. The analysis needs to be undertaken on a number of levels, including different socioeconomic strata, water operators, municipalities, departments, and the country as a whole. On this basis, it should be possible to simulate alternative policy responses to the financing gap, including municipal, departmental, and national contributions, or adjustments in the level and structure of the subsidy.
• **Quality-of-Service Regulation.** The CRA proposals for a framework of quality-of-service regulation based on guaranteed minimum service standards and financial compensation to customers are very sound and should be developed into draft regulations as soon as possible. Ideally, these measures should also be complemented with mechanisms for increasing consumer involvement in the regulatory process. Careful thought will need to be given to the transitional process to the new higher-quality standards, and the regulatory resources required to enforce compliance.

The CRA should be responsible for implementing the proposed improvements, and it is recommended that activities be initiated immediately. Implementation of the proposed improvements has no additional fiscal impact.
Annex I
Improving the Water Supply and Sanitation Services in Medium-Size Cities and Small Municipalities

I. Introduction

The policy seeks to support water sector reforms both in medium-size cities or regional utilities (serving populations of up to about 300,000) and in small municipalities (populations of up to about 12,000) by facilitating the incorporation of the private sector in the management and operation of the water and sanitation services in the utilities of interested cities and municipalities and by providing financial support to these utilities, while ensuring provision of services to the poor. Based on experience in Colombia and elsewhere in the LAC Region, it is assumed that once the private sector gets involved in managing the utilities, the level of water and sanitation services will improve, the services will become more efficient and reliable, their coverage will expand, and the access of poor consumers to these services will increase.

The policy provides targeted assistance to utilities that choose to incorporate the private sector in management and operation of the water and sewerage services, since the PSP approach is believed to be the best way to improve the performance of the water utilities and the level of services they provide to the customers. Under the policy, support will be provided to municipalities which (a) agree to private sector participation in their water utilities; and (b) reach an agreement with MED regarding a tariff increase which will elevate the tariffs to a level which, at a minimum, will cover operation, maintenance, and depreciation costs, and as higher than that as socially and politically possible. For the purposes of the policy, PSP is defined as transferring full management and operational responsibility to the private sector and provision of investments by the private sector in an amount compatible with the agreed level of tariffs. The policy of focusing on medium-size cities and small municipalities would result in providing support to a population with scarce resources, since most of the population in the medium-size cities and small municipalities are of low income.

The preferred option in PSP in the water sector is to reach an agreement on a full concession under which the concessionaire commits to providing all the investments required during the contract period. However, under the conditions in medium-size cities and small municipalities in Colombia, it would be difficult to reach full concession agreements. Most of these cities suffer from significant infrastructure backlogs and need high investments, while the current tariffs are quite low. It is estimated that in most medium-size cities and certainly in all small municipalities, even with tariffs increased to a socially acceptable maximum level, it would not be possible to finance all the works required in the next 10 to 30 years (the contracts period range) just from tariffs. Consequently, the private sector, which will be hired to manage a
utility, will invest up to a level that can be recovered from tariffs, whereas the rest of the investments would need to be provided by the public sector (national and/or local government) in the form of subsidies or loans to service providers.

Two different mechanisms were developed to facilitate the incorporation of the private sector in (a) medium-size cities or regional associations of municipalities with populations of up to about 300,000, and (b) small municipalities with populations of up to about 12,000. The differentiation results from the fact that, from the private sector's standpoint, the business is different in the two size ranges of municipalities, and the required type of operator is different in both, that is, for medium-size cities only an experienced operator with proven credentials in operating utilities of comparable size can be hired, while for small municipalities proven experience in operating comparable systems is not required, but rather the capacity to operate them. The cutoff number of 12,000 was selected because it defines reasonably well the limit between the two types of municipalities and because it coincides with an administrative division in Colombia. Model-bidding documents have been developed for both types of municipalities which include the terms of reference, specifications, and draft contracts.

II. Medium-Size Cities

The operators for medium-size cities must be private companies or joint ventures that have proven experience in operating similar size water and sewerage systems and are financially solid enterprises that can mobilize the required funds for investment. The contract for the medium-size cities is called an "operation with investment contract." The investment commitment of the private operator of each city will depend on the level of tariffs agreed upon with municipal authorities. In one extreme, where the tariff level can support only operation, maintenance, and depreciation, it would be a management contract (operation without investment); in the other extreme, under which the tariffs can support all the investments, it would be a full concession (operation plus commitment to provide all the required investment). In most cases, however, it is expected to be an operation contract under which the operator would commit to providing part of the required investment while the rest would have to come from the public sector, either the municipality or the government or both. If the maximum tariff level acceptable to the municipal authorities does not cover the operation and maintenance cost of the utility, the utility is financially nonviable and the private sector cannot operate under such conditions.

The basic principle of the operation under an investment contract is that it commits the operator only to providing an investment compatible with the level permitted by the authorized tariff. The financing of any additional investment is the responsibility of the public sector, and under the policy an attempt will be made to provide participating utilities with the amount of support requested in each case by the private operator. The operation with investment contract stipulates the invest-
ment program over time (the POI) required to bring the system to optimal conditions, as proposed by the winning bidder, and including a commitment of the operator to finance and construct the part of it that corresponds to him or her according to his or her proposal. When public funding is required, its use and allocation will be derived from the POI. MED and the municipal authorities will reach an agreement with the operator regarding the works and goods of the POI, which will be financed by the government subsidy.

The criterion for selecting the winning bidder is simple and transparent: the contract would be awarded to the bidder who requests from the public sector the lowest capital investment subsidy in order to complete the works of the POI and bring the system to the optimal state, and operate and maintain the water and sanitation system. No operation subsidies are involved and the maximum amount that the government is ready to pay (the subsidy cap) will be stipulated in the bidding documents. The performance indicators targets (metas del contrato) will be stipulated in the draft contract which forms part of the bidding documents, will be compatible with the subsidy cap, and will also ensure adequate service to the poor. Each bidder will submit his own POI, which may be different from the POI proposed by the engineering consultant, since the POI is essentially a technical proposal, and it is advisable to let the private sector introduce its own ideas and innovations. Each bidder will provide in his proposal a detailed annual scope of works and related dollar amounts that he commits to carry out each year. The winning bidder will agree that, once he has received from the government an agreed set of works whose value is equivalent to the amount of subsidy requested, he will reach the target indicators value over time, as stipulated in the contract; that is, the operator will commit to attain the target indicators corresponding to the total level of investments provided (private plus public investments). The yearly work program can be changed by mutual agreement with the mayor, but the operator would have to comply with the total amount of the annual investment program.

The amount that the public sector has committed to provide will not be made available to the operator for discretionary use, but rather will be used to finance part of the infrastructure works stipulated in the POI, which will be proposed by the operator (that is, works considered by him as high priority) and approved by the municipal authorities and the MED. In this way, the private operator will not receive a financial contribution from the government, but rather the right to operate additional infrastructure which is provided by the government as a grant and is owned by the municipality, and the value of which is equivalent or close to the amount of the subsidy that was requested in his proposal. In this manner, the government in effect finances additional infrastructure for the city residents and not the provision of funds to the operators, a concept more acceptable to the public.

In each city, the works financed by the government will be designed by the private-sector-managed utilities. This arrangement will ensure that the infrastructure provided by the government will be totally satisfactory to the private operator and will meet his requirements. The works and goods financed with government proceeds
will be procured through the public bidding process in accordance with procurement law The supervision and control of the PSP contract will be the responsibility of the contracting agency, that is, the municipality, which may hire an individual consultant or a consulting firm, on a full- or part-time basis, to carry out that task and determine if the performance targets are achieved by the operator. The duration of the operation with investment contracts would be in the range of 20 to 30 years, which is the time required to recover investments in these types of contracts.

If the authorized tariff level is sufficient to cover the entire investment program (with no need for financing support from the public sector), the contract would then be awarded to the bidder that offers the highest reduction in the authorized tariff (that is, the lowest tariff).

III. Small Municipalities

The contract with private operators in small municipalities is called a "Constructor-Operator" contract. The concept of incorporating the private sector in the management of utilities of small municipalities, with populations of up to 12,000, is a most significant innovation. Common perception suggests that it is impossible to privatize small utilities, because the private sector does not have interest in utilities that serve fewer than 300,000 people. However, experience in Colombia and in other countries has shown that there are successful small-size private operators in the water and sanitation sector managing utilities without government support. The basic assumption of the Constructor-Operator concept is that big operators have an interest in managing utilities of large and medium-size cities, while small utilities attract small operators. The concept of the Constructor-Operator model in small municipalities is that through competitive bidding, small and medium-size construction companies, possibly in association with small consulting firms, will compete for the construction and/or rehabilitation of the water supply and sewerage systems in a small municipality, and the winning bidder will have to commit to operate the systems for 10 to 15 years from the date of signing the contract. No prior experience in operating water systems is required from the bidders. It is assumed that construction companies that have the capacity to construct the systems also have the technical and management capacity to operate them after minimal training, since the systems are quite small and simple.

Although it might appear that the bidding process for selecting the Constructor-Operator is similar to that for selecting a constructor for small works, it is in fact a process for selecting a private operator, in which the selection criterion of the winning bidder is the lowest subsidy that is required to construct, operate, and maintain the specified water and sewerage infrastructure in the municipality. Bidders will estimate the present value of surplus operating revenue and determine how much they can contribute from future income to finance the works, and how much they request as public sector (government and municipality) subsidy. The winning bid-
order will be required to establish a special-purpose company with separate accounts to construct and operate the water and sewerage systems of the municipality.

The Constructor-Operator model is basically a concession tailored for small municipalities, in which the government finances, in the form of a subsidy, most of the required water and sewerage infrastructure investment. The requirement for a high level of government subsidy results from the fact that small municipalities suffer a significant backlog in infrastructure, while the population does not have the capacity to finance this backlog through tariff increases. The Constructor-Operator model is, in fact, similar to that of the operation model in medium-size cities, with three differences: (a) in small municipalities the operator is also the constructor, and this is required for the creation of the operators market; (b) the level of government subsidy will most probably be greater (in terms of percent of total investment) in small municipalities; and (c) the duration of the contracts in small municipalities is 10 to 15 years, while the duration of the contracts in medium-size cities is 20 to 30 years.

Although initially constructors may not find such an operation attractive, they might agree to be responsible for system operation and management because of their interest in the construction portion of the contract. After operating the system he himself constructed for 10 years, the Constructor-Operator will most probably recognize the benefits of performing as a system operator, that is, benefiting from a stable, reliable, and continuous source of income while performing a relatively simple task. It is expected that this will convince the entrepreneur to remain an operator on a permanent basis. In that manner, through the concept of Constructor-Operator, it is expected that the market of private operators for small municipalities will be created.

IV. Ensuring the Provision of Services to the Poor

a) In Medium-Size Cities

To ensure services in poor neighborhoods of medium-size cities, two sets of preestablished performance targets, varying over the years, will be stipulated in the operation contracts, one for the entire city and one for the low-income neighborhoods. The operators will commit to achieve both sets of targets, thus ensuring the provision of services to the poor in the medium-size cities. In small municipalities the eligibility criteria will provide a screening mechanism that will ensure that only municipalities with a high portion of low-income population will be able to participate in the project. This can be done through use of the Municipal Development Index (Indice de Desarrollo Municipal, INDEMUN10), a social indicator that is

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10 INDEMUN is a territorial development indicator that reflects in each municipality a set of social indicators (coverage of education, coverage of public services, health, unsatisfied basic necessities), and financial indicators (tributary and nontributary income per capita
determined annually by DNP for each municipality. Only municipalities with an
index value of up to 5, which reflects low-income municipalities, will be eligible to
participate and obtain subsidies.

b) Subsidy Policy

The tariffs for each stratum will be structured in such a manner that high-income
consumers in strata 4, 5, and 6 in each municipality will pay their share in the
investment program through the tariff and will not receive any subsidies. As a result,
all the investment subsidies by the government will benefit only consumers in strata
1, 2 and 3, that is, population residing in low-income areas. This approach is a
requirement of Law 142.

c) Eligibility Criteria for Benefiting from Government Subsidies

Although there are some differences between the eligibility criteria of small municip-
ialities and medium-size cities, the criteria in both cases are quite similar. The main
eligibility criteria for utilities to benefit from government subsidies could be (a) the
water coverage in the municipality is lower than a preestablished value, (b) the
mayor and the municipal council agree to PSP and accept the proposed PSP model;
(c) the mayor and the municipal council agree to new tariffs at a level which will
ensure coverage of, at least, the operation, maintenance, and depreciation costs, and
as high as socially and politically possible; (d) the mayor and municipal council agree
to contribute to the investment program a certain percent (between eight to 20 per-
cent, to be established specifically for each case) of the Law 60 municipal transfers
or other municipal resources; (e) the mayor commits to carry out a campaign aimed
at informing the community about the reform, the PSP model, and the tariff adjust-
ment involved; and (f) the investment per capita is capped and cannot exceed a pre-
determined value.

and expenses per capita) The INDEMUN indicator has eight categories. Category 1
reflects the least-developed municipal level and category 8 the most developed. Category
5 was selected as the cutoff category of the indicator in order to be inclusive enough,
while on the other hand not to include in the project municipalities with too high a level
of development and too low a level of poverty
Annex II
Examples of Government Guidance Regarding Water and Sewerage Projects in Large Cities

I. Ensuring Adequate Disposal of Bogotá’s Wastewater

Over recent years Bogotá has made impressive development progress in urban infrastructure and transport, power, water, parks, and more. However, in terms of disposal of its wastewater, about 10 years ago it adopted a strategy that is very costly and does not provide significant measurable benefits. Consequently, the contamination of the Bogotá River continues to increase, generating an ever-growing public health risk to the inhabitants of the city and to the consumers of agricultural produce irrigated with the river water, and causing environmental degradation within the city limits. The adopted strategy consists of the construction of three activated sludge (secondary treatment) plants along the Bogotá River within the city limits, to be located at the confluences of the tributaries Salitre, Fucha, and Tunjuelo into the Bogotá River, which would dispose of their treated effluents into the Bogotá River. The investment cost of the three plants was estimated at the time at about US$1 billion; however, recent estimates are higher, at about US$1.4 billion.

The first stage of the adopted strategy, which has already been executed and is under operation, consists of the primary treatment of the first plant at Salitre, which was constructed under a 30-year build-own-transfer (BOT) agreement with a private operator. According to public information, the investment in the primary Salitre plant was US$125 million, and the monthly fee which the District is paying the operator is US$3 million, and it is estimated that the total amount the District would pay during the contract period, just for the first stage of the first plant, would amount to about US$0.5 billion.

After it went into operation, it was found that this plant had no detectable positive impact on the water quality of the Bogotá River. At the time, the Bank did not support the adopted strategy on the grounds that it was too costly and would not achieve meaningful benefits even after completing the construction of the three secondary plants. The Bank and a team of international experts proposed that an alternative strategy be considered, of constructing a large interceptor along the Bogotá River (the Bogotá River Interceptor, BRI) to convey the raw wastewater downstream of the city limits for treatment there in stages, according to the financial capability of the District. This strategy, which was developed by a consulting firm financed under a previous Bank loan, provides most of the benefits after a relatively small investment in constructing the interceptor and within a short time period, and is far less costly than the adopted strategy. However, it was rejected by the District. At the time, the Bank presented its position to DNP and Minhacienda, which were supportive of its position but chose not to intervene in the District’s autonomous decisions.
As a result of the high costs associated with the primary Salitre plant, the District is now questioning the validity of the adopted strategy and has initiated a process of revising past decisions and searching for an alternative strategy. It is recommended that this time the government work with the District and provide support to adopt a strategy based on the BRI concept. Government intervention is justified because there is still a risk that even the second time around, an inadequate, costly strategy could be selected, and if this happens, the government will have to bear, at the end of the day, part of the expenses for unnecessary investment, because investments could reach amounts which exceed the payment capacity of the District and an emergency bailout might be necessary in case of wrong decisionmaking. The Bogotá wastewater disposal project falls within the priority projects discussed in Issue 3 above, and should be considered a national project in which government should play a guiding role.

The responsibility for implementing the proposed policy should be given to MED and DNP, and it is recommended that activities be initiated immediately. The implementation of the policy has no current fiscal impact and could potentially save future fiscal expenses.

II. Ensuring the Continuation of Executing the Wastewater Disposal Project of Cartagena

The wastewater treatment and disposal project of Cartagena has been under implementation during the past couple of years. This project can serve as a good example for the application of the recommended policy for adequate management and disposal of municipal wastewater, presented in Issue 3. Cartagena is a priority city in terms of wastewater pollution control needs. It underwent a PSP process and sustainability of operation is ensured; tariffs have been raised; the District and the private operator are contributing the major share of the required investments; an appropriate, low-cost, simple-to-operate technology has been selected, based on preliminary treatment of the wastewater and discharge of the effluent to the Caribbean sea via a submarine outfall sufficiently long to prevent occurrence of any environmental nuisance, and the government provided a subsidy which made the operation possible.

Although during preparation and implementation the project enjoyed the strong support of all the mayors of Cartagena and of the central government, and received the environmental license from the competent authorities, since inception it has faced the strong opposition of local interest groups (landowners who own the coastal areas in the vicinity of the planned outfall site and think the outfall will have a negative impact on the development of their properties, a group that favors the construction of large oxidation ponds near the Ciénaga de la Virgen, and inhabitants of four small villages located north of Cartagena, in the vicinity of the planned outfall site, and others) which are doing everything in their power to defeat it.
The project has enormous benefits of providing water and sewerage services to all poor neighborhoods of Cartagena, cleaning up the bodies of water surrounding the city (Cartagena Bay, the Cienaga, the Caribbean beaches, and the in-city water canals) while avoiding generation of any detectable environmental nuisance. It is the least costly project that generates so many benefits; any other wastewater disposal alternative would be more costly and less effective.

In Colombia, public interests are at times captured by private interest groups. This has not happened in the case of the Cartagena wastewater project which, because of the Bank’s involvement, has been developed with the sole objective of providing the best solutions from the point of view of the public’s interests. However, the private interest groups, which were deprived of their power to control the project, are exerting huge pressure to capture the project and direct it to solutions that are not in the best interests of the public. It would be a great pity if the project had to be cancelled because of the opposition of a small number of well-connected and powerful people who put their private interests ahead of the public good.

It is recommended that the government exercise all its power to ensure that the implementation of the Cartagena project moves ahead without further delays.

The responsibility for implementing the proposed policy should be given to MED and DNP, and it is recommended that activities be initiated immediately. The implementation of the policy has no additional fiscal impact and could save future fiscal expenses.
Annex III
Intersectoral and International Context of the Problems Associated with the Regulatory Reform Proposed by the Water Regulatory Commission

To understand the problems associated with the reform proposed by the Water Regulatory Commission (CRA), that is, the new interconnection regulations, it is helpful to put them into a wider intersectoral and international context.

I. Analogy with Other Sectors

The proposed new regulations were in part inspired by the experience of creating competition in other utility services, particularly electricity and telecommunications. Although the comparison between water networks and other utility networks is intuitively appealing, it ignores fundamental technical and economic differences between these sectors:

- **Scope of Competition.** Both the electricity and telecommunications sectors involve national networks that interconnect large numbers of potential service providers, making it possible to contemplate effective competition. The water sector, on the other hand, is based on local networks each of which is interconnected with only a small number of economically and environmentally viable water sources. The main reason why national networks have not developed for the water sector is that (unlike electronic and digital data) water is a heavy liquid that is costly to transport in relation to its economic value. An important consequence of this is that the scope of competition between alternative water sources is very limited.

- **Complexity of Service.** Water quality is a critical parameter of the water service, with major health implications. The quality of water has numerous dimensions and is complex to monitor, all of which raise the transactions costs of reaching an interconnection agreement.

II. Experience in Other Sectors

The experience of the electricity and telecommunications sectors shows that far from reducing the regulatory burden, interconnection has proved to be one of the most complex and demanding aspects of regulation. This is due to the difficulty of establishing fair terms of access, given the scope for strategic manipulation of the conditions of interconnection when the owner of the distribution network competes with the new entrant for customers in the end market. As a result, the regulator may
often be required to intervene to solve disputes between parties. Moreover, in many cases, it has been shown that full vertical separation between network operation and service provision is ultimately required for competition to work effectively. Such transaction costs may be justified when the potential gains from competition are significant, as they have proved to be in electricity and telecommunications. However, in the case of the water sector this is unlikely to be true for the reasons stated above.

III. Experience in Other Countries

On a global level, there has been virtually no experience with interconnection of water networks, barring one isolated example in the Canary Islands. The practice was recently legalized in the United Kingdom, but in a context very different from that of Colombia. The interconnection regulations in the United Kingdom came after 10 years of water sector reform in a relatively mature regulatory system, and had been preceded for a number of years by an intermediate form of competition based on bulk supply that did not require access to networks (known as “inset appointments”). Even under these circumstances, the competitive response has been extremely limited. There have been only nine cases of inset appointments since this mechanism was legalized in 1992, and as yet no cases of interconnection since the regulations were published in 2000. This experience suggests that even in a mature market, competition is only a very marginal phenomenon and not something that can be expected to effect a sudden transformation of the water sector.

In conclusion, there is simply insufficient international empirical experience to quantify the costs and benefits of interconnection in the water sector, or to identify the possible pitfalls in implementation. Moreover, from a theoretical perspective, the probable advantages (in terms of competitive pressure and improved efficiency) appear to be very modest in relation to the probable disadvantages (higher transaction costs, increased regulatory burden, and higher risk to operators). For all of these reasons Colombia would be ill-advised to embark on an experiment with interconnection at this stage.

But most important, even if interconnection arrangements could be successfully implemented, they would not do anything to address the real problems facing the water sector in Colombia. These problems are much simpler in nature, and reflect the difficulties of implementing modern regulatory reform. Far more helpful in this regard are the two other components of the proposed new regulatory framework relating to quality-of-service regulation and eligibility for solidarity funds. Both these proposals have considerable merit and would address some of the genuine problems the country faces.
Natural Disaster Management: Vulnerability Reduction & Insurance

This Chapter was written by John Pollner, Eleotrio Codato, and Christina Garcia.

Part A. Hazard Mitigation and the Institutional Framework

Part A was written by Eleotrio Codato and Christina Garcia.

The assessment of the vulnerability of a population to natural disasters, the mitigation of risk, and the development of preventive public action plans, are necessary to avoid and minimize the impact of natural disasters. Further, because natural disasters interrupt development and growth goals, risk mitigation needs be incorporated into national, regional, and local development plans. Through a consolidation of efforts to establish a decentralized national system (the National System for the Prevention and Attention of Disasters, SNPAD) to address these issues, and by commissioning technical assessments of recent natural disasters, the government of Colombia has improved its capacity to mitigate risks of such events. Nonetheless, there is much room for improved management of natural disasters, especially the assessment of risk and vulnerability, further deepening the capacity building of the new governing system, and the development of nonemergency financing instruments.

I. Background

Natural disasters—such as earthquakes, volcanoes, floods, erosion, avalanches, and forest fires—are prevalent in Colombia. In the last 25 years, there have been six

1 The authors want to acknowledge Professor Omar Dario Cardona's paper Diagnóstico y Perspectivas de Gestión de Riesgos en Colombia, which they used as background in preparing this Chapter
major earthquakes, three volcanic eruptions, three landslides, three avalanches, petroleum and chemical explosions and leaks, and floods. Some disasters were brought on by Colombia’s climate and its location on Andean fault lines, and others are side effects of deforestation and land cultivation, or consequences of accidents related to industrial activities. The disasters not only disrupt the equilibrium of nature, but also prove costly by disrupting the system of infrastructure, productive lives, and the provision of services.\(^2\) It is estimated that the lives of more than 4 million Colombians were affected by a natural disaster during 1993–2000.

More than 74 percent of Colombia’s population reside in urban areas, where as a consequence of location and the concentration of people, infrastructure, and industry, the impact of natural disasters has been large. As a result of increased urban migration—part of a general trend and also due to political insurrection and violence in rural areas—urban centers are increasingly dense, and it is those people who are in the margins whose lives and homes are the most vulnerable to natural disasters. Projections of urban population growth predict that the urban population will double in the next 30 years; thus, further attention to urban planning and how it relates to natural disasters is increasingly important.

Under the new decentralized system, local committees are responsible for mitigating local risk and vulnerability. In the face of disasters, emergency relief is usually procured by the local commissions from the national calamity fund (Fondo Nacional de Calamidades, FNC). In the 1990s alone, local committees made more than 400 solicitations to the national government for aid. However, it has been noted that local commissions lack the capacity to institute the next two steps in natural disaster management: (a) the identification of future risks and vulnerable populations, and (b) the mitigation of risks and the adoption of preventive measures to minimize the future impact of disasters.

\(a\) Risk and Vulnerability Assessments

Risk and vulnerability assessments of natural disasters traverse disciplines and require interinstitutional and intergovernmental cooperation. In that spirit, the Instituto Nacional de Vivienda de Interés Social y Reforma Urbana (INURB), the Ministry of Development, the National Science and Technology System, universities,\(^3\)

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2. The eruption of the volcano Nevado del Ruiz in 1986 caused 20,000 deaths and cost more than US$211 million. The storms associated with El Niño during 1997 and 1998 cost more than US$564 million. The earthquake at Eje Cafetero, deemed a national disaster by the government in 1999, caused 1,230 deaths, 5,300 injuries, affected 200,000 lives, and cost more than US$1.5 billion, which is more than 2 percent of Colombia’s gross domestic product. The indirect costs associated with the deceleration of development were not measured.

3. Universidad del Valle (Observatorio Sismológico del Sur Occidente), Universidad de los Andes (Centro Estudios sobre Desastres y Riesgos), Universidad Nacional, EAFIT, and Universidad de los Andes.
and the Colombian Confederation of Non-Governmental Organizations have all worked alongside the SNPAD to commission studies, develop maps, and identify methodological approaches to decisionmaking as related to natural disasters. For the most part, however, the studies lack risk and vulnerability analyses (especially of social impacts), use inconsistent methodologies and instruments, do not include a time dimension, and are not technically rigorous. As a result, it is difficult to mitigate future risks and take preventive action. Exceptions exist, and best practices are evident:

- Bogotá is the city most advanced and diverse in its risk assessments. The seismic maps of the city have fine resolution and their assessments are the most comprehensive. They have preliminary seismic impact studies for buildings and for vital infrastructure involved in the provision of services. They also have studies of landslides and estimates of general vulnerability and risk for different types of natural disasters courtesy of the Center for the Study of Disasters and Risks from the University of the Andes.
- The Normas de Diseño y Construcción Sismo Resistentes, NSR-98, develops technical seismic studies and identifies zones across the country where the probability of a seismic incident is greater than 10 percent over the next 50 years. The cities of Armenia, Bogotá, Medellin, and Pereira have detailed seismic maps.
- Manizales and Tumaco have incorporated the goals of risk mitigation and implementation of preventive actions into their political agendas, and are thus in the process of instituting a methodological approach to decisionmaking as regards natural disasters.
- The INURB has commissioned evaluations of housing conditions and studies on, among other things, urban living standards, the provision of services, and the savings capacity of households. It is hoped that municipalities will consider this information in their city development plans, and ultimately that it will be used to assess risk and vulnerability to natural disasters and identify a preventive course of action.
- Based on data for 1,054 municipalities, the Ministry of Development has organized macro valuation tables and maps of areas susceptible to floods, volcanoes, landslides, and earthquakes.

However, deficiencies in risk and vulnerability assessments of natural disasters exist in Colombia. Studies are usually ex post and technical in nature and do not take social impacts into account, nor do they offer a good launching point for defining and undertaking preventive action. Additionally, no consistent methodology exists to identify risks. Finally, the responsibilities of each level of government to

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4 With the help of the Instituto de Asuntos Ambientales y Meteorología (IDEAM), Instituto de Geociencias y Minas (INGEOMINAS), and the Instituto Geográfico Agustín Codazzi (IGAC)
determine vulnerability and mitigate risks are not clearly defined, even though efforts to mitigate risks have been made in the last 10 years.

b) Institutions

The SNPAD, under the direction of the National Department of Prevention and Attention of Disasters (DNPAD), the Administrative Department of the President and the Ministry of Interior, was created by decree in 1991. The formation of the SNPAD followed from the spirit of the constitutional changes in the early 1990s in that it is organized in a decentralized and participatory framework. Specifically, there is a committee for each level of government. The national committee reports to the Ministry of the Interior, the regional committee reports to the governors of each department, and the local committees report to the mayors of the municipalities. In addition, there are a technical committee and an operative committee the respective purposes of which are to help the regional and local committees define the risks and preventive activities and coordinate resources in the event of a disaster.

The formation of SNPAD consolidated previous government commissions. Consolidation was seen as a way to introduce consistent instruments to measure risk and vulnerability, ensure interaction among all parties in the dialogue, and solidify natural disaster mitigation's role on the national agenda. The new government system, however, has its limits that are characterized by:

- Low capacity at the local level to mitigate and prevent natural disasters
- Lack of socialization and public education about the positive consequences of mitigating risks and a general public bias against the natural sciences
- Lack of legislation that would allow immunity and additional appropriation of funds by various levels of government during emergencies
- Difficulties in commissioning contracts in situations of imminent emergencies due to bureaucratic processes
- Lack of long-term perspective in preventive plans
- Insufficient funding for commissioning studies, investments in scientific instruments, and enacting preventive measures
- Reliance on cyclical and sometimes politically driven funding
- Lack of adequate resources during emergencies and for preventive action.

5. In 1986, in the wake of eruption of the volcano Nevado del Ruiz, the Oficina Nacional para la Prevención y Atención de Desastres (ONAD) was created in the Administrative Department of the President. In 1988 Parliament passed Law 46, which created the SNPAD. In 1989 Decree/Law 919 defined the roles of national, regional, and local committees within the institution. The 1991 charter was implemented in 1992 and further solidified the decentralized framework and expanded the role of the institution to provide technical, scientific, and planning support for the prevention of disasters.
Understanding these concerns, DNPAD developed a national plan (*Plan Nacional para la Prevención y Atención de Desastres*, PNPAD) under which the national system is to operate, and which defines the key actions necessary for the prevention and attention to natural disasters. Established by Decree 93 in 1998, strategic plans *Planes Ordenamiento Territorial* (POT), *Planes de Desarrollo Territorial* (PDT), and *Planes de Desarrollo y Expansión Sectorial* (PDS) for each territory and sector were to be drawn. Currently, however, the PNPAD is more important as a political symbol than it is an actual roadmap for action, because specific directions and responsibilities of entities are not clearly defined. Diagnostics of the plan suggest that

- Despite the knowledge of the scientific effects of national disasters at the national level (researched by the National Science and Technology System and the National Environmental System), there is little knowledge of the fiscal, social, economic, and cultural vulnerabilities of the nation, and without this information it is difficult to measure the true impact of natural disasters.
- There is no integrated information system containing costs, death tolls, injuries, damages, risks, dates, or technical information.
- There are difficulties in coverage and in monitoring and activating alert systems associated with national disasters.
- Limits on local capacity exist, in such instances, however, the Ministry of Development and *Dirección General para la Prevención y Atención y de Desastres* (DGPAID), using funds of the * Corporación Andina de Fomento* (CAF), are to develop local action plans and evaluate local risks. However, their capacity to do so is unknown.
- There is a need to increase intergovernmental, interinstitutional, and community cooperation in order to enrich local, sectoral, and investment plans.
- A national public education campaign strategy is lacking; however, piecemeal education efforts exist.
- There is a lack of explicit funding for the development of plans. Funds are often diverted to emergencies, and are insufficient or nonexistent at the local level. Problems exist at the national level and funds are not explicitly designated for the development of preventive plans. The FNC has seen its resources depleted by the costs of emergencies; however, this was not the purpose of the fund and has limited the implementation of preventive activities.
- Because efforts have been primarily focused on responding to emergencies, the benefits of natural disaster insurance programs have not been explored in depth.

Suggested modes of action to improve efficiency are:

- *Improve the knowledge base*. DGPAID should coordinate an agenda with the Ministries of Environment and other concerned parties. The agenda should address strengthening the capacity to determine the natural and anthropolog-
ological risks across all regions of the country. Information should be disseminated to all national entities. In addition, the ability of national and regional entities to perform assessments of risk and vulnerability should be investigated. Finally, lines of communication between universities and other institutions should be opened so that the application of methodologies and the development of social impact analyses are adequate and technically robust.

- **Develop a system of integrated information.** Under Law 919 of 1989 DGPAD is to organize such information. With the help of other entities, they are continuing with this effort. Short-term goals should be to organize the existing technical assessments and studies of risk, even though most are ex post.

- **Consolidate the monitoring and alert systems.** Consolidation of the coverage, quality, and sustainability of the monitoring and alert systems to identify tectonic activity, volcanic patterns, hydrological dynamics, and so forth, should be continued.

- **Provide technical assistance to subnational entities.** National and regional entities should help local government agencies outline development, preventive, and emergency plans. Necessary maps should be created and detailed studies of high-risk areas for natural disasters should be undertaken. In addition, strategies for management of high-flooding and avalanche-prone areas should be developed. Finally, help should be given to local and regional committees of the SNPAD to develop territorial emergency contingency plans, and subsequent risk assessments should discuss the impact on the provision of services.

- **Continue to develop the capacity in related sectors.** Currently, there is some ability to evaluate buildings, the resistance capacity of hospitals, the susceptibility of water systems and transportation, and the regulation of certain materials. In addition, there is a government entity to take preventive action against forest fires. Further sector analyses should improve the ability to make informed decisions and implement preventive action.

- **Improve coordination of all entities of SNPAD.** There should be an internal evaluation of the SNPAD to measure competency, mechanisms of coordination, and financing. Develop an agenda between the SNPAD and the *Sistema Nacional de Ciencia y Tecnología* (SNCyT) and the National Environmental System (SINA). Coordinate actions between security and defense departments. Promote the Regional Education Commission under the SNPAD to work with the Department of Environmental Education as defined in law 1743 of 1994.

- **Improve public awareness and education.** A national public relations effort should be launched to increase the capacity of local commissions (where community members can serve as representatives) to encourage informed decisionmaking, and to solicit and gain citizen support. Also, an effort should be launched to mount a permanent media campaign to raise public awareness about natural disasters and the need to properly protect against them, including drills in public buildings such as schools.
• **Assure financing for preventive measures.** Much of the financing for disaster emergencies comes from international donors. Funds set aside for preventive action are often used for emergencies as well. As a result, funding for the implementation of preventive measures is lacking. Noncyclical, explicit funding should be secured, since implementation of preventive measures will most certainly save lives and money in the future.

In sum, increased capacity to mitigate risks and take preventive action against natural disasters is contingent on (a) the development of comprehensive methodologies and studies to assess risk and vulnerability—both in terms of environmental and social impacts, (b) further deepening of the national system so that roles of all entities are better defined and citizen participation is included, and (c) securing explicit funding for risk assessment and preventive measures. Through the enactment of such measures, Colombians will be better able to manage natural disasters and minimize their disruptive impact on the economy.
Part B. Catastrophe Risk Exposure of Public Assets: An Analysis of Insurance Instruments for Smoothing Fiscal Volatility

Part B was written by John Pollner.

Analyzing Colombia's risk-management strategy is consistent with the government's risk-management practice of asset and liability matching. Countries, and in particular Colombia, have begun to use a more corporate approach to identify their national balance sheets in which the matching of, for example, currency assets (such as producing national revenues) with currency liabilities (such as foreign debt) is an essential exercise to avoid overexposure to exchange-rate risk. The same concept applies to countries prone to natural disasters. In this case, the balance sheet approach implies the need to identify latent but quantifiable contingent liabilities using actuarial tools, and to match these with the applicable financial contracts or mechanisms (including insurance) to hedge such risks and avoid severe disruptions in government fiscal operations and macroeconomic stability.

The traditional funding method for developing countries subject to natural catastrophes has been the ex post contracting of loans or multilateral/bilateral aid in the wake of such disasters. However, while this to some extent does qualify as one source of funding to restore assets and match latent liabilities, it also becomes an additional liability as well if the stock of such debt builds up excessively. The actuarial approach, therefore, helps to establish a framework in which the contingent liabilities (that is, the disaster events) can be "provisioned" a priori in order to accumulate sufficient "contingent assets" which can be used to fund the losses once the event occurs. This mechanism is the essence of the insurance contract, and reflects a prepayment of annualized installments of losses, which will eventually occur. While in present-value terms there may be no net return under such an arrangement, the real benefit is to smooth the financial and fiscal volatility generated by catastrophes, which disrupts the chain of economic activity funded from fiscal sources.

6. In the financial markets, an option instrument is essentially a contingent asset, and an insurance contract is essentially a long-term option.
I. Insurance Contractual Arrangements and the use of Reinsurance

The current practice in the property insurance industry in Colombia is the use primarily of proportional treaties for reinsurance. Common practice is for local companies to transfer or cede to reinsurers the premiums collected (and associated risks) for an estimated 50 percent of underwritten insured assets. Thus reinsurers are responsible for funding almost two fifths of any damage claims if they occur, once the ceding domestic company verifies that the reinsurance coverage qualifies for the losses incurred, under the assumption that such a reinsurance company is solvent and able to pay. Otherwise, the local company has the primary obligation to pay all the policyholder claims in full, since the reinsurer is responsible to the primary company but not to the end policyholder. For the 50 percent risk retained by the local companies, however, it is estimated that in addition, they also reinsure the top loss layers of that amount, by using excess of loss (XL) reinsurance contracts whereby an estimated 10 percent of that 50 percent retention is reinsured. Thus the net/net retention of local companies for property insurance is approximately 45 percent of the original exposure:

(a) Initial Retention (Quota Share Reinsurance Treaty): (100% - 50%) = 50%
(b) Net Retention after Excess of Loss Coverage: 50% - (0.10) \times (50%) = 45%.

This is illustrated in Table 1

<table>
<thead>
<tr>
<th>Table 1. Local Industry Reinsurance Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 percent of portfolio of asset risks reinsured under proportional treaty</td>
</tr>
<tr>
<td>(Reinsurance Coverage)</td>
</tr>
</tbody>
</table>

While it makes absolute sense to transfer away much of the risk to the international reinsurance industry, this also raises the cost of insurance.

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7 Proportional treaties, also known as quota share treaties, are arrangements whereby an entire portfolio of underwritten properties is shared between the primary insurer and the reinsurer (for example, 40 percent and 60 percent, respectively) Claims are funded in those same proportions by the insurer and reinsurer, and premium income is shared accordingly. Other modes of reinsurance include facultative treaties, which reinsure specific and specialized assets such as power plants.

8 Excess of loss contracts are yet another form of reinsurance. Rather than sharing losses on a pro rata basis, excess of loss (XL) contracts involve the payment by reinsurers of loss limits as defined between one value of losses and another (for example, a reinsurer will pay for losses up to $100 million over and above initial losses of $250 million, but not beyond $350 million).
a) The Quantification of the Natural Hazard Threat in Colombia

The main catastrophic hazards with significant probabilities of affecting Colombia are earthquakes, volcanoes, and flooding. The analysis of hazard frequencies and intensities is critical for arriving at the "driver" of any model to assess annual loss potentials for fiscal planning purposes. In this context, the methodology used in this Chapter, which follows current catastrophe insurance modeling practice, includes the following steps:

1. **Hazard Stage**: Quantification of hazard frequencies and probabilities of their intensities by type of hazard over a credible long-term period, to allow a projection of the annual probability of any given size event.

2. **Asset Valuation Stage**: Inventorying the stock of all relevant assets (buildings, water/sewerage, roads, and so forth) and establishing their cost base or market-replacement value.

3. **Locational/Topographical Vulnerability**: Quantification and mapping of vulnerable areas containing property, by degree of vulnerability (for example, based on topographic locations, proximity to river flood areas, and so forth), and determination of percentage of area affected by given size events.

4. **Structural Vulnerability**: Quantification and rating of structural resistance of assets based on engineering facts regarding construction material, condition, and other attributes.

5. **Loss Estimation**: Quantification of a damage function for both locational and structural vulnerability showing loss potential (that is, as a percentage of the asset) for hazards of given sizes. Development of a loss distribution function showing levels of losses to be expected for given sizes of hazards with different probabilities.

6. **Insurance Pricing Stage**: Based on the loss distribution function and considering the average of all potential loss events (that is, the probability-weighted average losses from the loss distribution function), determining the annual expected loss or provisioning requirement (the pure premium) required to fund future expected losses in an annuitized manner. Based on the pure premium, an estimation of the total premium taking into account business and administrative costs and reinsurance costs and risk-loading factors, would be determined.

7. **Pricing of Alternative Risk-Financing Instruments**: Based on the above insurance pricing analysis, the cost of alternative financial instruments such as contingent credit facilities, catastrophe bonds, or other options would be compared in terms of the present value of premiums expended versus the present value of benefits received in monetary terms. Other factors such as speed of access to funds are also considered.

8. **Comparison to Current Funding Arrangements**: These include fiscal and external resources to cover natural disaster expenditures, and comparison of the
costs and benefits of the status quo approach, with the use of insurance or other risk-financing mechanisms.

The sequencing of this methodology is illustrated in Figure 1.

**Hazard Probability and Exposure.** The probability distribution of earthquakes, one of the key hazards affecting Colombia, is shown in Table 2 for six benchmark frequencies and intensities.

**Structural Vulnerability** For structural factors affecting loss, the differentiation in construction quality, materials, and asset condition provides another variable used.

**Figure 1. Quantification of Natural Hazard Threat in Colombia**

- Quantify hazard frequency
- Inventory and value all assets at risk
- Measure locational (topographic) vulnerability
- Measure locational (construction) vulnerability
- Calculate price of insurance
- Price alternative risk-financing instruments
- Evaluate against current funding arrangements
- Estimate probable losses
Table 2. Catastrophic Earthquake Frequency and Loss Intensity

<table>
<thead>
<tr>
<th>Return Period (expected frequency of occurrence every so many years)</th>
<th>100</th>
<th>250</th>
<th>500</th>
<th>1,000</th>
<th>1,500</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>0%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.07%</td>
<td>0.05%</td>
</tr>
<tr>
<td>Probable Maximum Loss (percent of asset value)</td>
<td>1.3</td>
<td>2.8</td>
<td>4.6</td>
<td>6.7</td>
<td>8.0</td>
<td>8.9</td>
</tr>
</tbody>
</table>

to determine the damage potential of public assets. For example, in the case of roads, estimations can be fine-tuned to adjust the damage effect, based on the type of material and condition of roads. Illustrative coefficients are shown in Table 3:

In the case of roads, which comprise one of the largest value asset classes for public property in Colombia, a standard damage ratio percentage can be applied to the “DT” (double treatment)9 quality roads that are rated in good condition. For roads in less than good condition, or in poor condition, the coefficient for adjusting the damage ratio can be increased. For stronger construction roads, conversely, the adjustment coefficient would be decreased. Earth roads have extremely high vulnerability to floods and landslides, so the adjustment coefficient to the standard damage ratio for these hazards can be quite high—3.5—particularly for poor-quality dirt roads. (Note: the above figures are illustrative only and do not reflect actual data).

**Asset Value.** Government buildings, properties, infrastructure, schools, and health facilities (excluding electric, energy, or telecom facilities), are projected to have an asset value of approximately US$14 billion in Colombia. This serves as the basis for estimating potential loss.

**Damage Ratios.** The damage ratio for public assets and infrastructure, in the aggregate, is shown in Table 4, and this can be primarily attributed to locational hazard and inherent structural (construction) vulnerability. The reference damage ratios for specified perils, and in the aggregate, are estimated for varying intensity of events.

Table 3. Roads: Vulnerability Factors as a Multiple of Standard Damage Ratio of 1.00

<table>
<thead>
<tr>
<th>Condition</th>
<th>Asphalt</th>
<th>Hydraulic</th>
<th>DT</th>
<th>Select</th>
<th>Earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>0.20</td>
<td>0.65</td>
<td>1.00</td>
<td>1.30</td>
<td>1.75</td>
</tr>
<tr>
<td>Regular</td>
<td>0.30</td>
<td>0.85</td>
<td>1.50</td>
<td>1.95</td>
<td>2.63</td>
</tr>
<tr>
<td>Poor</td>
<td>0.40</td>
<td>1.30</td>
<td>2.00</td>
<td>2.60</td>
<td>3.50</td>
</tr>
</tbody>
</table>

9. That is, roads constructed with two layers of material for reinforcement.
Table 4. Capital Stock—Earthquake Damage Ratios

<table>
<thead>
<tr>
<th>Capital Stock</th>
<th>MMI VI</th>
<th>MMI VII</th>
<th>MMI VIII</th>
<th>MMI IX</th>
<th>MMI X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>0.2%</td>
<td>1.7%</td>
<td>8.1%</td>
<td>23.0%</td>
<td>41.0%</td>
</tr>
<tr>
<td>Property</td>
<td>0.7%</td>
<td>4.2%</td>
<td>19.6%</td>
<td>49.7%</td>
<td>82.9%</td>
</tr>
</tbody>
</table>

Note: MMI = Modified Mercalli Index, which is a measure of earthquake intensity. MMI VI, MMI VII, and so forth, represent an increasing scale of observed damage.

b) Inventory of Public Assets and Infrastructure

Government assets should be valued based on a reconciliation of various property registers for government buildings, service facilities, infrastructure (roads, bridges, water systems) as supplied by the Registrar Office for public assets, respective sectoral ministries, and historical records of the Accountant General's office to value these at current cost. The methodology to arrive at reliable cost figures includes:

- Use of engineering estimates of square footage of different asset types and their unit costs
- Official Registry or Accountant General's data updated for inflation based on the year of acquisition or construction of the asset
- Direct construction cost data supplied by certain Ministries.

For example, for health facilities, which can include a number of different levels and sizes of installations, the meterage and unit cost estimates should be used to approximate the total asset value in that sector.

The sample of assets to be considered should include the following public facilities: (a) roads and bridges; (b) educational centers and schools; (c) hospitals, clinics, and health centers; (d) police stations; (e) government administrative buildings; and (f) water and sewerage facilities. Usually excluded are airports, telecom, and energy facilities because they are already privately insured given their autonomous and commercial orientation. These special purpose infrastructure facilities are also traditionally covered under facultative treaties (that is, reinsurance contracts covering specific and unique productive assets or operations), although they could potentially be pooled with other assets under a comprehensive insurance treaty. Preliminary estimates (to be verified) for the total public assets exposed and subject to insurance protection in Colombia are projected to be US$14 billion.

Based on the above information, therefore, the estimation of total losses would be comprised of:

\[ \text{Loss \%} = (\text{Hazard Probability}) \times (\text{Area Affected}) \times (\text{Structural Damage Ratio}) \times (\text{Value of Asset}) \]
The resultant loss percentage multiplied by the gross asset value gives the damage expected on a long-term annual average basis, in currency units.

c) *Loss Projections for Risk-Management Planning*  
To set a benchmark for risk management for the government of Colombia, the above steps (hazard frequency projection, vulnerability estimation, and type of property) should be used to estimate a benchmark potential loss scenario. For example:

- Annual Expected Loss (the weighted sum of all probabilities of loss events, expressed as an annual average amount);  
- Using a 0.2 percent probability or 500-year-return event. Such an event would represent a significantly destructive earthquake—one of large magnitude.

The resultant loss distribution curve shows, at various probability/intensity points, what the loss levels would be (see Figure 2, for illustrative purposes only). This is useful for the government to determine what “tail” or confidence level is acceptable or unacceptable for risk protection using insurance or other financial mechanisms, as discussed later.

**Expected Loss.** The expected loss (EPL) is the basis for the pricing of an insurance/fiscal hedge. Since insurance contracts are traditionally renewed annually, the

![Figure 2. Seismic Risk—Loss Distribution Function](image)
annual probability of all possible events will be the relevant figure for the insurer/reinsurer or other financial instrument, to consider. However, alternative financial instruments, while sharing the losses in different ways, can also reduce the insurance price by covering upper loss levels which are priced more aggressively in the traditional insurance industry due to the probabilistic uncertainty (high variance) of their occurrence, and more recently due to the impact on the insurance industry of the September 11, 2001 terrorist attacks.

**Benchmark Example—Analysis.** The cost of insurance pricing for public sector assets can be determined using the following variables (this analysis is illustrative and would require additional refinement to ensure accuracy):

- **Event:** 500-year-return period (0.2 percent probability)
- **Value at Risk:** $14 billion
- **Loss percentage:** 4.6 percent (based on probable maximum loss of single event)
- **Loss Value:** $640 million
- **Percentage of Government Budget:** 5.9 percent
- **Premium Equivalent:** $1,280,000 x 4.0 = $5,120,000
  (equals loss amount times annual probability times risk load factor of 4.0)
- **Premium as Percentage of Budget:** 0.05 percent

**d) Catastrophe Insurance Pricing and Risk-Load Factors**

The pricing of the catastrophe layers of insurance is not only a function of the expected loss (or probability of loss) at those layers, but also of the global reinsurance capacity and variance of the loss mean. If the premium for catastrophe XL insurance is denoted as \( P_{\text{cat}} \) the pricing of a given layer of catastrophe cover (known as “rate on line”) is expressed as:

\[
P_{\text{cat}} = (p) \left( \frac{\sigma_{\text{cat}}}{\sigma_{\text{non-cat}}} \right) \left( \frac{\text{loss}_{\text{cat}}}{\text{loss}_{\text{non-cat}}} \right) \left( \text{coverage layer} \right)
\]

where \( p \) is the probability of a given event to generate losses defined under the coverage layer; \( \left( \frac{\sigma_{\text{cat}}}{\sigma_{\text{non-cat}}} \right) \) is the ratio of the standard deviation around the loss mean at the defined catastrophe layer to the standard deviation of noncatastrophe frequent losses, and \( \left( \frac{\text{loss}_{\text{cat}}}{\text{loss}_{\text{non-cat}}} \right) \) is the ratio of reinsurance loss claims in the present period compared to claims during the period in which a pricing benchmark exists (for example, prior two years—in the current market, this ratio will rise given the reinsurance losses due to the September 11, 2001 terrorist attacks in the United States).

Therefore, while the lower probability of catastrophic events at the highest loss layers would normally imply lower comparative premiums, these are not proportionately lower since the higher statistical variance and uncertainty of those events at those levels implies an added risk/uncertainty load to the reinsurance premium.
Thus the premium for XL coverage decreases only as long as the lower probability effect is greater than the increased variance effect associated with that probability.

e) Comparison of Financial Instruments for Catastrophe Protection

This section evaluates the different financial structures which can be put in place to insure against potential damages associated with earthquake or other losses estimated using the actuarial data developed earlier. The probability estimates for different classes and sizes of natural disasters is not only useful for projecting long-term average losses, but also serves as a tool for governments and other risk-conscious agents to quantify their level of risk tolerance and risk aversion. While this report frequently uses terms such as “500-year return,” which implies a 0.2 percent probability, the idea is not to protect against these unusual events alone, but rather to examine the cumulative continuum of losses which can occur below and up to those events, or alternatively, from that event up through to higher losses. Once these ranges of intermediate events are considered, the probabilities increase since they reflect the cumulative weighted averages of various events, up until some specified benchmark point. Figure 3 illustrates this.

The first curve in Figure 3 shows the point probability of each specified event and its associated loss. The probability-weighted average of all events and their losses under the first curve would therefore represent the long-term annual average loss from all possible events, that is, the expected annual loss or EPL.

The second curve shows the probability of all possible events that can occur below and up to each specified loss point. The second curve thus reflects the weighted sum (or integral) of each succeeding point on the first curve, and is used

Figure 3. Loss Probability Functions for Single and Cumulative Events
to select the policy options regarding the most optimal layers (rather than points) of loss coverage required. These decisions depend on the preferences for loss avoidance, the probabilities of ranges of losses occurring, the probabilities of all cumulative losses exceeding specified points, and the premium cost to the government.

The discussion below uses both these analytical frameworks to evaluate which benchmarks for risk management meet both the coverage and cost criteria.

f) Financial Parameters for Establishing a Risk-Management Strategy

The above analysis showed the basis of the pure premium required to prefund and hedge future disaster losses. The annual expected/average loss (EPL) figure has essentially established this pure premium amount. However, the government may not wish to insure all possible losses but rather those that go above and beyond a tolerable fiscal cost threshold. For example, if the fiscal cost, including additional aid or loans, rises above 20 percent of the current national budget after a catastrophic event, the government may wish to insure any losses above that point to avoid disruption in the fiscal and macroeconomic program, taking into account new aid which may arrive to fill part of the gap. In such a scenario, the government would “retain” or self-fund (including via aid flows) losses up to that point, after which some form of insurance mechanism would cover further losses to facilitate reconstruction and recovery.

Once the probability loss distribution function is established or estimated based on empirical data and the valuation of exposed assets, the government would need to specify its “risk-aversion” point—that is, the point of a single-event occurrence or cumulative losses from a combination of events at which traditional ex post, ad hoc funding become undesirable and preheded insurance a preferred choice. The selection of that point will depend on three factors. (a) size of loss, (b) likelihood of loss, and (c) budget availability (related to both financing losses and financing annual premia).

g) Risk-Linked Securities and Catastrophe Bonds

Catastrophe bonds are illustrated as an option that could be used if reinsurance capacity did not exist to cover the large losses of government assets. This instrument is explained as a potential mechanism that could be deployed in the Colombian government’s risk-management toolkit, particularly since Colombia is one of the creditworthy sovereign issuers in the Latin American region. Catastrophe bonds are normally linked to an established index or a physical measurement of the hazard, and as such do not require supervision/oversight of the loss determination/adjustment process. This transparent link between the trigger indicator and the loss payment makes the bonds more amenable for sale in the capital markets, thus tapping a broader pool of “insurance capital.”

Catastrophe bonds are market bonds in the full sense of the word. Typical market bonds are rated by rating agencies such as Moody’s, Standard & Poor’s, and Duff and Phelps. The ratings essentially provide an estimate of the probability of default
by the bond issuer, and the bond buyer or investor demands a spread above the risk-free rate, based on the chance of default. For example, a new bond issue from a less than high-quality company might receive a rating reflecting a 3 percent default potential. If the market rate on similar risk-free treasury bonds is 5 percent, then the investor will require a bond annualized coupon rate of 8 percent in order to purchase such a bond and be appropriately compensated.

Catastrophe bonds work in the same way. The only difference is that the default probability is calculated based on a natural event (that is, frequency of hurricane or earthquake) instead of a corporative or financial event or default. If an earthquake of a defined magnitude, say, 6.0 on the Richter scale, has a probability of 4 percent of occurring in any year, a catastrophe bond would theoretically require a yield of 9 percent (that is, the risk-free rate plus the 4 percent catastrophe chance) (see Table 5).

**Similarity Between Market Bond and Cat Bond Rating and Yield Determination: Theoretical Model.** Catastrophe bonds ("Cat" bonds) are structured so that the issuer can default and thus retain the principal proceeds (for reconstruction), if the defined disaster occurs. It is important to note that the defined disaster is explicitly measured and usually based on a parametric trigger such as hurricane force of earthquake intensity/magnitude (see Table 6). Thus, while a cat bond provides a form of insurance, it is not an "indemnity" since it does not pay for observed losses. Rather, it provides funds through default, to the issuer, if the catastrophic event occurs. In this sense, the issuer must ensure that the trigger event that allows default on the payment of the bond's principal is indeed correlated with potential large losses on the ground, and that these loss amounts are estimated to be similar to the bond principal amount.

However, while the payment trigger is simpler than in a traditional insurance contract, setting up the measuring devices is an investment in itself. For example, the objective measurement of flood levels or earthquake shocks requires the installation of tamper-proof and damage-proof measuring devices that can be internationally verified, at key sites where there is concentration of property. The institutional procedures for the reporting and transmission of data from these sites also require foolproof validation and security measures. Therefore, unless the institutional and technical investments are well implemented to measure the hazard magnitude prop-

<table>
<thead>
<tr>
<th></th>
<th>Market Bond</th>
<th>Cat Bond</th>
</tr>
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<tbody>
<tr>
<td>Risk-free Rate (U.S)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Default Probability (risk spread)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Catastrophe Probability (risk spread)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Bond Interest Rate</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
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Table 6. Example of Parametric Loss Triggers for Cat Bond “Payment”

<table>
<thead>
<tr>
<th>Flood Triggers</th>
<th>Earthquake Triggers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Water levels exceeding 5 feet from benchmark levels at 6 river stations near specified cities</td>
<td>(a) Magnitude of Richter force to exceed 7.2.</td>
</tr>
<tr>
<td>(b) Rainfall exceeding specified millimeterage within a 48-hour period, at 6 specified measuring stations</td>
<td>(b) Earthquake epicenter to fall within boundaries of 5 specified regions in Colombia</td>
</tr>
<tr>
<td></td>
<td>(c) Seismic wave propagation to reach minimum radius from epicenter</td>
</tr>
</tbody>
</table>

erly at a given site, this mechanism would not be viable for obtaining insurance via the cat bond market.

The pricing of catastrophe bonds is also slightly different from the theoretical model for two reasons:

- Being a relatively new market instrument, investors demand a higher premium above the estimated default/disaster probability.
- The estimated probability may have a larger variance than a similarly rated market bond, and thus this will add to the “risk load” and increase the overall premium.

Therefore, the rate online for catastrophe bonds may typically be at least 1 percent above the reinsurance market price for excess of loss coverage. This makes the catastrophe bond significantly more expensive than insurance, although the trends in some markets are reversing in light of the insurance and reinsurance increases after the September 11, 2001 terrorist attacks.

Under the parametric contract, if the conditions for either flood or earthquake are met, then the payment would be made to the insured by having the insured essentially default on the principal payment of the bond. The structure could also be set up so that a prespecified percentage of the payment, corresponding to the earthquake event, would be received if the seismic event by itself met its trigger characteristics.

The “payment,” in essence, would be the release of the escrowed bond principal. At issuance, the principal paid by investors is kept in trust and earning a risk-free deposit/interest rate. If no event occurs during the maturity of the bond, the investors are paid back the principal plus risk-free interest plus the insurance premium spread. If a catastrophe occurs, though, the principal is paid to the insured party to use for damage funding (see Figure 4).

Another application of catastrophe bonds would be for coverage of destroyed assets and dwellings of lower-income communities. Since the homes of such communities are generally difficult to insure due to their vulnerability, which would command extremely high premiums, the cat bond approach can be used as a general fis-
Figure 4. Catastrophe Bond Financing Structure

- **Government pays interest spread via Trust to Investor (5.2 percent)**
- **Bond Investor**
  - Bond purchased and proceeds paid into Trust
- **Special Purpose Trust**
  - Bond proceeds earn risk-free rate
- **Government pays interest spread on bond, above risk-free rate**
- **Risk-free (5 percent) paid to Investor from Trust**
- **Principal paid to government if disaster occurs**

...cal hedge for the government to finance such losses. Since the government generally provides financial assistance to such communities, it could develop a cat bond contract based on a specified hazard intensity, which would be correlated to large losses in such communities. For such a mechanism to be implemented, additional study would be required to historically compare what events and of what intensity and location have been correlated with losses to such communities and incentives for those communities to participate in the loss-reduction process. In addition, as discussed above, the measurement of such events would need to be internationally recognizable and accepted for cat bond investors to rely on their bonds’ performance or default, based on such objective indicators. Finally, the government would need to weigh whether the cost of the premium (the cat bond interest) was affordable in terms of the asset protection required, and whether the value to be protected was sufficiently high to justify such a securitized approach to risk transfer.

*b) Risk Financing with Contingent Credit*

A risk-financing (credit) option can supplement the insurance cover and have as its main purpose the replacement of the uppermost level of XL reinsurance coverage, in order to substantially lower the annual premium (or equivalent catastrophe bond coupon) cost for lowest probability, but highest impact events. The standby credit option, which is one form of risk financing and a more appropriate instrument in this case, permits the government to combine some initial layers of catastrophe protection and a funding facility for upper-level losses beyond those levels. The benefit of such an arrangement is that, being a credit rather than an insurance instrument, the premium equivalent is almost negligible if not used. The drawback to such an arrange-
ment, however, is that while the cost is lowered if no event occurs, it is not necessarily lower if an event does strike, since coverage with credit means that the entire credit (plus interest) needs to be repaid. However, by analyzing the probabilities of a given size event or loss occurring, the government can make the determination as to whether, from an actuarial point of view, it makes sense to use credit at the upper loss layers, with the understanding that once used it does have to be repaid.

The subsequent analysis will demonstrate that even considering the likely probabilities of repaying such a credit to finance losses, the long-term average cost may still be less than using reinsurance at those highest loss levels. This would assume that the terms of the credit would be similar to bilateral loans, that is, with relatively long maturities and lower rates of interest. The basic structure is shown in Table 7.

An example of the expected cost of using risk financing (credit) versus risk transfer (insurance) for a certain catastrophe layer of coverage is illustrated below:

- Probability of Event: 1 percent (for example, 100-year earthquake)
- Cost of Reinsurance Coverage: 4.5 percent annually of covered amount
- Expected cost of using reinsurance = 4.5 percent of covered losses (assuming no change in rates)
- Cost of using contingent credit (assuming 9 percent interest rate and 7 percent equivalent of amortized principal equaling a total cost of 16 percent annually)
- Probability-weighted expected cost of using contingent credit = (1% x 16%) + (99% x 0.0%) = 0.16%

Thus, on an average basis (50/50 chance of a correctly estimated actuarial distribution), the cost of contingent credit in the long term would approximate 0.13 percent versus 4.5 percent for reinsurance. However, commonly for catastrophe modeling, an extreme case "tail distribution" is used—that is, assuming a 97.5 percent confidence interval versus the 50 percent assumed above (that is, the mean distribution). Using a 97.5 percent confidence interval, the use of credit may actually increase, since the 1 percent probability event would be assumed to occur on a skewed basis—that is, more frequently in the early years. While the cost of contingent credit would still remain the same, the chances of using it more frequently than on a 1 percent probability basis would increase the overall cost. The government of

Table 7. Insurance Structure Using Risk Transfer and Risk Financing Instruments

<table>
<thead>
<tr>
<th>Probability</th>
<th>Loss $ (billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25 percent (400 year earthquake)</td>
<td>Risk-financing Contingent Credit Line 1.0</td>
</tr>
<tr>
<td></td>
<td>XL Reinsurance or Catastrophe Bond Layer 0.6</td>
</tr>
<tr>
<td></td>
<td>Retained Layer/Budget &amp; Aid Financing 0.25</td>
</tr>
</tbody>
</table>
Colombia would need to determine its degree of risk aversion or risk tolerance in order to specify what degree of statistical confidence it needs to feel comfortable using this type of facility. Nevertheless, the above is meant to illustrate how different financial instruments have advantages from a cost point of view, depending on the actuarial assumptions that are put into operation.

i) Role of the Domestic Insurance Sector

While, generally, promotion of a domestic industry is desirable, it would be inefficient for the government to initially insure its assets via the primary local insurance industry in Colombia, since the sheer size of such a portfolio would require splitting insurance policies among various companies, thus generating scale diseconomies. The pooling of government assets would command more efficient pricing in the international reinsurance market and allow the proposed scheme to be more feasible in that manner from a costing point of view. Nevertheless, the local Colombian insurance industry would still need to play an important role as the claims processing agents if part of the government's insurance structure included a layer of indemnity-based reinsurance coverage (that is, coverage requiring an ex post assessment/adjustment of losses on a case-by-case basis). In such a structure, the local insurance industry could benefit from some prenegotiated commission income for providing that service. The arrangement of such a potential service structure is illustrated in Figure 5.

II. Recommendations for the Development of a Government Risk-Transfer Policy

Based on both cost and probabilities of occurrence, and given the budget constraints of the Colombian government, the most likely risk-management strategy would be to protect against mega catastrophes at the upper loss levels versus having comprehensive coverage. Insurance protection is not only less costly in absolute terms in such instances (since the probabilities of occurrence are lower), but can also use more advanced financial structures which may lower annual premiums by exploiting the use of contingent credit at the uppermost loss layers and possibly the use of parametric trigger-based bonds. Contingent credit, while not insurance per se, provides a prefunded mechanism that may be needed only if losses exceed mega catastrophic levels. While repayment of such facilities is more costly, the actuarial probability of needing them are such that over the long term the expected cost (due to nonusage for long periods) can be lower than obtaining contracted insurance with annual premium obligations. Nevertheless, some degree of real risk transfer (either through reinsurance or catastrophe bonds) is also recommended for catastrophe levels which reach high levels of damage up to specified dollar/peso limits.

The combination of these financial market instruments provides governments with coverage of high-risk exposures along with reasonable risk-hedging costs. To
put such mechanisms into effect, however, governments need to weigh their loss-tolerance levels against their budget-tolerance levels for expending resources on premiums. By identifying the criticality of assets to be protected, the risk tolerance of the government, the need for immediate indemnification of certain key assets, and the cost protection using a cocktail of financial instruments, the government can tailor a risk-management policy to its fiscal and macroeconomic program.

To identify and further tailor such instruments, however, groundwork and quantification would be needed in the following areas:

- Validating the inventory, value, and structural quality of public assets identified
- Improving the country risk maps to better quantify the physical effects (for example, flooding, landslide, seismic shock transmission) of hazards on assets at specified locations
• Linking event frequency data with various hazard information sources to achieve increased reliability of information and lower the statistical variance of the actuarial distribution (this will increase the certainty of risk-frequency exposure)
• Reassessing the loss-distribution function to include additional data in the series regarding both loss levels at varying hazard frequencies and correlations between events and asset vulnerability in specified locations (particularly if parametric-based catastrophe bonds are to be considered)
• Validating the pricing of insurance protection by established global reinsurance firms and determining other contractual configurations to reduce fiscal risk (for example, use of multypear insurance contracts and inclusion of more than one major event per policy coverage)
• Further developing the sensitivity of financial coverage and cost estimates based on loss probabilities to better tailor the mix of financial products to the government’s coverage and cost preferences
• Developing private insurance programs to ensure wider coverage of private assets in the economy, and consideration of state-funded mechanisms to protect lower-income households.

The informational requirements for establishing a government catastrophe insurance program are numerous and require both domestic and international expertise before the menu of financial instruments considered can be priced properly. However, the development impact of such an exercise is quite high given the wealth of risk information that the government will obtain and can use in other endeavors such as national planning, zoning, and vulnerability-reduction investment programs.

Once such information bases are developed and vetted by international experts associated with the insurance and investment banking industry, the government can proceed to design well-calibrated financial and risk-transfer instruments to essentially hedge its fiscal losses that might occur due to future natural disasters. To optimize the coverage/cost ratio, such mechanisms should combine the modalities of reinsurance, investment banking, and multilateral agency facilities.
Agriculture and Rural Development

This Chapter was written by Adolfo Brizzi, Natalia Gomez, and Matthew McMahon.*

I. Background

The rural sector is key to Colombia's development. Failure to recognize this and to act accordingly will only increase the polarization of a country where rural poverty, inequality, and conflict will become increasingly difficult to control and to reduce. Such polarization will cause development efforts in most of the country to become more and more impervious to economic policies. Moreover, rural development, seen from the perspective of land use and the occupation of the territory, may hold one of the keys to addressing violence and widespread insecurity in the country. The agricultural sector represents 14 percent of GDP, 23 percent of the labor force, and 28 percent of total exports. By comparable standards the sector has a relatively greater weight than in many other countries in the region. In the aggregate, it shows relatively higher labor productivity and a remarkable development potential thanks to the extraordinarily rich natural resource endowment and the quality of its human capital. But the rural sector is much more than agriculture, and the "rural space" is the scene of important investments and opportunities both in the mining sector (coal, oil, gold, and so forth) and in the services sector. The rural population (in

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localities of up to 10,000 inhabitants) may be as high as about 40 percent, with small urban centers providing a new dimension to the concept of rural development as a source of diversification of economic activities within the rural sector.

The story of the agriculture and rural sector in Colombia over the last decade is a mixed tale of good intentions, reforms, reversals, and an increased sense of prolonged and lingering crisis of the campesnado. The performance of the agriculture sector has historically been relatively good, with sustained growth rates of 4.5 percent during the 1970s and 2.7 percent during the 1980s. However, this trend kept declining and became more erratic over the 1990s, with an average of -2.4 percent from 1990 to 1994; 1.0 percent from 1995 to 1999, and rebounding remarkably in 2000 and 2001 with growth rates of 5.2 percent and 3.4 percent, respectively (see Figure 1). It is also interesting to note that the performance of the sector in terms of aggregate growth did not experience the same dramatic contraction as the rest of the economy when the crisis hit in 1999.

At the end of the 1980s it was already clear that the growth potential of the sector was reaching its limits and that a change of policies was needed. The protectionist policies based on import substitution, discrimination of tradable, preferential credit regimes for importables, and reliance on the domestic market for growth, were obsolete. Similarly, direct government intervention in almost all agricultural markets through import permits, marketing monopolies, and price support schemes was causing distortions, inefficiencies, and high fiscal costs, and was therefore unsustainable.

Figure 1. Growth Rates

![Graph showing growth rates for agricultural and economic growth from 1970-2002 with averages noted over the period.](image-url)
It is worth noting that the growth rates of the 1970s and 1980s did have a remarkable impact on poverty rates, which declined by 14 percentage points (20 percentage points for extreme poverty) between 1978 and 1988. Since then, poverty rates in the rural sector have remained stable around a still very high level of 79 percent (extreme poverty did decrease by another 10 percent until 1995 to 37 percent, and then stagnated) (Table 1). However, inequality did not improve during this period and actually worsened during the last five years.

Starting in 1991, the government embarked on a comprehensive reform program for the sector called *la apertura*. It essentially aimed at (a) trade liberalization and lower tariff reforms, (b) the promotion of market-oriented approaches, and (c) the reduction of State intervention in marketing and licensing activities. These reforms were meant to reinvigorate the agricultural sector and promote private sector involvement and access to the export markets that had remained undeveloped as a result of import-substituting policies. It aimed at building on Colombia's comparative advantages to improve productivity and competitiveness. The *apertura* was immediately confronted with major exogenous challenges that occurred at the same time: (a) a significant exchange rate appreciation deriving from capital inflows associated to a favorable perception by foreign investors of the new liberal policies and a domestic consumption and credit boom, (b) a drop of international prices for most agricultural commodities and consequent reduction of producers' real prices, (c) an increase of inflation rates generated by lax monetary policies and an expansion of government spending, and (d) one of the worst droughts in Colombian history in 1992. This led to a crisis in the agricultural sector which made implementation of the reform agenda in the sector very difficult.

Since 1992, the *apertura* went through a succession of reversals, negotiated special deals with interest groups, renewed intervention of marketing boards (the Instituto de Mercadeo Agropecuario's [IDEMA's] operations were reinstated in 1992 until 1997, when its financial situation required foreclosure), establishment of complex price band mechanisms, stabilization funds, and return to protectionist policies for some crops (grain, oilseed, sugar, rice, and milk). The fundamental principles of the

<table>
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<tr>
<th>Table 1. Poverty and Inequality (in percent)</th>
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<tr>
<td><strong>Urban</strong></td>
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<tr>
<td>Poverty</td>
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<tr>
<td>Extreme poverty</td>
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<tr>
<td>Income Gini</td>
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<tr>
<td><strong>Rural</strong></td>
</tr>
<tr>
<td>Poverty</td>
</tr>
<tr>
<td>Extreme poverty</td>
</tr>
<tr>
<td>Income Gini</td>
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*Note: The measures of welfare are adjusted household per capita income.
Sources: World Bank (2002), data from Departamento Nacional de Estadisticas*
apertura were only partially implemented and for too short a period to have an impact. Many analysts would admit that by the end of the 1990s the policies of the sector were more distorted than before the apertura, and its performance showed great heterogeneity (IDB 2000). While the apertura is seen by many as the source of the prolonged crisis of the campesinado, a more accurate analysis would be warranted to evaluate the missed opportunities and the elements that would have facilitated its sustainability and the likelihood of its success.

Two important initiatives in rural development and decentralization efforts in Colombia were the Desarrollo Rural Integral (DRI) and the Plan Nacional de Rehabilitación (PNR) programs. The DRI, which dates back to the mid-1970s, was a major effort to integrate various interventions in production, credit, technical assistance, rural infrastructure, and social services in rural areas. While the program was considered to be largely successful, it remained largely centralized, first under the purview of the DNP, and subsequently under the Ministry of Agriculture, despite increased involvement of communities and municipalities. Only in 1985 was the DRI program given legal autonomy with the responsibility to promote and cofinance municipal development projects (Vargas del Valle 1996) in the context of increasing decentralization and the devolution of new responsibilities to the municipalities, which substantially modified governability schemes at the local level. However, the DRI program remained trapped in controversies around the management of the budgetary resources and the quest for its control at the central level. Its commitment to municipal autonomy in the planning and design of projects was hampered by the lack of an adequate policy framework and it lost some of its relevance because of the failure of the government to effectively consolidate support for municipal strengthening. The PNR was launched in 1983 as a strategy to counter violence through a better presence of the State and the more effective mechanism of social participation. Its concepts fostered the inclusion of civil society participation in the constitutional changes of 1991. By 1995, the largely successful PNR was transformed into the Red de Solidaridad Social (RED), which endorsed most of the participatory instruments of the PNR but confined itself to the allocation of limited special funds and did not really capitalize on and sustain the valuable lessons learned in terms of institutionalizing a decentralized approach to rural development and the empowerment of civil society.

For reasons that can be traced to the distribution of land in large chunks during colonial times, Colombia has a highly concentrated land ownership distribution with a Gini Coefficient of 0.86 (Machado 1988).1 From 1984 to 1997 there has been a clear tendency of increasing concentration of land ownership with large farms increasing their share of area from 46.3 to 53.8 percent. Unequal access to land has

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1 This value is comparable to other Latin American countries such as Brazil (0.85) and Peru (0.91), but is in sharp contrast to Asian countries where the rural sector has been growing much faster during the past decade, such as Korea (0.35), Taiwan (0.45), and Thailand (0.45).
been one of the root causes of violence and conflict throughout Colombia's history. Four factors have compounded the skewed distribution of land: (a) tax incentives for agriculture, (b) legal impediments to the smooth functioning of rental and sales markets, (c) directed credit and interest rate subsidies plus disproportionate protection of the livestock subsector, and (d) the use of land to launder drug money as part of a strategy of territorial occupation.

Land reform has been a major spending item through the Instituto Colombiano de Reforma Agraria (INCORA) and Casa Agraria (through a 70–30 cofinancing scheme), but results have been modest and Gini Coefficients have hardly changed as a consequence of land reform programs. In many cases government intervention has caused an overvaluation of land prices, and generated an unsustainable level of debt (through the Casa Agraria) and little incentives for beneficiaries to contribute to equity payments. Many beneficiaries have already abandoned their land, thus casting doubts on the efficiency of present land reform programs as a way to achieve sustainable improvement of household welfare. Moreover, though access to land is a significant determinant of income, the relatively small income elasticity of land ownership suggests that bringing the poorest 40 percent of farm households above the poverty line would require very large transfers of land, unless accompanied by other policy instruments to increase income (Lopez and Valdés 2000) (also see the Land Policies Chapter).

The year 1995 signaled a steep increase of the cultivation of coca, the surface of which more than doubled from 50,900 hectares to 122,500 in 1999 (Mandato Ciudadano 2000) and more than 250,000 families were thought to be directly working with illicit crops. This corresponded with the deepening of the crisis in the sector, the lack of real alternatives or of policies that would make development more inclusive of the rural poor, and the weakness of national institutions. However, the area under illicit crops is estimated at only 3 percent of the total, which largely mitigates the perception that this is the main problem of the rural sector. Notwithstanding these facts, narcotraffic and violence conducted by guerilla groups has become a plight for all Colombians, and it is estimated that, since 1985, some 1.5 million Colombians, have been forced to leave their homes due to escalating violence, which has contributed to the expansion of the urban frontier.

Since 1998 the sector policies implemented by the Ministry of Agriculture and Rural Development have had four main priorities: (a) to mobilize investments, (b) to strengthen technology development and food safety, (c) to modernize commercial policies, and (d) to promote rural development. The economic crisis of 1999 led to a considerable downscaling of the sectoral budget while also witnessing a shift of budgetary allocations for the sector toward special initiatives in the Presidency (the Plan Nacional de Desarrollo Alternativo, Alternative Development Plan [PLANTE] program, Plan Colombia] which cut short the Ministry's ambitions and coordination capacity. With very limited resources, the Ministry focused on promoting productivity and efficiency of the marketing chains of a number of crops (cadenas productivas). This was carried out through the establishment of alliances with the private sector (Acuerdos Sectoriales de Competitividad) in the framework of the Programa de
Oferta Agropecuaria (PROAGRO) program. The Incentivo a la Capitalización Rural (ICR) subsidy was instituted as a matching grant facility for investment financing. However, its implementation remained considerably skewed in favor of the larger producers (only 2 percent of the small farmers could access it) and of the better-endowed regions (Departments of the Atlantic Coast). The Ministry also dedicated much effort to the conceptualization of a consolidated national agricultural science and technology system, but its implementation was weak and fell short in ensuring relevance of the extension system to the small-farm sector through the strengthening of an institutional setup built on municipal capacity (Unidad Municipal de Asistencia Técnica Agropecuaria, UMATA).

Rural development efforts failed to coalesce around a consistent strategy for the sector as initiatives emerged from outside the sectoral institutions without real coordination, as this Chapter will discuss later. The focus on productivity and competitiveness in recent years is consistent with the objective of modernizing the sector and achieving growth; however, recent reviews of the performance of the sector (Contraloría General 2001) have concluded that it was pursued in an exclusive way at the expense of equity and integration. This strategy left behind the crops that could not easily fit into an agroindustrial process (mostly the nontradables), as were the producers that were not integrated in the markets chain or that had little capacity to compete in an open market. One of the main challenges facing the sector is to find a better balance between the development of commodity-oriented supply chains and a rural development strategy repositioned in the regional context.

II. Main Issues

a) Missed Opportunities for Growth

Despite the many fingers pointing to the apertura policies as the culprit of the crisis that affected the rural sector, it could also be argued that the apertura was not implemented for a sufficiently long period of time to bear results, and it could not maintain the integrity and consistency of its reform program. It could be seen as a missed opportunity to the extent that it did lead to a surge in imports of previously protected crops without really establishing an incentive structure and price signals that could have redirected the production potential toward Colombia’s comparative advantages.

Almost all crops with the exception of cotton, sugar, and rice experienced a generalized decline of returns between 1990 and 1997. This is attributed primarily to world prices (inducing a particularly severe drop for grains—minus 37 percent, and for cocoa—minus 42 percent), and to the exchange rate (determining a 4 percent drop for soybeans and 19 percent for maize) (Jaramillo 2001). Incentives were generated from disparate commodity-driven preferential treatments as government action supported commodities such as rice, sugar, maize and barley, remained neutral for most exportable crops, and reduced protection for soybeans and wheat. In
general, the net consumers of food and the agroprocessing industry (most notably the poultry industry) benefited. Exports dragged behind, penalized by an overvalued exchange rate, low international prices, and the inertia linked to the difficulty of implementing changes of the cropping patterns without a serious effort to accompany the reform process.

In retrospect, one could also argue that the apertura reforms pursued since the beginning of the 1990s were necessary but not sufficient to achieve broad-based sustainable growth and poverty reduction anyway. They promoted competitiveness and growth in the commercial sector but they have had little trickle-down effect. The structure of growth appears to be as important as growth figures per se with respect to its contribution to rural poverty. On their own these reforms could not have addressed the deep-seated structural issues that inhibit efficient supply response from millions of smallholders and rural entrepreneurs. New measures would be needed to facilitate the required adjustment and integration of the small-farm sector, induce a change of behavior, and remove the barriers hindering access to the new opportunities. This means promoting the better functioning of factor and goods markets, access to basic services and infrastructure, education, financial services, and information and technology, and most important, rebuilding a social capital that kept degrading under the double pressure of dwindling institutional presence and growing violence. This basically points to the revival of a rural development strategy repositioned in the regional context.

b) The Poor Functioning of Factor and Goods Markets

i. Land

Data show that 88 percent of area but 65 percent of plots have titles for their property (see Land Policies Chapter). This implies that large producers have a higher level of security on their tenure as provided by their titles, which, combined with the land concentration phenomenon, has implications for efficiency and equity. Moreover, the effectiveness of rental and sales markets leaves much to be desired. About 10 percent of producers (but with wide regional differences) report having bought land during the last five years. However, almost 80 percent of the transactions were acquired from small farmers, indicating that the sales market may essentially be driven by small producers exiting agriculture. Rental markets are still shallow, with only 15 percent participants and a median area rented of 2 hectares compared to a mean area of 28 hectares owned by those who do not participate in rental markets. This suggests that rental markets are unlikely to represent a substantial means of land access for the landless and a path out of poverty.

Decentralization policies offer municipalities the opportunity to elaborate land use plans and use land taxation as one of the most important sources of local government revenues. Well-defined property rights can contribute to providing the basis for fiscal responsibility of local governments and level out disincentives for the productive use of land. These opportunities are not taken advantage of. Land taxa-
tion (*impuesto predial*) remains incipient, especially for rural municipalities that maintain their dependence on critical and much-needed fiscal transfers. Limited coverage of the cadastre, wide differences between cadastral and commercial valuation of land, and limited administrative infrastructure for tax collection are the main impediments to enhancing reliance on land taxation.

**ii. Financial Services**

The institutional landscape for public and private financial institutions operating in Colombia's rural sector has shifted dramatically in recent years, as affected by crisis and reforms in the financial sector. Mergers and liquidations have drastically reduced the number of banks, cooperatives, and other financing companies operating in the country, and this consolidation is likely to have affected access to financial services in rural areas relatively more than in urban centers, as the number of cities and with at least one bank branch has decreased by nearly 20 percent since 1996. The rural sector is likely to have experienced a worse-than-average contraction in credit flows as well, given that disbursements to agriculture from formal institutions declined by approximately 16 percent since 1998. Small farmers have received significantly declining shares of formal agricultural credit, as lending to this group—currently defined as having a net worth of about US$15,000 or less—declined by 35 percent in real terms since 1998, and by 60 percent since 1996.

Alternative sources of finance, such as producer cooperatives, product traders, input suppliers and financing arrangements involving multiple parties, including banks, producer associations, storage or processing facilities, for example, may be increasingly important as a means of overcoming informational barriers and high transaction costs involved with rural lending to small-scale producers, which are greater in an environment of conflict and violence. Survey data for 1997 and 1999 show that of the 15 percent of rural households receiving credit, one third relied upon informal intermediaries.

With the closure of *Caja Agraria* in 1999, the government has taken steps toward correcting distortions and rationalizing public support to rural financial markets, but the effectiveness of the remaining public institutions and programs are dubious in terms of their costs, sustainability and degree of coverage. The downscaling of public banks and the consolidation of private sector institutions may have set the stage for the growth of more competitive and stable financial intermediaries, but the financial products, services, regulations and systems which are likely to improve access and address the diverse needs of the rural producers and households,---in terms of savings mobilization, insurance, contract farming, investment funds, electronic finance technologies, collateral guarantees, and credit information systems, among others—have yet to be developed and implemented on any significant scope or scale in Colombia.

**iii. Labor**

Labor markets have become of critical importance to poverty reduction in rural areas. Unfortunately there is still very partial understanding of their functioning and
of the very complex and dynamic relationship that exists between the rural and the urban sectors. Low labor productivity in agriculture, and insecurity, have been the two main causes of migration and of the remarkable importance that nonfarm employment has taken on in the last decade. This corresponds to similar trends in all Latin American countries and has represented an important valve to escape poverty. In Colombia, nonfarm income (wages from agriculture and nonagriculture, profits from off-farm activities, and remittances) represents 45 percent of household income in rural areas (World Bank 2001).

It is debatable how much these population movements can be explained by a real “pull factor” that derives from the possibility of accessing better opportunities in other sectors, or by a “push factor” of the rural poor that simply made urban poverty and inequality much worse. While there may be a combination of both factors, it is clear that the overall worsening of the economic performance of Colombia in the past three years has reduced opportunities, and much of the migration may have come from an expulsion effect (voluntary or forced). It is estimated that the sector may have lost 5.4 percent of its labor force between 1991 and 2000. While urbanization contributes to poverty reduction over time, there are limits in the short term to the capacity of large towns to absorb an increasing flow of uneducated people. This is a cause of social disruption in the community of origin, but it is also inefficient for the society as a whole because of the large social cost it generates compared to the contribution of unskilled workers to total productivity.

Moreover, nonfarm rural opportunities and services are mostly developed in high-productivity, resource-rich areas. This means that marginal producers in remote areas are not only constrained by limited mobility and low education, but access to nonfarm employment may come only through outright urban migration, even if only as a low-return shelter. Many see migration as a possible solution to poverty not necessarily because they have no productive potential, but because poor policies and little attention by public programs have left them without access to key markets (land, financial services, produce), basic infrastructure, and education. Recent data suggest (Posada 1992) that even if nonfarm employment contributes to income opportunities, households are better off specializing (either in on-farm or off-farm activities). For this to happen, however, policies should focus on addressing the failure of factor markets and the lack of endowments (physical and human) in the regions. Diversification out of agriculture will continue as part of a general trend that will eventually erode differential returns to labor and capital across sectors. A regional approach to rural development may achieve economies of scale and higher productivity gains while maintaining a focus on rural areas, promoting local opportunities and employment, and preserving existing social capital.

iv. Technology

Because of its great ecological, social, and productive diversity the knowledge and information needs of the Colombian agricultural sector are very varied and have
to be addressed by a variety of sources. The Corporación Colombiana de Investigación Agropecuaria (CORPOICA) continues to be the dominant research institution and is highly dependent on the public sector for funding since it draws roughly 80 percent of its budget (US$68.4 million in 1998) from public sources (Beintema, Romano, and Pardey 2000). However, the Agricultural Research System is characterized by its increasing diversification of suppliers, drawing mainly from farmer organizations, universities, and nongovernmental organizations, which augurs well for the future strength of the system (Posada 1992). This trend of diversification has been strengthened over the past five years with the introduction of a competitive grant system (Programa Nacional de Transferencia de Tecnología Agropecuaria, PRONATTA) which promotes a demand-driven research system to include a range of institutions and to draw on existing underused assets both physical and human.

The creation of the UMATAs at the end of the 1980s was a radical step in the reformation of the extension service in Colombia, since it passed the responsibility for the implementation of the service to the municipalities. The UMATAs were designed to be closer to the small producers by placing the extensionists in the municipalities to thereby be able to capture the demand more effectively. The installation phase of the UMATAs was a success since over 1,000 municipalities had the service installed and the number of producers being attended was over 400,000 in the mid-1990s.\(^2\) At present it is felt that the system is languishing and is not fulfilling the objectives that were established for it at the beginning. Nor have the links between research and extension worked in favor of the small farmers. The majority of the UMATAs have common problems such as (a) mayors have the power to hire and fire extension agents, and thereby affect the stability of employment and the continuity of the work; (b) there is a lack of farmer organizations at the local level to exercise social control; (c) there is poor support at the national and regional level to ensure the quality of the service; that is, there is a lack of training programs and contact with research systems and other sources of information; and (d) there is a failure to attract quality personnel because of insecurity and low salaries.

A weak aspect of the whole public technology system, which covers both research and extension, is the lack of direction, strategy, and quality control from the national level. Over the past decade Colombia has had various institutional models (Sistema Nacional de Tecnología Agropecuaria, [SINTAP], Sistema Nacional de Ciencia y Tecnología Agroindustrial, [SNCTA]), but these systems were not implemented in a meaningful way. Paradoxically many of these systems are conceptually strong, but they were created by decree and have not formulated the required strategy, work plan, and budget for their effective implementation. The government may be better off streamlining and focusing its approach to technology on one viable model and making it work.

\(^2\) Assessment of the Municipal Units of Agriculture Technical Assistance (UMATA) Studied done by PBEST Advisors (1996).
v. Misuse of Land Resources and Diversification

Colombia is capable of producing a large diversity of crops in both its tropical and subtropical regions. During 1990–97 there was a sharp decrease in the area sown to annual crops, falling at an annual rate of −3.6 percent, resulting in an estimated decrease of 1 million hectares to a level of 1.6 million hectares in 2000. While there has been a slight increase in annual crops in recent years, the area sown to these crops is well off its peak. This decrease in annual crops was only partially offset by an increase in permanent crops of about 175,000 hectares (see Figure 2). Most of the gap has been filled through conversion into extensive livestock of low productivity. This increase of the ganaderización, while being a marked phenomenon of the 1990s, is a continuation of a trend that goes back at least 50 years.

Almost all of the livestock activity is based on the latifundio, with about 38 percent of the production based in 3.5 percent of farms, and much of the expansion in permanent crops—palm oil, sugarcane, bananas, and so forth—is also in the largeholder sector. The evidence points to the fact that the smallholder sector has had little capacity to diversify, with the exception of illicit crops. In fact, many crops that are exclusively associated with smallholder agriculture—potatoes, yuca, beans, and plantains—have shown very stagnant patterns of production over the past decade.

Illicit crops are promoted through well-organized illegal structures that facilitate access to inputs, finance, services, and markets, which are what smallholders lack most. The illicit crop marketing chain has a reserve of profitability that can probably stand competition with any other crop and will make alternative crop development programs difficult to implement. This is also likely to affect marginal coffee-producing areas, which had managed to remain relatively insulated, but where illicit crops will present farmers with viable alternatives as a result of the coffee crisis. Farmers are responding to economic and social incentives and are very rational economic actors. This is made even more compelling when access to “legal” alternatives or opportunities are not available. On the other hand, the violence and social cost that accompany the development of illicit crops serve as deterrents to enter into these activities and can partially offset their economic attraction.

The gap between the natural vocation of the soil and its productive use is obvious: livestock uses double what would normally be considered appropriate, while agriculture uses less than 4 percent of the 16 percent considered as suitable land. Only about one half of Colombia’s agricultural and forestry land is still forested, whereas it is estimated that two thirds of this is suitable for forestry. This would suggest that there is a major economic failure to allocate resources efficiently that is largely policy driven and derives from biased incentives in agriculture, land, rural finance, and basic infrastructure programs, which have generally favored large-scale capital-intensive agriculture (Heath and Binswanger 1996). The diversification into low-labor-intensity farming such as livestock has reduced the opportunities for both

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3 Policies and performance of the Agriculture Sector at the National General Controllery
4 FAOSTAT, FAO Rome
Figure 2. Percent Change in Area Harvested Between 1988–90 and 1999–2000
farm and nonfarm employment in rural areas. Moreover, misallocation of resources deprives the rural economy of its growth potential and hinders injection of income both in the on-farm and off-farm sectors.

Even the irrigation sector has not helped as much as one would have expected in diversification efforts. The absence of rigorous cost recovery in public irrigation schemes and skewed incentives helps explain why most of the land is under low-margin crops and pasture. The transfer of irrigation districts was only partially successful and the poor state of infrastructure in many districts creates a disincentive for the water users to take over management responsibilities. User associations are weak and in need of strengthening their capacity. Moreover, there is still a moral hazard issue with respect to the subsidies provided by the Instituto Nacional de Adecuación de Tierras (INAT) for maintenance. Much more emphasis should be put on the economic analysis of public investments in irrigation projects to tap the real productivity potential of these schemes.

Another cause of the misallocation of resources in the sector is the insecurity factor generated by violence, which reduces the incentive to invest in agriculture and causes a bias in the pattern of investment toward activities that are relatively non-intensive in the use of labor. This creates a vicious circle of low productivity and poverty, and encourages landowners to invest in extensive livestock rather than crops as a strategy to maintain ownership of land. With the growth of violence and the increased buying up of land by drug traffickers, the problem has become even more complex, with land having become even more concentrated as evidenced by the proportion of landholdings above 500 hectares which increased from 35 percent of total land in 1994 to 45 percent in 1997.

c) Poverty and Inequality

As noted above, growth had a significant impact on the reduction of rural poverty until the beginning of the 1990s. Since then the correlation between agricultural growth and economic growth has become much more tenuous and erratic. Urban poverty kept decreasing until the crisis of 1999, when it increased by 7 points, back to the level of 1988. On the other hand, rural poverty stabilized at very high levels for most of the 1990s and did not increase during the crisis. However, the sector shows strong dualistic behavior, which is reflected in income figures and Gini Coefficients. Between 1988 and 1995, mean rural income per capita grew at a modest rate of 0.7 percent a year, and continued rising between 1995 and 1999 at 1.4 percent while urban areas were contracting (−1.2 percent). However, rural median income (after accounting for the outliers) also declined during the recession period. Inequality seems to be much more resilient to the performance of the agricultural sector, and despite some progress until 1995, the income Gini's show that all previous gains were offset in the past six years. Most of the rural population was worse off in 1999 than in 1995 (the welfare of the bottom 70 percent of the rural population worsened) and, as in the urban case, rising inequality has diminished poten-
tial welfare gains (IDB 2000). This points to considerable and worsening inequality and concentration within the sector. Inequality between the urban and rural sectors has remained about constant over the last two decades, with rural average income per capita at about one third the perception in urban areas. (Figure 3 shows the differential variation between urban and rural income by using the Sen welfare index.)

This seems to confirm the view that the favorable effect of policies that protect agricultural incomes through commodity-related policies are disproportionately captured by landowners or large industries, and that the welfare of the rural population or inequality are not very elastic to the performance of the agricultural sector. While some aggregate figures reveal improvements in productivity and poverty levels, a more disaggregate analysis shows an increasingly polarized sector with sluggish growth in employment and degrading living standards. Colombia has been identified by a number of analysts as a country with a strong capital-intensive growth model and substantial "large farm bias" (Heath and Binswanger 1996). There is mixed evidence throughout Latin America on whether total factor productivity in farms operated with family labor is larger than that of larger farms hiring labor. However, many of the policies implemented with respect to access to credit, land tenure, irrigation, and capital input subsidies have de facto acted against the family farm sector, hindered employment generation, and widened the gap within the sector.

Figure 3. Income Per Capita—Sen Welfare Index

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5. The Sen index is a measure of mean income adjusted to changes in welfare due to income inequality.
The rural sector also presents considerable regional disparities and, most interestingly, the development ranking of the four main regions has changed over the past decade. The Oriental and Atlantic regions have had the most impressive gains, the Pacific region considerably deteriorated, and the Central region stagnated. The poor performance of the latter two is clearly related to the decline of the coffee sector. Strong regional differences also derive from population dynamics, which were mostly determined by strong concentration in urban areas, wide dispersion in rural areas, and the development of a communication infrastructure largely driven by the domestic market along a few main roads. This settlement pattern, accompanied by weak institutional presence, has to some extent also driven the penetration of the insurgency movement.

The debate around food security is of great importance in the context of agricultural policies and rural poverty, but needs to be addressed adequately or it can become a new source of protectionist policies, distorted incentives, and missed opportunities. Food security should not be confused with self-sufficiency, because it is as much an issue of supply as one of access to food and available income. Most of the time poor producers are net food consumers. For them, buying cheap food for their consumption and selling higher-value products seems to be a more rational decision. In many cases, however, they do not have access to the key markets or to the information and technology required to be efficient market-driven producers. Moreover, nontradable crops have not received the attention required to develop their productive potential and spur pro-poor growth, with the caveat, however, that a major output increase may lead to price declines. These failures should be addressed squarely but should not induce policymakers into trying to determine what crops should be grown as a function of food demand. This would hinder access to better opportunities by the rural poor and will not prevent situations of food shortages or malnutrition because, as worldwide experience shows, these may occur next to shops full of food, because of the limited purchasing power. Food security should be seen in the context of the efficient use of resources for the country as a whole to be fed adequately and safely. This means promoting policies that permit the producers and the consumers to make the most rational decision in terms of how to feed themselves, without compromising the competitiveness of the agroindustrial sector.

For the extreme poor living in marginal areas with low production potential, or for landless workshops with limited off-farm opportunities, dependence on primary activities with low productivity will continue to predominate. For this segment of the rural population, safety nets, income support programs, and public pension systems may yield very effective results by reducing the exposure to risk and vulnerability of these populations. The pervasiveness of poverty among indigenous and Afro-Colombian populations also raises issues of equity, social inclusion, and access to assets. It also challenges conventional government programs to address poverty issues in a way that is consistent with cultural preferences, traditional practices, and needs (see the Chapter on Indigenous Peoples and Afro-Colombian Communities).
d) Institutional Breakdown

i. Loss of Confidence

Over the past two decades the presence of the State in the rural sector has been weakened and the effectiveness of its institutions diminished. This has generated a crisis of governance and legitimacy which affects the credibility of the public administration to guarantee the effectiveness of the development process in the rural sector. Before the *apertura* of the 1990s, the sector institutions were shaped according to the import substitution model where the State was responsible for defining the incentive structure of the various commodities, the protectionist measures, and the subsidies to be assigned within the sector. The public apparatus for the sector remained centralized, and was characterized by its links with economic and political interest groups with weak representation of the social groups that were supposed to benefit from sectoral policies and programs. The model did not foster social control or accountability.

In the 1990s, the development model shifted toward liberalization, elimination of trade barriers, the dismantling of distortionary subsidies, and the modernization of the State. However, these reforms were implemented only partially as the government remained captive to the interest groups that had influenced previous policies. This generated again a selective protection structure and biased incentives. Many institutional reforms remained confined to new organsigrams or in attempted staff reduction efforts, but did not manage to fundamentally modify institutional habits or the way the rules of the game are designed and implemented. Therefore, the modernization of the sectoral institutions remained incomplete (Machado and Samacá 2000).

The inability of the State to overcome the influence of private interest groups and rent seeking may have been one of the factors that most affects the credibility of the public institutions. Clientelism can become an obstacle to civil society participation in public programs and fragment the country into interest groups the main objectives of which are to look for favors. Interference from political interest groups at the regional and national levels impedes the application of transparent rules of the game and the implementation of policies and programs that can respond to the collective demand for well-being. The situation becomes worse when laws are passed with the specific purpose of directing or conditioning the allocation of the sectoral budget to specific interests.

ii. The Inefficiency of the Institutional Setup for the Sector

There is a wide variety of public institutions offering services and programs for the rural sector. This may have been the cause of the problem rather than the solution, to the extent that they generate dispersion, duplication, inefficiency, competition for scarce resources, and low impact. It is worth mentioning that in Colombia in the past several years the most important programs for the sector were designed and
implemented from outside the sector institutions. For instance, the Red de Solidaridad Social, the Alternative Development Program (PLANTE), the Council for Displaced People, and the Campo en Acción program of the Plan Colombia, were led directly from the Presidency with limited participation of the Ministry of Agriculture and Rural Development (MADR) and its institutions. In the opinion of many analysts this may have contributed to the weakening of the institutional effectiveness through greater dispersion and the creation of parallel structures that despite their intentions to be light and temporary, ended up creating new situations of rent and resistance to phasing out. This institutional scattering is also reflected in the intervention of other ministries in the areas of environment, mines and energy, education, health, and trade, which overlap with rural sector programs without the required coordination so as to generate synergies, economy of scale, and enhanced impact. Also, in many cases MADR retains its role of executing agency of largely centralized programs instead of focusing its mandate on policy formulation, regulation, coordination, monitoring, and evaluation, while promoting the decentralization of program implementation.

Institutional diagnostics and recommendations are abundant in Colombia and not much can be added. The work of the Misión Rural (Echeverri 1998), which completed a thorough analysis of the sectoral and institutional issues in 1998, stands out. In 1998, Mckenzie carried out a comprehensive institutional assessment of INCORA, a bloated institution that admittedly is lacking effectiveness and relevance to address the sensitive topic of land tenure. In general, it is felt that conceptual sophistication in Colombia has not given rise to an equivalent implementation commitment and capacity. New structures have been created and new organigrams established to compensate for the weakness of an institutional framework that needs a major overhaul. Rural development in Colombia requires a much more integrated and decentralized approach that by nature needs stronger coordination, political commitment, and the design of a medium- to long-term State policy for the sector that can ensure continuity and overcome discretionality in its interventions.

iii. The Inability to Control the Territory

One of the most important elements that may hamper the capacity of the rural sector to develop is the incapacity of the State to control the territory and the progressive loss of sovereignty of the public administration at the decentralized level. The institutional weakness and vacuum at the local level have created fertile ground for the armed conflict to expand, further weakening local institutions and reducing governability, to the benefit of organizations at the margin of the law. Guerrilla and paramilitary groups exert territorial control in rural areas as the basis of a war strategy that contributes to the dismemberment of the national territory and institutional breakdown. Rural regions, under the increasing influence of the economy of illicit crops and armed groups, are a factor of political instability. Daily, rural inhabitants experience increasing insecurity as a growing obstacle to economic development and to the maintenance of a social capital that is the basis of a more just and democratic society.
The inability of the State to provide security and justice has reached a level in a number of regions where development has given way to simple survival.

From the point of view of the decentralization process, a contradiction appears between the principles of local and regional autonomy and participatory planning contained in the Constitution of 1991, and the government structures that maintain a sectoral and centralized organization. The experience of the DRI and PNR has certainly provided valuable guidance on how to pursue decentralization policies, but the process needs to be sustained and made more effective. Decentralization needs to build on participatory local planning at the community level and municipal strengthening. The “institutionality” for the sector has not adjusted to the needs of a highly heterogeneous rural population that has become more and more disconnected from the decisions taken in Bogotá and that aspire to more accountable governments at the local and regional level.

iv. Degradation of Natural Resources

Skewed incentives in favor of agriculture and livestock and lack of appropriate technologies, compounded by the expansion of illicit crops, are taking a toll on Colombia’s natural resources. Colombia is seeing its remarkable environmental capital being rapidly degraded. The Andean region has the richest biodiversity resources, but is also the region where 80 percent of the population is concentrated and where the degradation of soil and water originates mostly from agricultural activities. Soil erosion and sedimentation are having a detrimental effect on many watersheds and on the contamination of the hydrological systems. In the Orinoquía and Amazonia regions, the impact comes from recent colonization, but it is already showing in the Guaviare, Guainía and Putumayo, Caquetá, and Meta departments where more than half of the area has already been deforested. The gap between the natural vocation of the land and its actual use, mentioned earlier in this Chapter, points to a distorted incentive structure and misallocation of resource use. It is estimated that the agriculture and livestock frontier advances at a rate of 200,000 hectares per year (IGAC–CORPOICA 2001).

Moreover, the shift toward monocropping has increased the fragility of the ecosystems and has transformed Colombia into one of the countries in Latin America with the highest consumption of agrochemicals. This also runs counter to the traditional knowledge and practices that indigenous populations have accumulated over time and which are now being threatened. Unfortunately, the indigenous reserves and the communal land rights granted to Afro-Colombians have not been

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6. The volume of sediments transported by the Magdalena River to the sea (130 million tons) is equivalent to 40 percent of the total sediments carried by the entire fluvial network of the country (IDEAM 1998, “El Medio Ambiente en Colombia”)

7. According to the Ministerio de Medio Ambiente (1999), Colombia uses 50 percent more pesticides per hectare for technified monocropping than the United States for the same type of crops.
exempted from this trend, because the armed conflict is also putting strong pressure on these areas that are lacking much-needed support for the development of management plans.

Infrastructure development, and especially roads, has also accelerated the transformation process of natural ecosystems. Despite progress on the regulatory and institutional front, there has been little implementation of the Planes de Ordenamento Territorial (Territorial Land Use Plans, POT) contemplated in Law 388 of 1997, nor diligent application of environmental assessments to infrastructure development.

The conflict initially had only a moderate impact on natural resources when, during the 1950s and 1960s, natural ecosystems were essentially used for protection and the hiding of armed colonelization movements. With the expansion of guerrilla activities throughout the last two decades, and the considerable expansion of illicit crops, the degradation process reaches new dimensions. The illegality of the activity may induce producers into short-term considerations with a focus on the “product” versus an investment in soil, natural resources, or land ownership. Coca cultivation is extremely destructive because it affects primary forest in fragile areas. Moreover, the recent expansion of the fumigation of coca fields has accelerated the itinerant characteristic of illicit crop growers in the search of new land to be cleared. In addition, chemical residues from coca laboratories are contaminating water flows and aquifers. The conflict will continue to pose a serious limitation to any attempt to manage natural resources in a sustainable way because violence is particularly acute in the richly endowed areas. Efforts to restore natural resources management practices need to be built from the local level up. Communities need to reestablish the level of conviviality and social cohesion needed to arbitrate the tradeoffs existing between agriculture, livestock, and the sustainable use of natural resources at the local level.

Colombia has not entirely realized the development potential that its natural resources capital represents and has not taken full advantage of the new market instruments available. The richness of Colombia’s environment could put the country at the forefront of the efforts made to develop new products such as biocommerce, certified production, ecotourism, organic agriculture, and so forth. However, this may require revisiting the entire range of incentives and alternatives available to poor farmers, because short-term survival needs too often override environmental considerations.

III. Options for the Future

a) Fostering Growth in the Rural Economy

Maintain sound macroeconomic and sectoral policies. This aspect is key to set the basis for long-term agricultural growth and productivity and for employment generation. While the apertura of the early 1990s was a step in the right direction, it was not sustained, and many of the distortions that have characterized the agriculture sector in the past are still in place in one form or another. It is important to
revisit the incentive framework for the sector and to complete the process initiated with the apertura so as to reduce price distortions and biases and to diminish the role of the state in market interventions and ensure that exchange rate policies do not penalize the agricultural sector. However, it has to be recognized upfront that while market-driven reforms will be necessary, they will not be sufficient to accomplish the long-term goals of an efficient and equitable rural sector because they will have differential effects on the commercial and smallholder subsectors. These differences will have to be addressed within the reform strategy and any second-generation issues that occur during the implementation. Subsidy programs should be revisited with a view to modernize them and allow for efficient and competitive participation of the private sector without distorting the incentive structure. Income support subsidies are by far the least distorting and most effective, and should be preferred to price, input, or marketing support, an area where the Government should refrain from intervening. In this respect the experience of Mexico’s PRO-CAMPO and PROGRESA programs are worth studying (see Box 1).

Open Markets to Agricultural Trade. The government needs to signal its intention to put the sector permanently on a path of open markets. A first step in this direction would be a reduction in the dispersion and average level of agricultural import tariffs and a relaxation of nontariff barriers. These steps will need to be taken in the context of the upcoming Doha round of the WTO and the Free Trade Agreement of the Americas (FTAA) both of which are proposed to be finished by January 1, 2005. Prior to these negotiations an effort should be made within the Andean Community (Comunidad Andina) to harmonize the Common External Tariff at a low level to facilitate negotiations with the larger trading partners. The Doha and FTAA negotiations will present a good opportunity to reduce protectionism across the board, both for OECD and developing countries. Colombia can play an important role by supporting the elimination of distortive measures such as the production and export subsidies of the developed countries. These negotiations will also allow countries like Colombia to advocate more transparent rules as regards antidumping as well as health and phytosanitary barriers which have been used indiscriminately in the past. The Government should also explore the possibility of instituting a new support system (decoupled, WTO green box payments) to prepare for sector liberalization. In designing a negotiating strategy the Government should commission a study to identify products of special importance for Colombia which face significant trade barriers in specific countries. This would help to better focus negotiating resources to get the best results and would identify weaknesses, if they do exist, i.e. health and phytosanitary controls, and in which the Government could invest and therefore increase the competitiveness of the sector.

Promote Productivity and Competitiveness. Any growth strategy will need to be based on expanding markets where Colombia has a comparative advantage, but it also needs to be more equitable than in the past, and will have to
Box 1. PROCAMPO

The PROCAMPO program was introduced in Mexico in 1994 with the objective to facilitate the switch from distortionary commodity price subsidies to direct income payments. Payments are fixed amounts according to the historical (not current) amount of land cultivated in a base period for a list of specific crops being liberalized, and no longer on the basis of agricultural output. The program has a duration of 15 years and the last five years have a declining pattern. In 1999, the program represented 0.25 percent of GDP. While at the beginning the PROCAMPO program was linked to the planting of eligible crops, with time its rules were relaxed and most crops became eligible (including forestry), as long as farmers had been registered at the beginning of the program. In 2000 the PROCAMPO payments was entirely disconnected from planting and became more of an entitlement or a payment guarantee which enhanced its flexibility and fungibility. In 2002 the Government agreed to let farmers cash the total income payment (or part of it) over the remaining period of the entitlement at a discounted rate through the banking sector, to finance viable projects in the farm or non-farm sector. PROCAMPO has proven to have much more of a redistributive effect than previous price support schemes and has a multiplier effect implying a positive outcome on investment behavior. Despite its positive elements PROCAMPO, being a non-targeted universal program, still directs considerable amounts of resources to relatively well-off farmers.

On the other hand, PROGRESA, also an income support program, is targeted to the poorest and provision of subsidies is conditional on school attendance, obtaining health care and nutrition assistance. The advantage of behaviour-conditioned programs like PROGRESA is that they provide a two-prong approach to risk reduction: i) income support for the poor; and ii) increased human capital accumulation among the future workforce.

include measures for increasing productivity in the smallholder sector. Colombian agriculture will be increasingly under pressure to become more productive and diversified. It will be necessary to adjust public expenditures to accompany this process and facilitate its adjustment. Despite its very diverse ecology and rich natural resource base Colombian agriculture has shown very little innovation in diversifying its product mix into higher-value crops (with some exceptions such as palm oil and bananas) and exploiting its diverse potential in world markets. A diversification strategy will be key to increasing productivity and serving as a source of employment in rural areas. The decline of the coffee sector, which has a large smallholder component, is a wake-up call for action on the diversification front and on the need to compete with a high-quality product or in specific niche markets. This diversification strategy will be private-sector led
but government will have an important role in accompanying this process. Firstly, the elimination of price distortions will be an important first step in establishing a level playing field so as to allow the development of commodities that have a comparative advantage under Colombian conditions and which are in demand in national and international markets. The development of food safety and quality standards that are norms for entry into international markets will be necessary. Demand driven and competitive research and innovation systems need to be developed that are capable of accessing the international knowledge marketplace and thereby facilitating the importation of relevant technology. Financing systems need to be flexible to support the emerging commodities as the market determines which are the most competitive. Marketing alliances need to be developed internationally. Diversification is not easy, but there are numerous examples of successful diversification in Latin America over the last forty years that should be studied i.e. the fruit industry in Chile, citrus production in Brazil, the soybean industry in Argentina, oil palm in Colombia. As diversification progresses there will be a number of second generation problems which will arise and which the government will have to address i.e. rural infrastructure, and externalities such as environmental issues i.e. cutting down of coffee plantations and the resulting environmental effects. The government has made considerable progress through the acuerdos de competitividad in which it promotes public-private partnerships which allow for better efficiency, access to information, technology and marketing channels for small farmers. These schemes should be monitored carefully over the short-term and should be evaluated for their efficiency and effectiveness.

STRENGTHEN RESEARCH, EXTENSION, INFORMATION SYSTEMS, AND STANDARDS. As Colombia looks to strengthening and sustaining its agricultural research system, it needs to build on the diversity of its institutions by continuing to develop competitive financing systems. These will leverage private funds and strengthen a range of institutions that will help better match technology supply and demand to respond to the many and varied needs of the sector. Such needs will only increase if Colombia follows the path of diversifying its production in line with its agroecological potential. On the extension side, the concept of the UMATAs is a sound one and the problems encountered in its implementation do not invalidate it. Farmer organizations at the local level should be strengthened and should be given a more prominent role in the management of the service. Strategies for feeding new information systems on market and prices should be devised at all levels and used as a key tool to promote market search and access, investment decisions, and so forth. Similarly, the increasing integration of agriculture in international trade agreements has highlighted the importance of food safety and quality standards as key elements of an export-promotion strategy. This is an area where the public sector could contribute to the development of norms based on industry participation and needs and to the diffusion of the information.
Reducing transaction costs and the perception of the risk of doing business in rural areas will continue to be a priority for private sector investments. For this to happen, security and justice will remain the most important elements and the sine qua non condition for renewed private sector involvement. But it also means the implementation of effective public sector programs to address the externalities facing rural areas along a three-pronged approach. (a) developing infrastructure of rural roads, warehouses, and basic services in rural municipalities through a decentralized and participatory approach repositioned in the regional context, (b) building social capital and organizational capacity of the rural households through the promotion of economic associations, service cooperatives, and producer organizations; and (c) developing a credible regulatory framework and enforcement capacity as critical factors for secure transactions and improving the perception that the judicial system works.

Promote the development of sound financial services. The first priority should be to expeditiously assess the options for increasing sustainable financial services coverage to rural areas as compared with the costs and benefits of the current scheme anchored in Banco Agrario and FINAGRO. Experience from a number of countries within the region and elsewhere point toward a shift in the role of the State from retail and second-tier lending to an institutional development role with substantial private sector involvement and greater effectiveness in the application of limited public sector subsidies. The provision of incentives and technical assistance for intermediary capacity building focused on bank and nonbank institutions to expand their services in rural areas may present a more viable alternative to the development of sustainable intermediaries which are likely to reach a broader segment of the rural population. The consistency between transfer programs and the development of institutional capacity for rural financial intermediation also needs to be analyzed to avoid a situation where subsidies are contributing to non repayment or interfering with the development of private sector initiatives. Caution is needed, however, to avoid dismantling or reducing the size of a system based on public institutions before a new system more reliant on the private initiative is in place. In particular, it must be kept in mind that the precarious security and violence prevailing in rural Colombia will represent both an obstacle to the functioning of public institutions and a deterrent to private-sector involvement. Innovative systems, products and methods for mitigating the substantial risks involved in providing financial services in Colombia's rural areas merit further attention, in terms of the regulatory and other barriers to the implementation of modern price and yield risk hedging instruments, collateral guarantee and credit information systems, and electronic transfer and debit cards, for instance. A new administration pressed to tackle rural poverty may feel inclined to resort to subsidized credit intended for smallholder agriculture as a means of fighting poverty while avoiding large fiscal outlays. Such temptation should be resisted as both domestic and international experiences show that subsidized credit is often captured by medium and large scale farmers, and little if any reaches the intended beneficiaries.
Direct transfer programs would be much more effective in reaching the very poor, usually without repayment capacity to acquire debt.

b) Poverty

Foster peace. It can be argued that in Colombia today, peace is probably the most critical condition necessary for the basic improvement of rural welfare. Rural Colombia, more than anywhere else, needs security and confidence to be restored. In most recent surveys, violence is by far the most widely reported factor that hampers development. But peace is not an exogenous factor to rural Colombia, to the extent that the rural sector must be a key contributor to peace, for peace to be sustainable. For this, rural inhabitants need to mend their wounds and rebuild the social fabric that constitutes the platform of any development process. There are a number of development experiences and projects in Colombia\(^8\) that show that trust and hope can be rebuilt, even in fragile and unstable security environments. These programs are constructed from the bottom up and aim at building social capital and strengthening local institutions and organizations. These experiences should be consolidated and promoted through a more effective and scaled up government rural development strategy. While implementation may need to be carried out through nongovernmental organizations, it is important that there be channels for community participation in the decisionmaking process so that they become self-sustaining.

Promote prooor growth. There is considerable evidence demonstrating the positive influence of growth on poverty alleviation. However, the quality of growth is a key factor in determining the elasticity of growth to poverty. Experience shows that a growth process relying entirely on trickle-down benefits is slow in the absence of the required market mechanisms to connect rural areas with the rest of the economy. A prooor growth strategy will need to be devised so that smallholders can participate in the development process not simply as providers of primary commodities but as a source of wealth, employment, and growth. This means removing the impediments that affect the proper functioning of factor and goods markets, especially land and financial services for the farm sector as well as broadening the base of the growth structure and generating employment locally in both the on-farm and off-farm sectors. Such a strategy will establish the right incentives for more efficient production patterns to develop and a more proactive government policy toward increasing agricultural productivity (both export crops and nontradables) as developed under the diversification strategy as well as, microenterprise development to generate off-farm employment, and basic infrastructure services to render rural regions more attractive.

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8. The most notable one is the *Magdalena Medio* Development Program. See the World Bank's Project Appraisal Document and the Implementation Completion Report for Phase I.
REVISIT THE APPROACH TO LAND REFORM. Fifty years of relatively ineffective and expensive attempts at land reform suggest modest impact and little incorporation of lessons from experience in both Colombia and abroad. Law 160/94 is flawed and needs to be revised as follows: (a) the limit on the grant size for the purchase of land should be abandoned to limit price escalation and facilitate integration of land purchase with productive investments; (b) trying to provide beneficiaries with a whole farm unit (Unidad Agrícola Familiar, UAF) is fiscally unsustainable and reduces the number of participants, so more flexible arrangements should be accommodated; (c) land reform should be integrated within a broader context of local development, and rigorous analysis of the productive potential of land reform projects should be conducted; and (d) the institutional setup and particularly the role of INCORA should be revisited with a view to decentralizing land administration and titling and establishing partnerships and cofinancing with local governments and the private sector (for more details see Land Policies Chapter).

DEVELOP RISK-MANAGEMENT TOOLS AND SAFETY NETS. It is important to better understand and recognize extreme poverty. Many Colombians will not be able to reap the benefits of growth or even to participate in a propoor growth process. This includes many displaced people, the landless, the elderly, many indigenous peoples, producers in marginal areas without a productive potential, and rural dwellers without opportunities to migrate. Differentiated policies and programs will be needed. Many of these people are still very dependent on low-productivity agriculture as the main source of income, and it will be critical to increase their productivity. However, in many of these cases safety net programs such as public pensions, social security, and income support can have large payoffs and can be important factors in reducing the vulnerability and risk exposure of the poorest. In general, it will be critical to adjust public programs to cultural preferences and values and to build social capital as a key ingredient to local development.

c) Institutions

RESTORE CREDIBILITY. The agricultural sector, through its institutions, needs to establish confidence and define a reform path that reflects consensus and sustainability of its policies (Machado and Samacá 2000). The reforms need to reduce "clientelism" and discretionality to ensure that public interest will prevail. The government needs to elaborate a clear and realistic strategy for the sector in combination with a credible regulatory framework that will ensure transparency and enforcement of the rules of the game. The government needs to stay the course in the application of its policies and ensure consistency between stated objectives and implementation capacity. In particular, a number of instruments used by the government in its poverty-reduction efforts (ICR, credit programs, Fondo Agropecuario de Garantías) should be reviewed to avoid their capture by the largest producers. Similarly, preferences and special regimes conceded through commodity-driven pri-
vate interest groups or through politically driven budget allocations for specific regions should be analyzed.

**Mainstream Sector Responsibilities and Avoid Duplication of Efforts.** In the context of limited resources it will be critical to avoid inconsistency among various institutional actors intervening in the sector with little coordination. MADR should recover its leadership in establishing strategic priorities and regroup the different existing programs under a consistent institutional and operational framework. At the same time, the performance of a number of large institutions consuming sizable amounts of the sector budget need to be examined as regards efficiency and effectiveness, and hard-nosed decisions must be taken about their restructuring and streamlining.9

**Pursue Effective Decentralization.** Decentralization is a critical condition for recovering trust in, and efficiency of, public institutions. Decentralization and the consolidation of local democracy will be the basis for the restoration of governability because they will create the conditions for greater participation and accountability. There will need to be a redefinition of roles at the different levels of public administration, and in particular increased responsibility and accountability at the municipal level, together with a considerable capacity-building effort. Municipalities should enhance the level of own revenues collected, particularly through a sound land taxation system that would restore the incentive for more productive use of land and contribute to local development. Efforts to increase security of tenure and to use the land registry and cadastre as essential elements for local planning should be pursued further.

**Promote Community-Based Regional Development.** As decentralization proceeds, the “institutionality” for the sector will need to adjust accordingly, because local approaches will inevitably be much more integrated and less oriented along sectoral lines. The intervention of civil society, the private sector, communities, and producer organizations should be emphasized so that they can better participate in local planning, definition of local priorities, and implementation. Rural development will need to be repositioned in a regional context and the traditional urban–rural divide needs to be blurred to foster a continuum of employment opportunities both on farm and off farm. This approach promotes better organization of communities and rural producers, integration with the supply chain, development of labor and financial markets, provision of basic infrastructure and services, and sustainable management of natural resources. By rendering rural areas more attractive, regional development can accompany population movements to the benefit of the local economy. The “rural space” becomes the main scenario where social cohe-

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9. In 2000, INCORA and INAT were allocated about 30 percent of the budget for the sector. Moreover, INCORA uses about 70 percent of its budget to cover recurrent costs.
sion can be rebuilt and participation in the decision-making process becomes the basis for consensus building and ownership of the local development process. Over time the process can prove a powerful instrument to bridge the gap with the remoteness of the Bogotá-driven development agenda. The successful experience of the Magdalena Medio development program provides a very valuable example for replication, and a methodology of how to proceed in areas of conflict.

Foster New Public–Private Relationships. The new institutional framework that the sector needs cannot be the result of only normative dispositions, but must be the result of the construction of a relationship and cooperative programs with the main actors in the sector, civil society groups, commodity-based organizations (gremio), the private sector, local governments, and communities that represent local interests. Local legitimate actors should take the leadership of regional planning and priority setting, guide and negotiate local development processes, and create the conditions for better governance. A number of instruments have been promoted by the government and are heading in the right direction, such as strategic alliances, competitiveness agreements, parafiscal funds, and so forth. They will need to be consolidated and strengthened so that their benefits can expand beyond the commodity-linked supply chain and be better articulated with local and regional development. Para-fiscal funds, in particular, need to improve their performance and revisit the mechanisms and criteria established for the allocation and use of the resources and improve the outreach of their services to the beneficiaries.

d) Natural Resources

Fix the Incentives and Promote Market Instruments. Colombia has the potential to make a difference in the sustainable use and conservation of its natural resources through better use of market instruments and revision of the present incentive structure for agriculture and livestock. However, the biggest caveat is that the nature of the armed conflict and the profitability of illicit crops will continue to pose a severe limitation for other crops to compete, thus posing a severe threat to environmental degradation. Notwithstanding this critical factor, Colombia needs to capitalize and get market recognition for its environmental services. Biodiversity considerations can be incorporated in many productive processes including coffee, medicinal plants, tropical fruits, ornamental plants, and wood. Organic agriculture is a rapidly expanding market that offers a substantial premium and payments for environmental services at the regional and global level. Carbon sequestration through accepted trade emission permits also offers new avenues to be pursued as an

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10 These funds are managed directly by the producer organizations (gremio) mainly for activities related to research, technical assistance, marketing support, promotion, and so forth, and are funded through a mandatory contribution of the producers of a specific commodity or in a particular subsector.
efficient instrument for market-driven regulatory measures that can offer added value to agricultural practices. The government has already developed a number of instruments\textsuperscript{11} that will be worth strengthening and that will require support for (a) the elaboration of a government policy and incentives in this matter, (b) the development of credible and impartial certification mechanisms and agencies that would establish the incentives for self-regulation by the industry, and (c) considerable capacity-building and organizational effort at the local level for the producers to meet the quality and volumes required.

Enhance the use of environmental land planning tools (Planes de Ordenamiento Ambiental del Territorio). Natural ecosystems need to be subject to management plans as established by the law, including areas such as the parks (Sistema Nacional de Áreas Protegidas, SINAP), communal lands, and indigenous reserves. Many times the implementation of these plans has remained in the realm of good intentions because they have lacked the capacity, funds, and ownership to be practical planning tools at the local level. A decentralized regional approach to rural development needs to integrate natural resources management as part of the consensus building over priorities and competition for water, energy sources, land use, forests, and so forth. These plans could be the tool of municipalities to implement a more effective land taxation policy.

Generation and dissemination of alternative technology. Hillside management (cultivos de ladera) requires new innovations in soil and crop management to ensure that a sustainable agriculture can be developed for these areas and therefore be made less itinerant and less demanding on the agricultural frontier. This will require a publicly funded demand driven innovation system that is referred to previously. Initial conversion subsidies to support the shift toward environmentally friendly techniques such as zero tillage, organic farming, or improved agro-sylvopastoral production systems might be considered.

References


\textsuperscript{11} The Certificado de Incentivo Forestal de Conservacion, the microcatchment program, rates for water and forest uses, and organic agriculture certification mechanisms.


Coffee

This Chapter was written by Daniele Giovannucci with valuable contributions from Hector Arévalo, Juan Jose Echavarria, José Leibovich, Bryan Lewin, Santiago Montenegro, Nestor Osorio, Gonzalo Paredes, Diego Pizano, Luis Samper, and Panayotis Varangis.

I. Background

a) Anatomy and Evolution of the Sector

Colombia is the third-largest coffee producer in the world, and by far the largest producer of washed arabica coffee. Its share of the international market went from 10.6 percent during the first half of the 1970s, to 15.2 percent in the first half of the 1990s, falling to 11 percent during the last two years (Clavijo, Jaramillo, and Leibovich 1994; Pizano 2001). Since serious commercial production began there in the 1870s, it has slowly developed a sterling reputation for consistency and good business practices. Coffee has long been identified with Colombia; it was instrumental in fostering much of the country’s industrial development, and many of its important industries today were funded by coffee earnings. Indeed, for many decades coffee has been the most important sector of the Colombian economy. Through the mid-1980s, coffee policy was synonymous with macroeconomic policy. Since then, coffee’s relative macroeconomic importance has declined.

1 This Chapter is complemented by two separate World Bank reports—the “Colombia Coffee Sector Study,” by Daniele Giovannucci, which is a sector report that provides a more thorough and in-depth analysis of the sector, and “Global Supply and Demand. New Paradigms in the Coffee Markets,” by Bryan Lewin and Daniele Giovannucci, which assesses the larger global situation in terms of both the dominant supplying countries and the evolution of demand. This Chapter reviews some of those findings and suggests a menu of policy options available to the Colombian coffee sector.

2 While coffee accounted for 5.6 percent of total GDP and 13.1 percent of agricultural GDP during the 1980s, it fell to 4.4 percent and 11.3 percent, respectively, in the 1990s (Pizano 2001).
Today coffee derives its importance not only from being one of Colombia’s main exports, but also because fully 18 percent of Colombia’s rural households depend on it for their income. According to the 1997 Encuesta Nacional Cafetera, Colombia’s coffee zone had 566,230 coffee farms, with 423,368 households living on them. Its non-perishability and cash value make it the most important crop in the highland areas. In some of these regions with proximity to areas of illicit crop harvesting, the labor force that is normally well employed in coffee production has been attracted to this illicit alternative now that coffee prices and farm employment are at the lowest levels in many decades. In 2001 the real value of the coffee harvest was only 40 percent of its average throughout the 1990s.

Coffee’s importance, especially among the rural population, has made the current price crisis particularly difficult for some of the poorer segments of Colombian society. There is urgent concern that a prolonged crisis could seriously destabilize a number of rural areas. Since the mid-1970s, world coffee prices have decreased in real terms. Colombian world coffee prices are the lowest in real terms since 1821. It may be little consolation, but these historic lows are not confined to the coffee market. Like coffee, many commodities have experienced dramatic lows in recent years, and coffee price volatility has quadrupled in the last decade (less so domestically due to costly price supports). Low prices and volatility most severely impact the poorest segments of society. In Colombia, the inability or failure to diversify and/or add value has left commodity production as the primary source of income for many thousands of poor families.

A coffee farmer audit completed in 2001\(^3\) noted, in order of importance, the main problems mentioned by small coffee farmers:

- Low coffee prices
- Lack of rural credit
- Commercialization problems
- Lack of community organization
- Low coffee productivity.

The inability to earn reasonable returns and reinvest in their farms leads to many well-documented problems, including rural migration, reduced education and healthcare, and unsustainable natural resource use with corresponding environmental problems. How best to manage the negative consequences of fewer coffee commodity market options and volatile coffee markets is a key issue for Colombian farmers and the allied coffee industry. This need is particularly pointed in light of emerging information that global shifts in production and consumption patterns indicate that the depression of prices could be of considerably longer duration than normal.

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There is no single solution that applies to all 11 million bags of current annual production in Colombia; rather there is a menu of viable options. Many of these options respond to market demands that have changed markedly in recent years from the commodity-based systems that have traditionally dominated the global coffee trade. Some new paradigms are emerging.

b) Global Context and Trends

The coffee industry is undergoing some fundamental changes in the nature of the business, and it is important to recognize the extent and consequences of the emerging paradigm shift. These include:

- Dramatic increases in tree plantings that now practically ensure structural long-term overproduction potential, particularly in unwashed arabicas and robusta.
- The quality of these less-expensive coffees is steadily improving.
- The ability and willingness to substitute traditional coffee origins in most industrial blends.
- Increased concentration, especially among roasters and traders, which reduces market options.
- Market concentration, inadequate information, and speculation will likely fuel continued high volatility in the absence of an international agreement.
- Lower green beans prices no longer necessarily correlate with lower roaster and retail prices that would usually stimulate increased consumption.

i. Support and Stabilization Schemes

In the past there have been several international attempts to stabilize world coffee prices through the International Coffee Agreement (ICA). The ICA succeeded in keeping coffee prices higher and stable, although price stabilization benefited mostly exporting countries with established higher quotas, and penalized new entrants (Akiyama and Varangis 1990). Since 1989, the ICA has not included economic clauses that would regulate the coffee market, resulting in greater world price volatility and overall lower prices during the 1990s. From 1993 until its recent demise, a producers’ organization, the Association of Coffee Producing Countries, tried but failed to regulate the world coffee supply through a retention scheme.

In addition to international efforts, several coffee-producing countries (including Cameroon, Colombia, Cote d’Ivoire, and Papua New Guinea) have used price stabilization funds. Almost all of these stabilization funds ran into serious financial difficulties. In most cases, the funds eventually went bankrupt. While it lasted, Colom-

4. A considerably more in-depth treatment of this topic occurs in the companion document, “Global Supply and Demand: New Paradigms in the Coffee Market.”
bia's was certainly the most successful, but its net worth has dramatically decreased and it can no longer perform its stabilization function.

During the 1990s, several coffee-producing countries (Costa Rica, El Salvador, Guatemala) tried to support domestic prices.\(^5\) Mexico and Nicaragua used funds differently to support the income of small coffee producers by giving a fixed payment per hectare with caps on maximum farm size rather than production quantity. More recently, Guatemala is using a fund to promote diversification, agroprocessing, marketing, and debt restructuring. The various experiences with price support schemes and stabilization funds provide us with the following lessons:

- Most price stabilization schemes aim to support domestic prices when world prices decline. The objective of higher prices rather than stable prices is almost impossible to maintain (Wright and Williams 1990; Deaton 1992; McIntire and Varangis 1999; among many others).

- If support is deemed absolutely necessary, the better approach is to support the income and/or the diversification of coffee farmers instead of supporting prices. Mexico and Nicaragua, for example, have provided a support linked to amount of hectares under coffee so that there is less distortionary incentive to increase production in order to receive more.

- Any price support scheme that maintains a higher price level removes the realistic incentives for necessary adjustments in terms of diversification and reducing production in marginal areas.

c) Production and Demand Trends

In the last 20 years, world production has increased from 86 million bags to about 122 million bags today (USDA 2002), giving rise to surpluses on the order of 10 million bags in 2002, and more in 2003. For the near to mid-term, most predict that price recovery will be slow. Production may drop below demand by 2003/04, but significant accumulated stocks will remain a negative influence on prices.

When looking for an answer to coffee’s dismal prices, most fingers point first to Vietnam, whose dramatic 1,400 percent robusta production increase in a decade (1990–2000) appears to have surprised the industry. While Vietnam’s meteoric rise to number 2 producer, with 14.7 million bags in the 2000/2001 year, makes it the most visible contributor to overproduction, it is by no means the only one. Brazil, for example, has added more to the global supply over the last five years than Vietnam has (Giovannucci 2002), and its production increase in this year alone (about

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5. Costa Rica’s National Fund for Coffee Stabilization (FONECAFE) paid farmers $6.38 per quintal during 1998–99 and 1999–2000, and $18.76 per quintal during 2000–01, with the obligation of a repayment by farmers if world prices increase above $92 per quintal. Similar efforts by El Salvador and Guatemala were all funded through the issuance of bonds
13 million bags) exceeds Vietnam's total output for this year. Also of note is that since the 1997 low point for consumer stocks, the stocks of arabicas (particularly Other Milds) have been growing faster than robustas. Consumer stocks of Colombian coffee fell sharply in 1995 to about one month's supply, where they have remained since. This, along with reduced Colombian stocks, may have contributed to raised differentials in relation to the Other Milds. However, recently that premium has been lost as the prices of other good-quality washed arabicas have risen as production of washed arabicas has fallen.

Brazil produced a bumper crop in 1998/99 of about 38 million bags from about 3.4 billion trees. Recent estimates suggest there are approximately 4.6 billion trees now in production, with about 1.3 billion more still developing. Of these 6 billion trees, many new ones went into northern frost-free zones and the highly productive areas of the Cerrado (Giovannucci 2002). Brazilian cooperatives in Sol do Minas are now introducing washed coffees, and perceive a production capability of about 2 million bags. The quality of the unwashed and semiwashed coffees has improved, and is now able to take a much larger part of commercial blends than before, displacing other washed coffees and even robustas according to relative prices (see Figure 1).

Figure 1. Importer Demand for Exportable Production

Source: B. P. Lewin, World Bank
Until the arrival of the 2002/03 Brazil crop, the most notable increase has been in robustas, where Brazil, India, and Vietnam, particularly, have seen substantial increases. Exportable robusta production now accounts for nearly 40 percent of import demand, which historically has not averaged much more than 33 percent. Brazil’s naturals, much improved in recent years, are likely to take an increasing blend share as noted in the Figure 1 trend.

This increased capacity has strong implications for future supply. Historians would note that this boom-bust cycle has plagued the industry for more than a century, including Colombia’s own, although more modest, 50-percent-plus production increases in the 1970s. Indeed, it is not just coffee that suffers this cycle; it is almost an a priori definition of commodities. The availability of these coffees and flexible usage patterns have come following a period in which high volatility and high prices forced coffee roasters in importing countries to make a number of changes in their business, and this is another key part of the paradigm shift.

Through the use of new technologies, industry has been able to lower its necessary working stock levels and has also been able to introduce more flexibility into its blending—by, for example, steaming robustas and some low-grade arabicas to reduce their harsh taste. Analysis of imports from Colombia and other washed arabica producers into countries such as Germany suggests that roasters are finding replacements for the average quality output from Colombia. It is not clear whether they would switch back if Colombian output rebounded above recent levels. This implies that Colombia must be savvy about its strategies in these markets.

Conceptually, the overall market can be perceived as a quality pyramid with inexpensive soluble coffee at the bottom, standard commercial blends in the middle, and progressing toward high-end differentiated coffee at the top. While the top and bottom are growing at a healthy pace, the vast middle section has been stagnant. Colombia’s general position is primarily in this middle tier, and therefore finding sustainable future growth presents a challenge.

### i. Concentration

The fact that technology has led roasters to become more flexible in their approach to blending has increased the requirements of agile just-in-time logistical capabilities of suppliers, which has consequently favored the largest trading companies, leading to concentration of the supply chain in fewer major traders. The shortening of the trade chain and the loss of some market players has also led to a concentration of the marketing margins in the hands of the more powerful players (Table 1).

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<th>Table 1. The Increasing Concentration of the International Coffee Business</th>
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<td>• 5 traders dominate 48 percent</td>
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<td>• 5 importers manage 46 percent</td>
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<tr>
<td>• 5 roasters control 55 percent</td>
</tr>
</tbody>
</table>

*Source: Pazano (2001)*
Today, retailers, with their ability to manage consumer information and prices, are in the driver's seat. Their ability to develop private labels and otherwise bypass the traditional trading channels is fast emerging as a critical issue. Only the more organized producer groups will have the capacity to deal with them directly.

Globally, the food industry is consolidating at every level. While this trend increases efficiency, it also reduces the leverage of producers and makes it increasingly difficult for smallholders and small and medium-size enterprises to participate in the markets. As the dominant players downstream in the supply chain capture more value and enforce exclusivity on their suppliers in order to maximize profits, increase entry barriers, and mitigate risk (that is, food safety, market risk, financial), they are fast emerging as the dominant form of competition. To be competitive today, producers need to address supply-chain development at every level so that they add value to agricultural products as they require individual participants to coordinate their activities in a continuous improvement process.

A declining share of earnings is further aggravating the dire situation of Colombia and other producer countries. In the 1980s consumers spent approximately $30 billion per year on coffee, and producing countries earned approximately $9 billion, or nearly 30 percent of this. Today consumers spend an average of $55 billion a year on coffee, and producing countries earn approximately $6 billion, or 11 percent of this (Gemel 2001).

d) Macro Trends in Established Consumer Markets

If, indeed, consolidation is now a dominant competitive paradigm, other options are fast emerging for smaller producers and enterprises to exploit channels that large supply chains and mega-enterprises find less cost-effective than mass production. One such channel is differentiation, where producers can develop a competitive advantage that is not easily affected by generic competitive factors (price, distribution, and so forth) that dominant actors often command.

Quality and value will continue their emergence as competitive standards with continued, although more modest, prosperity in the European Union (EU) and in the United States, where postwar baby boomers will drive growing demand for "highly targeted and specialized products" (Food Distribution Magazine 2001), and mass market brands are particularly vulnerable to intense competition. This is supported by industry research pointing out that individualized tastes of the percentage of the U.S. population consuming gourmet coffee has grown considerably in recent years, from 31 percent to 46 percent.

According to the U.S. National Coffee Association, coffee-drinking habits are elastic among consumers under age 35. After age 35, the proportion of people who convert from non-coffee drinkers to regular coffee drinkers is low, suggesting that in

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6 Defined as "premium whole bean or ground varieties" in the 2001 "National Coffee Drinking Trends Study," The National Coffee Association, New York.
relatively mature markets like the United States, the coffee industry will have to capture more young people as they enter adulthood.

Another area of strong growth is the market for soluble coffee. This is growing at the high end for more mature markets and among the most basic quality levels in the emerging markets. Some of the high-end markets such as the United Kingdom use a considerable proportion of arabica beans in their soluble offerings.

Increasing food safety concerns (mycotoxins, bovine spongiform encephalopathy [BSE, or “mad cow” disease], hoof and mouth disease, genetically modified organisms) stimulate strong market responses. This implies a fundamental shift in the role of grades and standards from reducing transaction costs to serving as strategic tools for market penetration, system coordination, quality and safety assurance, and product niche definition. These are being driven by three sets of changes in the global trade regime:

1. A new regulatory environment, with the World Trade Organization and its Sanitary and Phytosanitary/Technical Barriers to Trade agreements, regional trade agreements, and even governmental requirements (EU standards for ochratoxin, maximum residue levels, and so forth) make entry into fast-globalizing markets more demanding than ever for products across the agricultural spectrum.

2. A new business environment features increased legal liability and requires “due diligence,” such as the international standards organization and hazards analysis at critical control points, that are some of the institutional methods of standardizing. Supply chain concentration also demands ever-increasing levels of standards and performance measured by global rather than local performance standards. Individual firms and chains (supermarket, fast food, and so forth) are increasingly creating their own standards that they impose on the agrifood chains that they dominate in developing countries (the Ethical Trade Initiative and Euro Retailer Produce Working Group).

3. There is a new consumer environment that features increased food safety concerns, a focus on health and diet, and increasingly globalized consumer tastes. In more developed markets, experts predict that social and environmental concerns, especially ethical ones will continue to emerge as not only competitive differentiators but as basic rules of the game and prerequisites for participation.

Coffee sales are affected by these concerns even if coffee is not directly. There is great interest in the economic, social, and environmental benefits of differentiated and specialty coffees and their volumes have grown dramatically in recent years. The markets for these products should be approached with caution since they are still limited and can involve considerable farmer effort to adapt to their more stringent requirements. However, their development often provides additional benefits or externalities beyond competitive advantage; that is, improved natural resource man-
agement, community or organizational development, and increased rural self-sufficiency.

i. Differentiated Markets

Some leading buyers are either implementing or considering sustainable sourcing guidelines that differentiate them from other sources of supply, and may push the demand for coffees like organics that fit these criteria. The differentiated markets, led by continued strong growth in the United States that is now spilling over into Europe and parts of Asia, offer excellent circumscribed opportunities for higher-quality producers, although volumes in most of these markets are still very modest.

The differentiated markets could be one valuable tool with which to earn higher revenues and a superior market reputation. In the case of Colombia, these can serve as valuable levers to help it benefit from its quality-oriented competitive advantage. These markets can and often do overlap each other. They include:

- Geographic Indications of Origin
- Gourmet and specialty
- Organic
- Fair trade
- Ecofriendly or shade grown.

A brief discussion of their primary characteristics and their current trends is presented in Annex I. The reasons for their importance as part of a strategy include:

- Consistent high growth rates
- Price premiums
- The need to address global social and environmental concerns
- The need to access market niches that are competitively different
- The need to provide positive externalities in the field.

II. Main Sectoral Issues/Diagnostic

Given the context laid out in Section I, there are several key areas where policy improvements could leverage significant changes in the sector. The first is understanding the nature of the price crisis and recent government efforts to support the sector in terms of the economic and social consequences, particularly how these affect the most vulnerable segments of rural society. This section also looks critically at the entire supply chain, understanding that any lasting improvements must take into account a holistic view since the sector is very much interdependent and changes will not occur in a vacuum. Finally, the institutions that implement policies are reviewed in terms of their relative strengths and weaknesses, especially in terms
of their ability to effectively represent their constituents and respond to the changing nature of demand.

a) Domestic Impact of Low Prices Trends and Volatility

As profitability in coffee production decreases, field cultivation practices which demand labor and fertilizers decrease as well, affecting not only physical coffee quality but also its organoleptic (sensory) quality. This decrease in quality is already manifesting itself, and in the future its effect will only grow, given the cyclical and slow-developing nature of coffee trees. Consequently, these current responses in the field to low prices will affect coffee quality several years into the future, and will continue to jeopardize farm incomes even when the crisis passes.

Production levels have declined during the last four years, (see Figure 2), although this appears to be leveling out for 2001/02, at about 11 million bags.

Producer price volatility, in turn, has increased significantly, as measured by a volatility index, which rose from 10 percent in 1995 to 32 percent in 2000, and is now equal to the world price volatility index (see Table 2).

In the last decade, coffee production area has declined 17 percent, or about 17,000 hectares, according to Food and Agriculture Organization (FAO) data. According to the Encuesta Nacional Cafetera (1997), since 1970 there has been an increase in the number of coffee farms from 297,000 to 668,000, and a reduction in the coffee-growing areas from 1.05 million hectares to 870,000 hectares (see Table 3). This indicates a reduction in the average size of farms the primary crop of

Figure 2. Producer Price ($1998 = 100) and Production Volume

Source: NFCG
Table 2. Coffee Prices Volatility Index (Standard Deviation Percent)

<table>
<thead>
<tr>
<th>Year</th>
<th>World Price</th>
<th>Producer Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>35.52</td>
<td>9.69</td>
</tr>
<tr>
<td>1996</td>
<td>39.75</td>
<td>19.76</td>
</tr>
<tr>
<td>1997</td>
<td>65.12</td>
<td>40.13</td>
</tr>
<tr>
<td>1998</td>
<td>36.56</td>
<td>25.40</td>
</tr>
<tr>
<td>1999</td>
<td>55.52</td>
<td>26.83</td>
</tr>
<tr>
<td>2000</td>
<td>47.86</td>
<td>32.07</td>
</tr>
</tbody>
</table>

Source: NFCG

Table 3. Distribution of Coffee Plots (by size)

<table>
<thead>
<tr>
<th>Size of Coffee Plots (hectares)</th>
<th>Number of Farms</th>
<th>Total Coffee Area (hectares)</th>
<th>Green Coffee Production (60-kilogram bags)</th>
<th>Percent of Total Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>364,300</td>
<td>167,000</td>
<td>1,811,880</td>
<td>15</td>
</tr>
<tr>
<td>&gt;1–5</td>
<td>172,200</td>
<td>373,000</td>
<td>4,857,552</td>
<td>40</td>
</tr>
<tr>
<td>&gt;5–10</td>
<td>20,100</td>
<td>138,000</td>
<td>2,011,632</td>
<td>17</td>
</tr>
<tr>
<td>&gt;10–20</td>
<td>6,900</td>
<td>93,500</td>
<td>1,561,140</td>
<td>13</td>
</tr>
<tr>
<td>&gt;20</td>
<td>2,800</td>
<td>98,000</td>
<td>1,757,700</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>566,300</td>
<td>869,500</td>
<td>11,999,904</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Encuesta Nacional Cafetera (1997)

which is coffee, from 14.8 hectares to 5 hectares, and in the average size of actual coffee plots, from 3.5 hectares to 1.3 hectares.7

There is no clear evidence that the coffee crisis has induced a process of illicit crop substitution in the coffee regions, although several news stories and National Federation of Coffee Growers (NFCG) reports indicate the possibility is ominous.8 But there are indications that the shortage of employment opportunities and rural diversification options combine with the insecurity in many areas to form a self-feeding circle that serves to limit productive long-term investment and results in greater dependence on illicit crops and low-labor activities like livestock. Cocaine has helped produce a Dutch disease effect, contributing to the appreciation of the peso and to higher real wages in the countryside.

In some coffee departments, such as Cauca, Huila, Nariño, and Tolima, and with proximity to areas of illicit crop harvesting, this has created a source of attraction for the labor force employed in coffee production. Hence, illicit crops have pushed up

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7 The current Agricultural Production Unit (APU) definition of the farm differs from the one used in 1970. The argument does not refer to APUs, but to farms alone.
8 For example, *El Tiempo* (5 December 2001 and 17 February 2002) ran a front-page story about the crisis in the coffee zone and accompanying ills of drugs and kidnapping—both precursors and consequences of a bad situation.
labor scarcity and costs. To date, the main effect of illicit crops is not coffee crop substitution, but a distortion of the labor markets. In the case of the smaller producer, whose source of labor is his own family, and whose family income is generated not only by agricultural produce but also by wages earned outside the farm, he is likely to benefit from this phenomenon. For the larger coffee producer, who is highly dependent on wage labor, this situation will increase his costs of production. Given the few cash crop alternatives in remote rural areas, coffee is one of the few viable legal options for income, but it cannot compete with higher-value illicit crops.

Today, 18 percent of Colombia’s rural households depend directly on coffee production for income, be it through coffee harvesting or wage labor. Many of these employment opportunities come from the larger coffee producers. Labor employed in the coffee sector during the last decade has represented on average about 34 percent of total agricultural employment.9 While at the beginning of the 1990s coffee was responsible for about 750,000 full-time jobs in coffee-growing areas (Junguito and Pizano 1991), in 2000 coffee was responsible for 515,000 full-time jobs.10 The NCFG estimates that approximately 100,000 more people may lose jobs in the sector.11

Even if a few small producers have been partially able to compensate their lower income with some illicit resources, the overall effect of lower international prices on the sector’s income has been dramatic. As measured by the real value of the coffee crop, the coffee sector’s income has fallen 50 percent during the last decade. As a result, the welfare of coffee producers has been severely affected, and there has been a high human cost. Due to the reduced profitability of the coffee sector, it is estimated that the number of households in coffee-growing areas living under the poverty line rose from 54.2 percent to 61 percent between 1997 and 2000 (DANE 2000).

b) Smallholders and Their Integration with the Process of Rural Development

Smallholders are often marginalized in their attempts to benefit from the growing international trade in the products they grow. Integrating smallholders and especially coffee producers into global markets for their products implies an integrated process of rural development. This involves enhanced information flow and training to assess these markets and the tools (technology, infrastructure, and finance) to access them. Their ability to organize effectively into associations and cooperatives is the key factor for most to be able to take advantage of these benefits.

Building the institutional capacity of these organizations will be critical in order for them to properly manage their affairs, democratically represent their constituents, and use commercial, negotiating, and marketing skills. Government can partner with a number of institutions (international and domestic) that can deliver

11. Personal communication from Diego Pizano (5 March 2002 email commentary).
this training at the grass-roots level. There are obvious crossover benefits of such strategies, including rural finance, input purchase consolidation, marketing, democratic process, and so forth. These spill over beyond any one sector and benefit rural areas as a whole. The NFCGC can continue to provide a macro coordinating role if the organizations choose to use them.

Coffee has the distinct potential, as Colombia's leading agricultural sector, to demonstrate the methods and workable options available to farmers in other agricultural subsectors, and in that way to facilitate more advanced and remunerative agricultural development and options for diversification. This is particularly true where one of the necessary requirements will be improved grades and standards that can (a) create a market niche or conversely prevent entry, (b) differentiate products to earn a premium; (c) assure the quality and reputation of products or organization, (certification, seals, brands); (d) communicate product characteristics necessary for efficient transactions (quantity, authenticity, labeling, standard packing), and (e) protect the safety of consumers (labeling, phytosanitary requirements, pesticide standards).

Some of the differentiated markets, such as organics, provide many of the necessary training steps to establish and maintain international-level standards, such as field-to-consumer traceability, farm inputs accounting, and residue-free harvests.

c) Policy Initiatives with Stabilization Funds and Subsidies

Past policies in the Colombian coffee sector were aimed at stabilizing coffee prices through a floor price mechanism to farmers from the Fondo Nacional de Café (National Coffee Fund, FNC). Throughout most of its existence, the FNC has met its goal as a price stabilization scheme, as evidenced by the fact that the internal price volatility over the past 26 years has been half that of world coffee price volatility as measured by the coffee futures index.

However, coffee price stabilization has come at a cost that at times of low world prices has been very significant. The precarious financial condition of the FNC rapidly deteriorated after 1999, in part as a result of low prices that eliminated much of its special coffee tax revenue, and eventually the floor price mechanism was abandoned in January 2001. This meant few resources left for the implementation of coffee policy, so the Colombian government came to the rescue with a support package (see Annex II) and the FNC secured a credit line from the banks in order to continue the FNC's most basic functions.

The support package is based on the assumption that world prices will recover to reasonable levels in around three years. This is a risky assumption. Should the expected price scenario not occur, the sector would be left with an unsustainable supply structure that would have been created with public incentives. Despite the offi-

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12 Most of the FNC's accumulated assets, including the bank, financial corporations, and shipping company, were lost
cial warning that the subsidy scheme has a limited time horizon, it may turn out to be politically difficult to remove, should market conditions not improve as expected.

d) Institutions and Their Roles

The NFCG implements regulatory policy for what has been called the most regulated sector in Colombia, according to the decisions of the National Coffee Committee, the public-private body that acts as the managing board of the National Coffee Fund. Hence it is the dominant institution by far. Since NFCG has been forced to slash its expenditures, its capacity has suffered and caused a certain vacuum in the delivery of its many public functions (technical assistance, research, publicity for Café de Colombia, health and education services, and other special programs).

First, it should be noted that the NFCG has provided excellent social services throughout the coffee-growing regions and helped to stabilize and improve conditions there. It is important that these social services are not lost and that the regional and local organizational capacity is not wasted. Indeed NFCG's expertise in coordinating and executing a variety of social, infrastructure, research and development, and environmental projects is a valuable service that can be sold to various international and domestic agencies, such as the government, and thereby provide a new source of revenue as well.

For decades, the NFCG has guaranteed a "minimum price" for all coffee produced in the country. Although this guarantee may have helped to ensure that producers receive close-to-market prices from all buyers, this price smoothing means that the domestic price may not communicate the right signals emanating from the world price. Given the long-term nature of coffee investment (it takes 3 to 5 years for trees to mature) and volatile or reactionary market signals, short-term smoothing probably does not negatively impact overall sound decisionmaking. Indeed, there may have been considerable benefit in having consistent signals and a consistent policy. When this system recently broke down, after functioning for decades, growers were left without the capacity to manage price volatility and hedge their risks. It has been pointed out that other export sectors such as flowers and bananas have faced dramatic price fluctuations and real exchange appreciation, and have shown a significant capacity to respond without government subsidies. While this may be true, those sectors are also more concentrated than coffee. Coffee growers may need support to develop basic risk management capacities.

The recent decision to transfer the full world price to growers is consistent with the assumption that they are mature enough to take the best decisions that maximize their well-being. Of course, this does not preclude the possibility of the con-

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13. NFCG buys about 35 percent of production
14. It must be said that Colombia's production has appeared to be more responsive to the crisis than a number of other coffee-producing countries, the output of which did not decline markedly.
The tribución tax, provided that such a decision is freely taken by the growers themselves and is oriented to the provision of essential public goods, such as research and technical assistance.

Business does not thrive if the tax rate levied on it is subject to constant change. In the case of coffee, its tax has historically changed in a discretionary and untransparent manner. Any tax must be reasonably low and clearly defined so that economic agents (coffee producers, commercial agents, exporters) can define long-term strategies and new investment plans.

It is not clear whether Colombia's highly regulated coffee-marketing scheme is burdensome, but it warrants a review. For example, in principle, the NFCG and private exporters compete for available coffee, but in practice, there is an implicit quota. The mechanism for fixing a premium on Colombian coffee was not transparent, and when fixed above the world market, the competitiveness of exporters was affected. Varying the opening and closing dates for sales can preclude the possibility of fixing long-term contracts. These administrative measures may have inhibited the development of attractive investment possibilities in Colombia's coffee sector.

The NFCG's role as buyer of last resort has been hotly debated for its potential to distort the market. Nevertheless, there is evidence, in the presence of a steady concentrating market that is characterized by some as oligopsonic, that this has provided a larger share of the market price to producers than might otherwise have occurred. It remains unclear how efficient this service has been. International evidence on this is mixed. The growers in at least two other major Latin American producers (Brazil and Guatemala) receive a similar or even higher percentage of the export price in the absence of institutional price setting, although these are more dominated by larger growers. Colombia has traditionally passed along to its producers a higher percentage of the export price than the majority of other Latin American and world producers. Its 10-year average has been approximately 70 to 75 percent of the export price.

These measures highlight the problematic dual role of an institution that simultaneously serves as a regulatory agency and as a market participant purchasing 35 percent of exports.

The Colombian Coffee Research Center (CENICAFe) is known as one of the world's leading coffee research institutions for its important agronomic achievements. It can leverage this reputation to become even more useful by linking with other international institutions and selling services to all interested buyers, within and outside of Colombia, as a way to finance its research and development programs. Its inventory of basic research and production technology could greatly benefit the coffee sector, especially smallholders, but it has been more focused on the high-tech and larger-scale developments. Without appropriate evaluation and feedback mechanisms it will be difficult for CENICAFe to be more responsive to its clientele, particularly smallholders.

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15 A market condition in which buyers are so few that the actions of any one of them can materially affect price and other market factors.
e) Credit

With the decrease in world coffee prices during the 1990s, most coffee producers had to undergo numerous credit restructurings. This has created a complex set of problems not only for Colombia, but for many other coffee-producing countries as well.

Banks and other rural financial institutions are not willing to extend new credit to the coffee sector as long as prices remain depressed and unless the sector still bears its old and restructured debts. Restructuring may also demoralize good debtors. The formal financial sector does not have an adequate risk model to evaluate creditworthiness in the agricultural sector, including difficulties in forecasting coffee prices, and that, in addition to other sources of market failure, have made it shun the sector. Agricultural producers have turned to informal credit sources such as suppliers of agricultural inputs, with correspondingly higher interest rates.

Recent studies have identified the problem as market failure due mainly to asymmetry in information, lack of adequate guarantees, and perceived low internal rates of return that make agricultural projects financially unattractive (Marulanda Consultores 2000, 2001). Rural security problems are an aggravating issue. It is vital to provide training on the distinct vagaries of agricultural financing (that is, seasonality), and it would be helpful to develop appropriate coverage mechanisms that separate market risks (output, prices, and quality) from financial risks (rates of interest, liquidity, and rate of exchange). Stimulating the financial sector’s interest in agricultural projects may also initially require additional incentives.

f) Issues Across the Supply Chain

Although the great modernization effort of the 1970s significantly improved coffee production and productivity, the overall structure of coffee production has remained mostly unchanged except for a clear reduction in planted areas. While land productivity is certainly important from an economic standpoint, other production factors such as labor productivity, differentiation/specialization, and high-quality orientation may be equally valid and worthy of consideration. Colombian coffee growers face a complex scenario nationally and internationally, which nonetheless offers them several profitable alternatives. Some growers will need to become more productive while others will have to depart somewhat from the commodity production mentality and start evaluating the alternatives open to them. However, to aid them in taking appropriate decisions, certain institutional aspects of production need to be addressed and made available to the coffee-producing sector.

i. Production Quality

Quality begins in the field with good agronomic practices and requires well-managed harvest and postharvest processes. As a quality leader, Colombia has initiated a number of such programs over the years. Yet more quality and market-oriented
Interventions are necessary to maintain and even elevate the market advantage of Colombian coffee because most other producers are also rushing to invest heavily in quality. Among the potential areas of focus are:

- Improving the age, variety, and quality of the tree stock and considering the selective promotion of high-value heirloom varieties in appropriate smallholder growing areas
- Offering options for green production technologies, that is, organic and shade-grown
- Continuing the dissemination of eco-friendly processing technologies
- Introducing more quality promotion techniques; that is, quality-sampling labs in rural areas and quality competitions similar to the Cup of Excellence events.
- Promotion of Geographic Indications of Origin and the regulatory framework associated with them.

ii. Fertilizers

For many years the NFCG subsidized the use of fertilizers, perhaps unsustainably since the real beneficiaries in some cases may have been crops other than coffee. A promising soil conservation program that appeared effective and had long-term sustainability was unfortunately stopped because of the FNC’s financial crisis. Integrated soil conservation can significantly reduce the need for all externally purchased inputs and therefore reduce farmers’ exposure to financial risk incurred when borrowing or spending cash for synthetic agrochemicals.

iii. Productivity

Colombia’s physical output productivity increased from an average of 7 bags per hectare a year in 1970 to 12.9 in 1982, and then remained more or less constant until the mid-1990s, when it began to decline. It appears that this decline has been arrested and the NFCG renovation program has been largely responsible for recent increases in these averages since 2000. In 2002, productivity levels reached 13.7 bags per hectare, and 2003 projections are for 14 bags with modest and steady increases over the next few years, due primarily to the number of new trees coming into full production.

The NFCG’s assessments indicate that there is room to increase the output considerably in some areas and that a 20 percent further reduction in average costs of production is possible. Increasing output productivity is certainly welcome, but the methods must be well considered given the potential negative environmental externalities of intensified production and that an increase in physical productivity is not necessarily followed by an increase in profitability.

According to data collected and analyzed by the NFCG, the coffee plots belonging to small coffee growers (plots under 5 hectares) have production costs under US$0.45 per pound, basically because of their use of family labor. Medium-size and large producers (coffee plots bigger than 5 hectares) have production costs of over
US$0.53 per pound; their differential costs are primarily explained by the fact that 95 percent of their labor needs are met by wage labor.

Colombia's cost of rural labor has increased over time, in part due to the ongoing conflict in rural areas causing a shortage of labor supply. This of course affects coffee's costs of production, especially those of the highly productive farms that are intensive in wage labor. Labor costs amount to between 70 percent and 80 percent of final production costs. The rise in labor costs has not been offset by a corresponding increase in labor productivity; hence coffee's higher physical productivities may be producing an adverse effect in its cost structure especially under the present scenario of relatively low world coffee prices.

Proof of this is already appearing as a result of more intensive planting of new stock that has been subsidized by the government at US$.05 for each tree, representing about 15 percent of the total upgrade costs on a hectare-planting basis.

With international coffee prices below US$.70 per pound, profitability in coffee production for medium-size and large producers is too low to be attractive for investment. Intensification and adoption of new technologies in coffee production have been suggested to increase profitability. These may be very useful, especially with the larger technified producers. However, these strategies can have shortcomings because:

- They produce an increased demand for manual labor, thereby potentially narrowing profitability even further for the medium-size and large coffee producers.
- Colombia's topography does not permit mechanization alternatives.
- Care about coffee quality—one of Colombia's comparative advantages—requires a careful process of selection before and during harvesting, which depends on manual labor and adequate infrastructure, and is difficult to control whenever harvests come in great volumes and in short periods of time, as is the case in large-scale, high-volume plantations.
- Production on intensively cultivated farms is cyclic and regular, but as a monocrop is highly sensitive to climatic and environmental conditions.
- Coffee in Colombia is an exotic crop, and as densities increase it is more susceptible to pests than, in the absence of resistant coffee varieties, are more easily controlled under low plant densities.

Decades of promoting higher physical productivities may also have helped to produce environmental stress, in terms of deforestation, water contamination, loss of the soil fertility, and reduction of biodiversity in certain areas. These negative externalities today may be obstacles for the development of certain differentiated and specialty coffee such as organic, and therefore a consistent policy to develop more environmentally friendly types of coffee will be needed to address them. It should be noted, however, that well-managed coffee plantations are often more environmentally friendly than either coca or livestock.
iv. Postharvest Infrastructure

According to the 1997 Encuesta Nacional de Cafetera, 40 percent of the nation’s 566,230 coffee farms have the necessary infrastructure to process ripened coffee berries; 41 percent dry coffee using direct sunlight, and only 2 percent have drying silos. Sun drying makes use of various facilities such as schoolyards, churchyards, patios, roads, and so forth, not all of them suitable for that purpose. A deficient drying process results in a significant increase of pastillas (low-quality coffee berries). Due to deficient drying infrastructure, and because of the increasing risk of coffee being stolen from farmers’ premises, in some areas of the country wet coffee sales have increased. At present, between 20 and 30 percent of total coffee being purchased is considered inappropriately “wet.”

According to the records of the Almacenes Generales de Depósito de Café S.A. (ALMACAFE), around 8 percent of the total purchase during 1990–2000 had quality problems; in 2001 this figure reached 8.4 percent of total purchased production (522,763 bags), 40 percent of which were rejections due to “off” aromas and flavors picked up due to poor drying and storage, and most of the quality problems have arisen in a deficient drying infrastructure.

Coffee-cherry processing causes very significant amounts of water pollution, yet many farmers do not have adequate access to ecologically friendly methods. Both high-tech and low-tech methods already exist in Colombia’s repertoire but have not reached enough farmers. Today, there are no economic incentives to rationalize water usage because processors do not pay for their contamination and excessive usage during coffee postharvesting. On the other hand, increasing social pressure has turned it into a priority. In the future, water contamination will be an additional cost facing coffee producers once the already sanctioned water contamination tax begins to be enforced.

v. Marketing

The NFCG has generally done a good job of creating stable and reasonably efficient markets at the domestic level. It holds among its responsibilities transferring a fair market price to coffee growers and guaranteeing the purchase of all coffees offered which comply with predetermined and nationally known quality requirements. Transferring a fair price means transferring to the coffee growers as much of the sales price as possible, only deducting from it the costs of marketing. The general average received by growers over the last 10 years has been between 70 and 75 percent. This percentage may very significantly, depending on the exporter and whether intermediaries are used.

Colombia’s publicity campaign is undoubtedly the world’s best known. Indeed its trademark and logos are as widely recognized as many highly valued consumer brands. This is certainly no small feat and merits recognition. Coffee producers have invested approximately US$500 million in Colombian coffee’s promotional strategy since 1959. While no one questions the phenomenal success of Colombia’s publicity campaign, its considerable expense inevitably raises the question of cost–benefit.
Although such analysis would not be easy, despite several studies that conclude it was beneficial, none has ever fully calculated whether it was cost-effective.

Colombia’s brand development and unified marketing are positive byproducts of a centrally controlled coffee industry and set it apart from most other coffee-producing countries. There is concern that it may have lost touch with the market’s direction in recent years when it did not generate new strategic commercialization initiatives to address the erosion of its leadership position in the quality arena. Given its loss of share in major blends to lower-quality competitors the quality arena is probably where it has its best competitive advantage. After heavy investments in its consumer branding that have resulted in unparalleled awareness, it has only recently begun to explore new opportunities for its brand to directly capture value in downstream activities, and this should be further stimulated and encouraged.

For decades, Colombia developed a quality niche as producer and supplier of green beans in world coffee markets. Meanwhile, on the demand side of the market, roasters have shown a remarkable capacity to add value to raw material (green beans). In doing so, these actors have been able to create and develop a number of brands and capture value by targeting segmented and fragmented consumer markets. While Colombian producers have obtained a respectable decade average of a US$ 10 premium over comparable mild coffees, firms in consuming nations have captured large downstream margins. Several firms have captured these margins with the help of Colombian trademarks such as “Juan Valdez” or “100% Colombian Coffee.” Although these were likely win-win relationships, Colombia can also probably leverage these assets for its own greater benefit.

On the local scale, farmer groups are hindered by the breakdown of information flows because these do not reach the majority of coffee producers with necessary knowledge about a range of production and marketing options that they could use to improve quality, seek alternate buyers, manage risk, and so forth.

Another of the marketing options that Colombia’s quality producers could be quicker to take up is Internet sales. This small but growing tool has also facilitated some other forms of direct marketing and has also resulted in a number of highly publicized auctions throughout Latin America. The NFCG also offers excellent websites for consumers and domestic and international clients. Despite early forays into Internet sales auctions it has not elected to aggressively pursue B2B (business-to-business) e-commerce as an option.

g) The Changing Nature of Demand and Adapting to Differentiated Markets

There is great interest in the economic, social, and environmental benefits of differentiated coffees and they have grown dramatically in recent years. In 2002 projected exports of these differentiated coffees from Colombia are expected to increase

approximately 20 percent, according to the NFCG. It should nevertheless be
cautions that the markets for these products are still in the early stages of development,
and therefore are limited. In the mid-term perhaps 15 percent of Colombia's pro-
duction could participate. Most of this would come from the half-million small-
holders who are more likely to engage with these coffees, and since they represent
only about half of Colombia's production, this would therefore represent almost 30
percent of their total production. At current prices this percentage of their produc-
tion (30 percent) would earn more than 14 percent more. On average these Colom-
bian coffees were sold at around US$.90 per pound in 2001. This represents an
approximate 14 percent average increase over the average coffee export price of
US$.79 per pound in 2001 that includes higher value of quality exports such as the
“La Vereda” and Emerald Mountain coffees.

The NFCG has had commercialization projects for specialty coffees since 1995.
Although these efforts began later than in some other producing countries, the
NFCG program has nevertheless already help to register 54 brands and launch 72
production projects of specialty coffees with an annual export potential of 500,000,
60-kilogram bags. Many private exporters also promote these coffees, and the total
mid-term potential is estimated at 1.5 million bags (Micolta 2002) of single estate,
fair trade, organic, and so forth. This is in addition to the current exports of approxi-
mately 2.5 million bags distributed in the “100% Colombian” segment in con-
suming countries.

Full participation can also involve considerable farmer effort to adapt to their
more stringent requirements. Currently, in Colombia there is a distinct shortage of
accurate and up-to-date information for farmers on the requirements of these develop-
ing markets and how to access them. CENICAFE and the extension service have
an important role to verify and potentially adapt these methods and help ensure
widespread dissemination.

Differentiated products and markets demand ever-increasing grades and stan-
dards. There is a shift from standards being neutral market lubricants to their emer-
gence as tools of product differentiation. These are increasingly being driven by
three sets of changes in the global trade regime. (a) a new international regulatory
environment, (b) a new business environment and requirements, and (c) a new con-
sumer environment and demands.

Competing in today's globalized food economy requires the ability to adapt to
these emerging demands. While Colombia's coffee producers may have the agility to
understand and respond, they may not have the necessary information, technical
skills, and market linkages to do so. Associations at the local and regional level often
depend on apex organizations to provide the necessary international flows of infor-
mation, skills, and linkages. This could be one of the benefits provided by NFCG,
although it's bureaucratic and political constraints possibly reduce its capacity to do
so. Nevertheless, these skills and linkages are too important to be exclusively con-
trolled by any one organization, and indeed their very nature precludes any single
channel of information.
It will be vital for the development of not just the coffee subsector, but the entire rural sector, to encourage the development of representative organizations (that is, trade associations, cooperatives, supply chains) that can fulfill these emerging needs and thereby help Colombia to better participate in the differentiated markets that are quickly developing.

III. Policy Recommendations

Because of its organization and experience, Colombia's coffee sector will survive the current crisis by relying on its unique ability to adapt and blaze new trails in the coffee world. A vision of a sustainable coffee sector in Colombia involves an expanded approach to quality, increased focus on emerging environmental issues, greater attention to smallholders, and adding value by improving processes and capturing more of the downstream margins in the supply chain. To do so its institutions will evolve toward more agile and more transparent forms. These institutions are a critical fulcrum in the sector. They will know that the answer is not just about quality or about specialty markets or about productivity or about better promotional campaigns. It is about managing, like a business rather than a bureaucracy, all of their considerable factors of competitiveness and doing so in an equitable manner that benefits everyone in the sector. The following policy recommendations offer alternatives that focus on both improving competitiveness and reducing poverty among coffee growers. As a general caveat, policies should be consistent with the reasonable assumption that world prices will recover only modestly in the near or medium term.

Figure 3 illustrates the set of key policy recommendations for the coffee sector.

a) Smallholders and the Rural Poor

One of the difficulties in establishing policy is its distinct impacts on producers of different sizes. Although it appears that large producers have a higher proportionate output, in many cases smallholders are known to be more viable and productive when measured in terms of a diversified product output. Directing policy and infrastructure investments more toward so-called marginal areas may be justified by growing evidence that the marginal returns to investment there are higher on average than in the more advantaged areas (Altieri and Uphoff 1999), provided that the

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17. Coffee plots over 5 hectares represent 38 percent of total coffee area and contribute 45 percent of total production (Encuesta Nacional Cafetera 1997)
18. CERES (2001) studies show that with Colombia's high labor costs, and especially in a low-price market, smaller production units have lower costs of production and as a consequence can be more profitable per hectare, especially when coffee prices are low
19. Total factor productivity rather than monocrop (coffee) productivity
investments are not too scattered and sporadic (Hazell and Fan 2000). Nevertheless, the needs of larger producers must also be addressed since these producers can be very competitive and provide valuable employment opportunities, especially in rural areas. Medium-size producers appear to be the least competitive.

Integrating smallholder coffee producers so that they can benefit more directly from international trade implies an integrated policy and process of rural development that features enhanced information flow and training to assess these markets, along with the tools (technology, infrastructure, and finance) to access these markets. Farmers are hindered by the breakdown of information flows because information does not reach the majority of coffee producers about a range of production and marketing options that they could use to improve quality, seek alternate buyers, manage risk, and so forth. High unit costs of reaching farmers and the need for them to share risk and benefit from product and financial agglomeration dictates that they must organize.
Their ability to organize effectively into associations and cooperatives is the key factor for most to be able to take advantage of domestic marketing opportunities and global trade benefits. Institutional capacity building is critical for organizations to (a) properly manage their affairs, (b) democratically represent their constituents, and (c) develop commercial skills like negotiating and marketing. Government can partner with a number of institutions (international and domestic) that can deliver this training at the grass-roots level. There are obvious crossover benefits for such strategies that offer benefits beyond just the coffee sector, including rural finance, input purchase consolidation, and marketing.

b) Managing Transition: Options for Diversification

Maintaining subsidies for a long period is not a viable option. Given production costs and opportunities, it appears that small and large producers are deemed to remain most viable, while medium producers—some of them absentee—will be more likely to leave the business. By some estimates, 100,000 farmers could transition out of coffee in the coming years, as profits remain thin. Support or incentives to move to other alternatives will be costly. Ironically, coffee has been one of the most popular diversification options for many years. Now any government diversification plan must look beyond coffee growers to other rural production systems as part of a more integrated strategy.

How much coffee should be phased out will be determined by growers themselves responding to the market’s messages and the government’s incentives. Unprofitable producers or inefficient production areas should not be subsidized. Furthermore, new niches with premium prices do not necessarily imply the phasing out of a part of the current production segments. Each coffee type (depending on quality, origin, organic or not, and so forth) would have its own price, and the most appreciated coffees would get the highest premiums. It has been estimated that in the medium term it is possible to develop from current volumes of a half-million bags to about 1.5 million bags of niche market coffees (single estate, fair trade, organic). Colombia already exports 2.5 million bags of high-quality coffee in the “100% Colombian coffee” segment in world markets.

Options to escape from the bourse-based tyranny of commodity production fall into two main categories: (a) differentiated production, and (b) diversification.

A sharp decrease in annual crops (rice, maize, potatoes, cotton, and beans) and only modest increases in the hectares sown to permanent crops (bananas, palm oil, sugarcane, fruits but not coffee, which declined) are part of a disturbing trend that includes increased imports and the switch to livestock, which is typically character-

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20. NFCG data indicate that in areas lacking cooperatives to purchase smallholder coffee output, producer revenues tend to be significantly lower (see Giovanniucci and others 2002).

21. “Políticas y desempeño del Sector Agropecuario,” Contraloría General de la República
ized by low productivity and high environmental costs. This trend also implies that the present incentive structure fails to allocate resources efficiently. Without appropriate policies, low-labor-intensity farming such as livestock will continue to reduce the opportunities for both farm and nonfarm employment in rural areas.

Much of the expansion or shift noted above has not included smallholders, and occurred primarily on larger landholdings, suggesting difficulties for smallholders to diversify. Favoring extensive, large-scale agriculture "...continues the disturbing trend of the past fifty years where the use of land and labor in Colombia has been driven in highly inefficient directions by a variety of agriculture sector, land and rural financial policies and sector programs...."22 Although many crops that are exclusively associated with food security and smallholder agriculture have remained stable according to FAO data, there has been little diversification into cash crops that could help balance the dependence on coffee.

A diversification program for coffee-growing areas must start by addressing particular farmer objectives defined according to local needs (that is, income diversification, improved food security, promoting planting of other more profitable heirloom coffee varieties, or any combination). It must then help farmers assess these specific issues:

- Potential markets for different possible crops
- Risk
- Barriers to entry (investment costs, infrastructure requirements, market access)
- Necessary skills and resources (information, technical capacity, financing)
- Environmental and economic advantages for production
- Challenges pertaining to commercialization (logistics, quality, quantity).

In the past, many diversification initiatives have faced critical and sometimes insurmountable bottlenecks in these aspects. Farmer-centered research and extension is perhaps even more important for the adoption by small farmers of appropriate sustainable farming methods than the correct macro policies, according to extensive case studies of agroecological farming in different countries (Altieri and Uphoff 1999). One review of diversification initiatives noted that the most successful diversification enterprises were those initiated by the farmers themselves, as opposed to institutional programs. Most institutional efforts faced market and commercialization difficulties. However it is approached, diversification is not easy, especially from a popular nonperishable cash crop like coffee, and past experiences should be studied well. There is already a useful body of knowledge that could be used, including a diversification program financed by the World Bank in 1980 and the NFCG diversification program that lasted until about 1991.

22 Drawing from Heath and Binswanger (1996) Conveyed in personal communication from M McMahon
It is difficult to have the farmer assume all risks involved in the new crops. Incentives should exist for collaborative farmer-oriented research and analysis, technical and marketing assistance, and financing of the setting up of production, but not for production itself.

What can the government do to help?

- **Market Research.** The government can help conduct market research, preferably through specialized organizations, to help identify markets and study supply–demand options for agricultural products in short supply, for both domestic and external markets, through for example, the Corporación Colombiana Internacional (CCI), the Instituto Centroamericano de Administración de Empresas’s new Centro de Inteligencia Sobre Mercados Sostenibles, and Proexport.

- **Technical Assistance.** The government can provide technical assistance by designing appropriate integrated technical packages for products deemed promising (dealing with agronomic, environmental, and quality requirements farmers may face, all in one package). This could be carried out via privatized extension services managed and cofunded by local authorities (the Uganda model), thus ensuring their active participation or through the existing NFCCG extension service.

- **Commercialization and Logistics.** The government can help identify bottlenecks (such as transport costs) and solutions in order to drive investments that develop the necessary channels and appropriate facilities for the efficient commercialization of agricultural products.

- **Credit Support.** The government can provide temporary subsidized credit that might be needed to finance the initial investments necessary for setting up different types of production and some modest scheme to temporarily support individual producers’ income during the unproductive phase, but these should be minimized and not unduly distort the necessary market-oriented rationale for diversifying.

- **Community Organizations.** The government can support producer and trade organizations that could gradually take over the above processes and provide the necessary economies of scale and linkages to markets.

Existing plantations should be integrated into the new diversification scheme but with modest support, such as market research and technical assistance, but not necessarily transitional income support. In general, the scheme should feature (a) demand orientation, (b) voluntary participation, (c) some risks assumed by producers, and (d) free information and technology access to interested producers.

Resource allocation, in turn, should be based on (a) assessment of regional diversification potential, (b) ensuring that those most in need and with greater potential would have greater access to resources, and (c) promoting the local economy and supporting household income.
A form of diversification that recognizes that there is a limit to the income-earning capacity of small plots of land is nonfarm rural enterprise. Many useful services from machine repair to accounting to equipment rental can provide valuable services that support farm communities and make them more productive, while reducing the inherent risk associated with farming.

The present support package (Documento COMPES [Consejo Nacional de Política Económica y Social] and Annex II) which has been negotiated between the NFCCG and the central government has been defined mainly as a coffee support package intended to subsidize price and tree renewal. Because many coffee producers will surely migrate to other agricultural activities due to the crisis, the package could be redesigned to include the diversification program mentioned above.

Diversification systems tend to wane in popularity when coffee prices are high, but this does not mean that they can be disregarded at those times, since they have long-term requirements and cannot be easily started and stopped. This points out the government’s role in maintaining a longer-term perspective and helping stimulate increased diversification despite short-term price fluctuations in one or another of the commodities.

c) Risk Management and Safety Nets

With the elimination of the floor price mechanism offered by the FNC in January 2001, small coffee farmers in Colombia have no access to formal instruments to deal with price risks. There are, however, several informal instruments that farmers can use to deal with risks. They can (a) diversify to include other crops in addition to coffee, (b) diversify their labor by working outside their farm or pursue nonfarm rural enterprise, and (c) adapt their technology (using fewer inputs). Well-crafted policies that support such efforts with technology, knowledge, and direct skills through training in the field can facilitate these options.

In many coffee-growing areas coffee’s dominance means that price risk has a systemic effect on the overall rural economy and that many economic activities slow down. Thus, many people see migration to urban areas or even abroad as a solution. Social protection programs would need to target the vulnerable groups within rural communities that may include not only small, poor farmers, but also landless workers who because of low coffee prices cannot find employment on coffee farms.

To support producers in periods of very low prices it is preferable to rely more on income-transfer payments, such as those used in Mexico and Nicaragua, instead of price support. Income transfers have the advantage of being less distorting in terms of incentives, compared to price support programs. Price support prevents necessary adjustments in production patterns. Price support programs may also prove to be costlier compared to income support, but income support programs may be more difficult to administer because they require information about the individual farmers (plot size, location, and so forth). If prices rise, another option envisions that FNC could be replenished and provide a modified form of price stabilization.
using the markets—a sort of premium farmers pay for insurance—so long as it allows market–price signals to reach the producers.

The FNC, now no longer able to provide stability claims that it provides a fair price and maintains a purchasing guarantee. This is true, although an information system might also provide a reasonable "fair price" assurance at a much lower cost as in Guatemala, and there appears to already be an ample and well-contested market to sell quality Colombian coffee. Of course, the FNC's role would be much harder to replace in remote, less-contested markets where cooperatives and associations would have to intervene. A reasonable investigation or pilot study could test these alternatives.

Private exporters, now accounting for 65 percent of coffee exports, and the NFCG are very familiar with the types of financial instruments to hedge their price exposure. Currently, use of risk-management instruments is primarily limited to their own short-term price exposure—from the moment they buy coffee from farmers to the moment they sell it—and benefits farmers very little. It may be useful to facilitate both the understanding and access of farmers including sound smallholder organizations and associations to risk-management instruments, such as options traded at the New York Board of Trade, which may at times offer an attractive solution to reduce their exposure.

Farmers also need to reduce their price uncertainty when they make short-term investments and receive working capital loans. Because of their relatively small production size in general, coffee farmers need appropriate institutions that would aggregate enough volume of production and hedge it in the international market. Farmer cooperatives and producer associations are among some of the institutional structures that farmers can use to access price-risk-management instruments. It would be valuable to support the Risk Management Department of the NFCG or other agencies such as the International Task Force on Price Risk Management that, in partnership with other international organizations and the private sector, has initiated projects to enable groups of farmers to access price-risk-management instruments.

While debt restructuring in the credit arena will be important in settling old debt, there are certain things to bear in mind. Debt forgiveness and write-offs provide disincentives for prudent risk management, and thus need to be discouraged. New credits can be accompanied by appropriate risk-management instruments, much like the requirement of U.S. bank loans to farmers. The NFCG can also intermediate to help manage risks. The provision of loan guarantees by the public sector could be problematic. Public guarantees are a poor bandage since they might encourage less due diligence by private financial institutions, and they may become a financial burden for the government. Public guarantees without appropriate systems to screen loans and ensure that appropriate risk-management systems are in place probably will not work.

Finally, the farmer's natural resources are often his most valuable assets. It is wholly appropriate for government policy to help minimize some of the risks associated with these resources, especially since watershed management is a public good that is affected by agrarian land uses. It is advisable to reactivate the soil conservation program, which was canceled due to the FNC's financial crisis. Integrated soil
conservation can significantly reduce the need for all externally purchased inputs and therefore reduce the exposure of farmers to financial risk incurred when borrowing or spending cash for synthetic agrochemicals. Coffee soil in Colombia, with its high volcanic ash content, is very fragile and easily erodible. A comprehensive soil conservation program should include policies aimed at stimulating appropriate densities in coffee plantations, reducing the age of trees, stimulating suitable use of shade trees and wind barriers, introducing leguminous soil coverings, planting of associated crops, and avoiding the indiscriminate use of insecticides and fungicides. To preserve and increase the soil's natural microorganisms, policies should encourage the substitution of some synthetic fertilizers with organic material such as compost, coffee pulp, and other green fertilizers.

d) Policies of Subsidy and Support

Currently, two major subsidies affect coffee production: a subsidy for the renovation of coffee plantations and a price subsidy for coffee guaranteeing the farmer a minimum price support for his coffee production. The policy instruments of price and renovation subsidies have the potential to work against coffee growers' initiative to procure more sustainable and realistic productive structures on their farms, that is, diversification initiatives within coffee or out of it that might secure better overall profitability for their farms.

If public subsidies are to be utilized, they should be focused on developing future competitiveness rather than merely supporting the current price. It is the government's responsibility to ensure that the smaller and disadvantaged producers have prioritized access to such public subsidies. However, although direct subsidy may be inappropriate for large producers, their efforts to be more competitive should be supported since they are particularly important for their ability to disseminate technology and provide employment in rural areas.

Price-oriented subsidies such as the one in place tend to isolate producer's decisions from actual market conditions, thus distorting production signals. Its most pernicious aspect is the political difficulty encountered when trying to stop or modify it that can result in making it a quasi-permanent subsidy.

Renovation is a necessary component of a competitive coffee sector and must be part of any long-term strategy. Since coffee tree renovation is a customary production practice that larger producers typically carry out in order to remain profitable, regardless of subsidies, the fact that they are as eligible for the subsidy as every one else makes it a regressive instrument and blunts a desired effect of supporting the poorest small producers who might otherwise be less able to maintain their production capacity.

Alternative policies would not focus on higher production levels but rather on more sustainable forms of production. In some areas this may be more realistic than complete tree stock replacement. CENICAFFE has already conducted some research on organic and environmentally friendly production. Some of these alternatives although less productive in terms of output volume, might be less risky due to fewer
labor and input costs, and therefore potentially more profitable, and environmentally more advantageous.

Research institutions such as CENICAFFÉ provide a broad public good and are worthy of government support but they must align themselves clearly with the majority of farmers (most of whom are small) and directly address their needs. Research organizations must be transparent and responsive to their constituents.

e) Institutional Leadership

Any sustainable policy improvement must revolve around revitalized institutions. These must be agile, accountable, and more transparent. A set of private-sector-led and market-responsive policies are necessary to revitalize the market position of Colombian coffee. Appropriate policies and strategically targeted incentives can help stimulate the necessary shifts toward a more competitive and market-oriented development that integrates smallholders, and also can have significant potential externalities (improved standards, environmentally friendly production practices, and so forth) and crossover effects in other rural subsectors.

It has been noted that the government’s role and participation in setting internal prices and the coffee tax were occasionally influenced by macroeconomic policy goals and political priorities rather than the direct benefit of the coffee growers. Naturally, this raises the question of what is the appropriate level of government intervention. The sector’s social, economic, and cultural importance in rural areas argues for the government’s close participation. However, when compared to other sectors, the current level of direct influence could be considered excessive.

Detractors have accused the leading coffee institutions of being inefficient, feudal fiefdoms and even of being mismanaged. While they may not be perfect, they have nonetheless fulfilled some very valuable roles. Indeed, many analysts would agree that despite its shortcomings the NFCG is the most successful coffee sector institution in the world, and that much of Colombia’s coffee success is due to its implementation of a coordinated and cohesive policy and its marketing investments. Doing away with the Federation altogether—as some have suggested—is an unwise step akin to “throwing out the baby with the bath water.”

The NFCG of the future will undoubtedly be smaller and more agile. It will be operated more like a business. It will be redesigned to facilitate its periodic evaluation and to be more transparent for its stakeholders. It may not conduct much social work despite its well-regarded record in this area. In order to be effective with fewer funds it should focus on its three primary advantages: extension services, research, and international promotion of Colombian coffee. Regardless of the roles that the NFCG evolves toward, it should be evaluated in a number of ways, among which should be its capability to:

- Transmit the maximum economic value to the producer
- Distribute the value equitably
- Improve productivity and reduce transaction costs
- Transparently and legitimately represent its constituents
- Strategically improve the sector’s competitiveness
- Establish credible accountability
- Create and capture downstream value.

The resources for most of these activities will be provided by the tax levied when coffee prices are above an agreed upon level in the world market. Others could be self-financed. The coffee tax ought to be consistent, rather than variable, and sufficient to cover only the necessary and agreed upon public goods while passing on the maximum amount to the farmers. For consistency during lean years, a contingency fund should be established to ensure that operations are not halted as the sector weathers price cycles. This could come from tax and other earnings rather than public funds.

The NFCG’s dual role as regulator and market participant should be carefully considered. Some functions could potentially be transferred to other agents, such as cooperatives, associations, or private firms, wherever appropriate, without sacrificing Colombia’s ability to negotiate in an ever-concentrating market. Whatever functions it retains must be clearly delineated with transparent independent monitoring and evaluation.

The NFCG’s decades of coffee program implementation and its social and infrastructure programs (school building, road building and maintenance, health facilities) have been crucial factors in Colombia’s rural development that are now diminishing. The new resource-constrained realities facing the departmental and local branches of the NFCG mean that they may have to function more independently. In order not to lose their skills and experience, government should consider supporting their transition to nonprofit organization models.

Government and NFCG policy should also more broadly promote localized organizations of producers and other sectoral trade associations. Once these are recognized as legal entities and can be held responsible by their constituents, they can have a positive effect by empowering local communities and trade associations to better handle their own development issues to participate more fully in determining sectoral strategy and policy. Providing support for institutional capacity building is critical in order for these organizations to manage their affairs, democratically represent their constituents, and develop adequate commercial and representational skills. The government should be open to the participation of other sector actors in setting policy and determining strategy. One option is to broaden the representation in the FNC to more accurately represent the sector’s composition.

f) Competitive Foci

i. Adding Value by Improving Processes and Differentiation

Quality-oriented approaches will be critical to future competitiveness and the changing nature of demand. Quality begins in the field with good agronomic prac-
tices and requires well-managed harvest and postharvest processes. It is imperative that private sector, performance-oriented extension services, especially for smallholders, be supported by government, although not be fully subsidized. Colombia has initiated programs over the years that, for example, facilitate information flows via rural telecenters. However, more quality and market-oriented interventions are necessary to gain a market advantage for Colombian coffee, especially in light of evidence that even some simple quality improvements are not being fully adopted by a number of producers (Gerente Comercial 2002).

Supporting necessary extension training and certification of organic or ecofriendly coffee not only provides producers with potential added value (price premiums and currently strong market demand), but also provides significant externalities such as improved environmental management, participation in a system of improving agricultural standards, and community-level organizational support. The government can develop favorable policies for ecofriendly market development, and help increase the availability of “green” production technologies (organic and shade-grown) through credits that can encourage more environmentally beneficial use of water resources or through promotional campaigns and information dissemination based on pilot programs in key growing areas. This will facilitate and leverage the efforts of development agencies and nongovernmental organizations, ranging from United States Agency for International Development to Conservation International, that are keen to play a vital supporting role.

Although the NFCG began supporting production and commercialization projects for specialty and differentiated coffees in recent years, Colombia is still relatively new to this field. Consideration should be given to adapting more of its coffee supply to the growing demand for differentiated coffees in consuming markets. This implies creating conditions and incentives for differentiation so that growers capture the value added in differentiated coffee sales. The minimum export standards are important for Colombia’s reputation and should be maintained, while at the same time more actively expanding the production of differentiated coffees, including appellation coffees (see Annex I), single-estate varieties, and ecofriendly coffees.

Colombia can take a leadership role in a number of quality-oriented approaches with appropriately designed policies that encourage some diversification and risk by:

- Funding farmer-led research for improving the quality of the tree stock and considering the selective promotion of high-value heirloom varieties in appropriate smallholder growing areas.
- Stimulating external support (that is, donors and trade associations like the Specialty Coffee Association of America) for introducing more quality-promotion techniques, such as quality-sampling labs in rural areas, and quality competitions similar to Cup of Excellence events.

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23 There is currently a World Bank-supported initiative (through a grant), with the Ministry of Agriculture.
Furthering the legal and regulatory framework for Geographic Indications of Origin and promoting it.

Encouraging CENICAFE notable excellence and helping it to be more private sector and market oriented. It can sell or exchange (and thereby enhance) its considerable nonproprietary information for the benefit of Colombian coffee growers. It can also provide a useful verification service the Geographic Indications of Origin coffees.

As Colombia’s leading agricultural sector, coffee has the distinct potential to demonstrate the methods and workable options available to farmers in other agricultural subsectors, and in that way facilitate more advanced and remunerative agricultural development and options for diversification. One of the requirements to participate in more developed and more lucrative markets will be improved grades and standards. Indeed, it could be a future liability not to install this general mindset in the productive rural sector since standards for many agricultural products are fast becoming barriers to market entry for those that are not prepared (Giovannucci and Reardon 1999; Giovannucci 2000).

ii. Options to Capture More Value

There is concern that Colombia has not moved quickly and decisively enough to take advantage of its unprecedented earlier quality image, an image that has somewhat faded in market importance over the last decade as other more differentiated products capture the quality consumer. Colombian coffee may have lost the “human face” that it so effectively developed in its early marketing. Colombia has strong advantages for producing and commercializng coffee in the world. Its institutions and its brand reputation are among its most important assets. Colombia has a brand with valuable consumer or downstream value, and while it helps ensure an approximate US$.10 per pound premium, it could capture even more margins downstream. Colombia is in a uniquely strong position to take advantage of options such as selling its own brands in the processed mainstream retail markets in coffee-consuming countries or developing private-label business. Its ideal synergy would be to combine its consumer visibility with partners that have the capability for multichannel distribution. In changing world markets, it must not only address competition from other producers, but also from other actors along the supply chain. One of the suggestions for the NFCG is to conduct an independent evaluation of its brand strategies to optimize its value to its owners.

An analysis of the NFCG’s considerable marketing experience would be a wise first step since entering consumer markets is not easy. However, the advantages of leveraging the enormous investment in this brand appear to outweigh the risks. There are risks of damaging historically good relations with roasters and food multinationals, and the difficulty of positioning Colombian brands, given the oligopsonic power of giant distributors and food brokers.

Caution should be exercised in any consideration of vertically integrating the value chain, because the resulting learning curve could cause considerable ineffi-
ciencies, thereby reducing investment returns and risking reputation if markets are poorly served. If entering the markets were considered, then a partnership with a major participant (a roaster or a food multinational) to finance and execute it would be ideal, using Juan Valdez or the logo as contributing capital.

Apart from mainstream branding strategies, for some of its production Colombia could also follow the example of Jamaica and other countries by investing more in a different sort of branding in its Geographic Indications of Origin, much as Blue Mountain and Antigua have done to develop exclusive competitive advantages. To do so it will have to clarify the definitions of these regions and legally protect them with adequate judicial recourse that can even be supported by trade associations in the United States and EU that are willing to help develop these systems and help monitor and protect their use in the market. The basic promotional investment and legal adaptations could yield potentially high proprietary benefits.

One of the opportunities in such a low price market is the development of domestic markets that have not grown in recent years. Historically, Colombia's price subsidies served as clumsy stimuli that did little to promote long-term consumption growth. With an adequate stimulus the results could be considerable. A similar social profile in Brazil has responded to initiatives in recent years that have dramatically grown its domestic market to become the world's second-largest consumer of coffee. Achieving a similar growth rate in Colombia could add more than 1 million bags of coffee and nearly double its domestic consumption in just a few years.

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24. According to the Federación Nacional de Cafeteros (1999), consumption went to 2.09 kilograms green coffee per capita and a reduction from 2.0 cups per day in 1997 to 1.8 cups per day in 1999.
Annex I
The Nature and Characteristics of Differentiated Coffee Markets

Despite the impressive growth rates of differentiated coffee markets, they are still relatively small and can accommodate only a limited number of new entrants. Thus, their value may be greater for their externalities—that is, benefits to the producer such as improved natural resource management, lower risks, and so forth—than for their price premiums. They can therefore be a valuable part of a competitive strategy, though not necessarily the entire strategy, for a country with considerable production volume like Colombia.

Coffee from areas that are specifically demarcated and acknowledged as having distinct physical characteristics such as microclimate, soil composition, and plant varieties have successfully been marketed with their specific Geographic Indications of Origin (GIO). Development of such programs, sometimes called appellations, creates the mechanisms for permanent structural change built on a new agronomic model, similar to the wine industry. Much like the wine industry, this permits a unique competitive advantage and, if properly marketed, can result in stronger demand and higher prices that may be somewhat more immune to market fluctuations than commodity products. Despite recent setbacks in seeking legal protection for GIO in the United States, this differentiation strategy has been successful for many regions, among the most notable being Jamaican Blue Mountain, Hawaiian Kona, and Guatemala Antigua, the popularity of which have spurred reports of global sales far greater than their actual production volumes. This implies that such initiatives on the part of producing countries will also require investment in monitoring and enforcement.

Specialty coffee, sometimes used interchangeably with "gourmet" coffee, although the former more commonly refers to a larger set of coffees including flavored, espresso-based, sustainable coffees (see below), and cold preparations. Gourmet used to refer strictly to higher-quality coffees sold, often as whole beans, in dedicated coffee stores or cafés. Although this term still suggests a degree of exclusivity, such coffees have actually penetrated most marketing channels and are now available even through mass merchants and supermarkets. Market trends suggest that there is room for such expansion given that there is increasing differentiation, especially in price, and considerable growth in sales and profits. The market expansion for specialty coffees, led by high-visibility brands like Starbucks, has been significant in the U.S. markets and is now spreading back to Europe, where the café concept originated and specialty coffees have long held a considerable market share.

In the United States, where coffee imports account for one quarter of global totals, the specialty coffee industry accounts for approximately 17 percent of the

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total volume, yet its $7.8 billion in sales represents approximately 40 percent of the $18.5 billion U.S. coffee market’s total revenue, and an even greater percentage of its profits. It is the only segment of the coffee industry that has shown consistent and notable growth. According to the International Coffee Organization (ICO) and the Specialty Coffee Association of America (SCAA), most potential specialty coffee markets are far from saturated, and sales continue to expand by 5 to 10 percent per year according to the most conservative estimates.

The sustainable coffees: organic, fair trade, and shade grown, are predominantly produced by small farmers and characterized as paying farmers reasonable prices, providing incentives for organic production and rewarding farmers for practicing good natural resource stewardship. They tend to promote water conservation and protection, energy conservation, recycling, and even community/cooperative development. Until recently their scarce presence in the marketplace caused some confusion about what they each actually represent. Now with both clear definitions (see below) and international certification standards it is incumbent upon the coffee industry and regulatory bodies to help educate consumers and ensure that coffees using these labels are indeed certified by an independent third party. Failure to do so will cost the industry a valuable means of differentiation, and the resulting erosion of consumer confidence will render the terms meaningless and therefore remove a valuable tool from the repertoire of the small coffee producer, who can least afford such a loss.

Organic coffees incorporate management practices to conserve or enhance soil structure, resilience, and fertility by using cultivation practices and only nonsynthetic nutrients and plant protection methods. Organic certification is also required of the processor and roaster in order to be sold as such. Organic coffees have been on the market for several decades but broad appeal and volume sales have only occurred since the late 1980s. In the United States, the average annual growth rates of approximately 12 percent for organic coffee have been strong over the last five years and are expected to continue solid growth, although less strongly. North American consumption (predominantly U.S.) is estimated at approximately 6 million kilograms but growing, with 13 percent of the consumers who are regular drinkers of specialty or gourmet coffee—that is, 8 million people—purchasing organic coffee at least once. The EU consumes even more than the United States, led by Sweden, Germany, the Netherlands, and Denmark. Premiums paid to the producers average US$.33 per kilogram and are often higher, based on quality.

Fair-trade coffee is purchased directly from internationally registered and certified cooperatives of small farmers that are guaranteed a minimum and consistent contract price and access to some credit from the purchaser if necessary. Fair trade encourages community-driven investment in public goods like education, healthcare, and infrastructure. The fair-trade market sets a minimum price, currently US$1.26 for washed arabica and US$1.41 if organic. The price benefit is particularly noticeable during low price markets. Fair-trade arabica farmers averaged superior prices of US$.64 per kilogram in 1999 and US$.95 per kilogram in 2000, based on the differential between average annual market prices (ICO) and fair-trade contract prices. In 2001,
more than 17 million kilograms certified fair-trade coffee was imported from 22 producer countries led by (in volume order) Mexico, Peru, Colombia, Nicaragua, and Guatemala. Nearly 40 percent of this coffee is also certified organic. Approximately 3 million kilograms went to North America and most of the rest to the EU. The Netherlands, Germany, the United Kingdom, and Switzerland are the largest consumers. This category has shown steady but erratic growth with the European markets being more mature and the U.S. growing dramatically in the last three years.

Shade or ecofriendly coffee-production systems maintain and enhance wildlife habitat and biological diversity, particularly through effective management of the forest canopy on the farm and protection or restoration of surrounding natural environments. Globally more than 3 million kilograms of ecofriendly coffee were certified in 2000–01, the bulk of which is in Guatemala and El Salvador. This nascent market has yet to prove itself but has already seen success in select markets, mostly in the North America. Estimates for year 2000 sales of certified shade-grown coffee are approximately a half-million kilograms, although much more was sold uncertified. Premiums paid to producers vary and have ranged from US$.04 per kilogram to US$ 22 per kilogram.

Although there is certainly room for growth in all of these differentiated markets, as competition builds evidence clearly indicates that cup quality will be critical (see Figure A.1.1). Here, Colombia has a distinct advantage due to its historic focus on quality and the mechanisms to foster it.

**Figure A.1.1. Percent Rating Attributes as Important**

![Figure A.1.1. Percent Rating Attributes as Important](chart.png)

Source: Giovannucci (2001). Sustainable Coffee Survey
Annex II
Colombia’s Coffee Subsector Public Supports

As world coffee prices have continued to decrease, the tax take, both in relative and absolute terms, has decreased as well. In part as a result of this, but also due to poor management, most of the National Coffee Fund’s accumulated assets—the bank, financial corporations, and others—were lost.

This meant that there were no resources left for the implementation of coffee policy. As a result, the Colombian government came to the rescue with an aid package, financed from the national budget. For the first time, the government began to pay a direct subsidy to coffee growers. The package of subsidies includes support to the internal coffee price, stimulating the renewals of coffee trees, and refinancing credits. A summary follows.

1. A constant subsidy of COP30,000 per carga. This means that the growers receive a price equivalent to the world price plus that subsidy net of processing and transportation costs. The government announced that it will maintain the subsidy for three years, with the expectation that world prices will recover. The budget to finance the subsidy was COP31,300 million in 2001, and will be COP94,800 million in 2002 and 2003.
2. A subsidy of COP12,000 million in 2001 and COP44,100 million in 2002, to finance a program to renew coffee trees in 140,000 hectares. This program is a follow-up to the one implemented by the NFCG during the last three years, when 210,000 coffee hectares were renewed with its own resources.
3. A subsidy of COP44,000 million during 2002 to finance technical assistance. In the past, programs of this nature were financed with own resources.
4. A refinancing credit program of COP60,000 million.
5. Participation of the NFCG in Plan Colombia. This amounts to COP60,000 million in social and economic investment programs.
6. COP7,500 million to finance joint research projects between CENICAFFE (the research center of the NFCG) and other research centers on the exploitation of the biodiversity resource in coffee-growing regions.
7. Other complementary programs on rural education and housing, the main objective of which is to increase enrollment and generate employment opportunities in coffee-growing zones.

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26. February 2002 exchange rate: US$1 = COP2,300
27. Carga = 125 kilograms. If the international coffee price goes up higher than US$0.80 per pound parchment, the subsidy disappears
References


Clavijo, Sergio, Carlos Felipe Jaramillo, and José Leibovich. 1994. “El negocio cafetero ante el mercado libre ” Ministerio de Hacienda y Crédito Público, Department of National Planning, Tercer Mundo Editores


Giovannucci, Daniele, José Leibovich, Diego Pizano, Santiago Montenegro, Gonzalo Paredes, Hector Arévalo, Juan J. Echavarría, Bryan P. Lewin, and Panayotis


Land Policies

This Chapter was written by Isabel G. Lavadenz and Klaus Deininger.

I. Executive Summary

In Colombia, access to land has historically been a major source of political power and social conflict, and a key determinant of the productivity of the rural (farm and nonfarm) economy. In addition, access to land has had an important role in reducing poverty. This Chapter identifies key issues with regard to (a) the structure of landownership and land use, (b) the extent to which markets operate to reduce initial inequalities in landownership and thus facilitate more productive use of and equal access to this resource, and (c) specific government programs to improve management and land use.

Colombia's agrarian structure is characterized by significant underuse of productive land, a long-term trend toward re-concentration of land, and serious environmental hazard as a consequence of the overuse of land for cattle ranching. Jointly, these factors have historically led to out-migration to the frontier for cultivation of fragile lands, resulting in serious environmental hazard and social problems.

With macrostabilization and the elimination of protection for large farm crops, some of the factors that historically drove land concentration have disappeared. Survey evidence suggests this has reduced the distortions that have historically characterized land markets in Colombia. At the same time, land prices are highly variable across regions and there is evidence that, at least in some regions, land prices are hugely overvalued (in terms of land prices as a multiple of mean profits per hectare). While part of this is due to the inflow of drug money, it is also encouraged by the failure of most local governments to make use of the existing scope for land taxation.

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1 This Chapter was prepared with the collaboration of Diana Gruszynski and Mara Gonzales
There are three major government programs in the sector: titling, land reform, and the establishment of Zonas de Reserva Campesina at the frontier.

**Titling Inside the Frontier.** Even though the large majority of lands are titled, the systematic approach that is being implemented will allow coverage to extend to the poor, and will create information that can be used as the basis for collection of local taxes, for conflict resolution, and for land use planning at the local level. This might provide major benefits, especially if linkages to these are adequately strengthened.

**Land Reform.** The government's land reform program has historically consumed a large share of rural investment without providing commensurate benefits. Recent cuts in the land reform budget have come almost exclusively at the cost of investment, implying that, in 2000, about 70 percent of the budget was spent on administration. This is clearly an untenable situation, and an overhaul of the Instituto Nacional de Colonización y Reforma Agraria (INCOA) and legal changes to allow for a cheaper, decentralized, and more demand-driven program with private sector participation, are indispensable.

**Zonas de Reserva Campesina.** While the idea of trying to stop the continuing expansion of the frontier by complementing interventions in the country's interior with programs at the frontier is sound, implementation has not lived up to expectations in a number of respects. Before trying to scale up, a major reorientation of the program is needed.

### II. Background and Challenges

Like other Latin American countries, Colombia has a turbulent and often violent history of land relations. In addition to its importance as an economic asset and factor of production, land has an important place in the culture of indigenous peoples. The importance of conquering "territory" and land as a symbol of power and dominance is central not only to the armed conflict among guerrillas, paramilitaries, and the Colombian army, but is also likely to affect the functioning of land markets.

For reasons that can be traced to the distribution of land in large chunks during colonial times, Colombia, like most other Latin American countries, has a highly concentrated landownership distribution. The Gini Coefficient for the ownership distribution of land is 0.86 (Machado 1999). The Gini Coefficient is a relative index of inequality ranging between zero, when there is a perfect equal distribution of land, and 1, for perfect inequality. This value is comparable to other Latin American countries such as Brazil (0.85) and Peru (0.91), but is in sharp contrast to Asian countries that have grown much faster during the past decades, such as Japan (0.38), Korea

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2. All the data are from Deininger and Squire (1998)
(0.35), Taiwan (0.45), and Thailand (0.45). Recent empirical evidence that clearly links high levels of inequality in the land distribution to lower subsequent growth suggests that this may be of concern for growth, sustainability of natural resource management, the scope for administrative decentralization, and broader equity goals.

a) The Extent of Inequality in Land Access and Reconcentration and Underlying Factors

It is well known that the way in which property rights are assigned has implications for efficiency and economic growth in rural areas in a number of respects. First, the land distribution will affect productive efficiency since family-operated farms are generally more efficient than wage-labor operated or collective-production structures. Second, secure land tenure is essential to provide investment incentives, both at the household and the economywide level. Lack of secure ownership will undermine household agricultural investment incentives, but also, through (foreign and domestic) investment in related rural industries and nonagricultural ventures, the rate of growth in the broader rural economy. Finally, the ability to use land as collateral for accessing credit can have far-reaching implications not only for a household’s ability to obtain credit and make indivisible investments, but also, in broader terms, for the emergence and functioning of rural credit and other factor markets. Taken together, the impact of land-related restrictions on economic growth can be very big.  

Exploring how landownership patterns in Colombia have evolved over time, we find that during 1984–97 there was a clear tendency of increasing concentration of landownership. As illustrated in Table 1, this period was characterized by a marked concentration of land in the hands of large farms, largely at the cost of medium-sized farms. While the number of “small” farm units (comprising less than two Unidad Agrícola Familiaris [UAFs]) increased slightly, from 89.9 percent to 91.1 percent of all farms, the share of area cultivated by these shows a slight decrease, from 23.1 percent in 1984 to 21.4 percent in 1997. A more significant reduction in area, from 30.5 percent to 24.8 percent with almost constant share in the farm units, is observed for medium-sized farms. This implies that large farms, even though their number slightly decreased, increased their share of area from 46.3 percent to 53.8 percent over the period. The lower panel of Table 1 illustrates that conclusions are even more pronounced if physical area is taken as the basis for the assessment.

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3 A recent study estimates that, in the case of India, land market distortions reduce economic growth by close to 1.3 percentage points a year (McKinsey 2001; http://www.mckinsey.com/knowledge/mgi/reports/india.asp).

4 The UAF is the area of land which, for given agroecological conditions, can generate income for a family. Because the UAF is defined at the level of municipalities and natural regions within these, it provides a better way of accounting for the potentially vast differences in land quality that are difficult to integrate into the analysis if only physical farm size is considered.
Table 1. Structure of Landownership and Use in Colombia, 1984 and 1997

<table>
<thead>
<tr>
<th>Area</th>
<th>By Productive Capacity</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>Small (0–2 UAF)</td>
<td>23.15</td>
<td>21.40</td>
</tr>
<tr>
<td>Medium (2–10 UAF)</td>
<td>30.50</td>
<td>24.80</td>
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<tr>
<td>Large (&gt; 10 UAF)</td>
<td>46.35</td>
<td>53.80</td>
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</table>

<table>
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<tr>
<th>Area</th>
<th>By Physical Extension</th>
<th>Units</th>
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<tbody>
<tr>
<td>&lt; 100 hectares</td>
<td>40.00</td>
<td>34.50</td>
</tr>
<tr>
<td>100–500 hectares</td>
<td>27.50</td>
<td>20.50</td>
</tr>
<tr>
<td>&gt; 500 hectares</td>
<td>32.50</td>
<td>45.00</td>
</tr>
</tbody>
</table>

Sources: Top panel from Machado (1999), bottom panel from Mondragon (1999)

Traditionally, this phenomenon is attributed to three factors:

MACROECONOMIC POLICIES. Until the apertura (the economic and trade liberalization) of the early 1990s, large-farm agriculture was heavily protected, both indirectly through credit subsidies and directly through price support for crops that were grown almost exclusively by large farmers. The macroeconomic reforms have eliminated this factor (Jaramillo 1999), something which, in the absence of other factors possibly working in the opposite direction, should have led to better functioning of land markets in rural areas and possibly deconcentration of land holdings.

MONEY LAUNDERING BY DRUG LORDS. Colombia has a long history of speculative investment by drug lords who acquire land for nonagricultural purposes as a means to launder money. This is a significant factor that drives up land prices and is likely to underlie the heavy bias of land use in favor of cattle (ganaderización). Even though acquisition of land using drug money is illegal, proving this in any specific case is difficult, and a number of farms are caught in legal proceedings.

VIOLENCE. It is well known that in some of Colombia’s rural areas, the presence of guerrilla forces and physical violence prevents landowners from accessing and/or optimally using their plots. Both the magnitude of this phenomenon and the implications are difficult to quantify. On one hand, one would expect that peasants would be less subject to harassment by the guerrilla than large landowners. On the other hand, if establishment of paramilitary bands by large landlords provides economies of scale in protection, this may well be associated with an increase in average farm size.

The Comisión para los Derechos Humanos de Colombia (CODHES) reports that between 1985 and 2001, 2 to 3 million people were involuntarily displaced to other
regions within the country or abroad. At least 40 percent of the displaced population comes from rural areas, consisting mainly of small and medium-size farmers and peasant producers with less than 20 hectares, and about 20 percent are indigenous or of Afro-Colombian descent. Displaced people are usually expelled from their lands by means of threats and fear, which obviously leads to either "forced" sales or simple abandonment of their parcels. In this way, thousands of small farmers, colonists, and campesino communities are forced to leave their socio-productive space—land—to migrate to either more forested lands, accelerating a process of clearing and encroachment, or to urban areas, where they settle in marginal and hazardous areas.

This is likely to give rise to a vicious circle of violence—displacement—deforestation that is also linked to the extensive use of land for livestock. While further study would be needed, it is often the displaced population that is then forced to clear forested land and occupy land with cattle that has low maintenance.

b) The Consequence of Colombia’s Skewed Land Distribution: Inappropriate Use of Natural Resources

In view of the pressure on natural resources in rural areas of many developing countries, institutional mechanisms and incentives to ensure the maintenance of what is often a fragile ecological balance are of increasing relevance to maintain the productive capacity of rural areas, to provide nonmarket services (for example, regulation of hydrological flows), and to preserve biodiversity and other global public goods. In Colombia, a particularly important challenge is to prevent further uncontrolled expansion of the frontier, which is associated with huge losses in terms of biodiversity, and instead make better use of the land resources within the frontier.

This challenge is particularly important in view of the severe and increasing underuse of the country’s agricultural potential deriving at least in part from the unequal distribution of landownership. A 1985 assessment of the land use potential by the Instituto Geográfico Augustin Codazzi (IGAC) reveals that, of the total land area of 114 million hectares, about 12.6 percent are suitable for agriculture, 16.8 percent for pasture, and the remainder for forest and nonagricultural uses (Table 2). Comparing this to actual land use at about the same time indicates heavy underuse of the agricultural potential and heavy overuse of livestock—for example only 4.6 percent of the land suitable for agricultural crops was indeed used for this purpose. Interestingly, the share of underuse of valuable agricultural land further decreased, to 3.9 percent in 1999. Between 1987 and 1999, the land used for agricultural purposes decreased from 4.6 million hectares to 3.9 million hectares, implying that now less than one third of the area suitable for agriculture is actually used for this purpose. This is not surprising in view of the increase in the incidence of violence during this period.

The underuse of productive resources is combined with increasing ganaderización and overuse of pasture resources. While only pasture increased by about 1 million hectares, from 40.1 million hectares to 41.2 million hectares, misallocation
Table 2. Actual and Potential Land Use in Colombia, 1985 and 1999

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<tr>
<td></td>
<td>Million Hectares</td>
<td>Million Hectares</td>
<td>Of Potential</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
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<tr>
<td>Agrcrops</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(annual or perm)</td>
<td>14.0</td>
<td>12.6</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.64</td>
</tr>
<tr>
<td>Pasture</td>
<td>19.2</td>
<td>16.8</td>
<td>40.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>35.1</td>
</tr>
<tr>
<td>Forest</td>
<td>78.3</td>
<td>68.6</td>
<td>58.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>51.6</td>
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<tr>
<td>Nonagricultural</td>
<td>8.5</td>
<td></td>
<td>8.5</td>
</tr>
<tr>
<td>and urban</td>
<td></td>
<td></td>
<td>7.44</td>
</tr>
<tr>
<td>water</td>
<td>2.3</td>
<td>2.01</td>
<td>1.4</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1.23</td>
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<td></td>
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<td>60.9</td>
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<td></td>
<td></td>
<td>3.2</td>
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<td></td>
<td></td>
<td></td>
<td>2.8</td>
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<td></td>
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<td>139</td>
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<td>Total</td>
<td>114.2</td>
<td>100</td>
<td>114.2</td>
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of resources deprives the rural economy of its growth potential and precludes Colombia from realizing its comparative advantage in labor-intensive fruits and other high-value crops. This deprives the rural economy of income that could be used to invest in nonagricultural enterprises, thereby setting off a vicious cycle of nonfarm growth.

This unchecked expansion of cattle creates environmental hazards. Inability to gain access to land (either through rental or through sales markets) in the well-watered valleys drives the poor into marginal areas where they cause environmental destruction (Heath andBinswanger 1996), despite the fact that most of the more fertile land is used for marginal cattle grazing. Of Colombia's 1,028 municipalities, 39 percent report that between 35 percent and 70 percent of the area is affected by environmental problems, while 7 percent report that more than 70 percent of their area is affected by environmental problems.

\[c)\] Landownership Patterns and Administrative Decentralization

Unequal access to land has been one of the root causes of violence and conflict throughout history. The way in which displaced people can gain access to land, restitution claims are handled, and conflicts over land are resolved will have an immediate impact on social stability. Taxation of land and property provides one of the most important sources of local government revenue, implying that well-defined property rights can contribute to providing the basis for decentralization and fiscal responsibility at the local government level.

In Colombia, decentralization provides an opportunity to rationalize land use. The country has made significant progress in attempts to implement a program of decentralization that puts greater emphasis on the provision of local public goods by municipalities. In addition to providing for democratic election of the local leader-
ship, this includes the scope for raising local taxes and the need to elaborate and
develop municipal land use and development plans. These elements can contribute
significantly to reducing the traditional relationship between landownership and
power at the local government level.

Under the decentralization program, municipalities are required to elaborate
Planes de Ordenamiento Territorial (POTs) that would provide an assessment of the
ecological and economic potential of certain areas and the scope for integrating
them into municipal development. However, progress with implementation and, in
particular the quality of the resulting plans, is quite variable (Gruzczynski and
Jaramillo 2002) While part of this is linked to incentive structures (that is, no or
limited rewards for elaborating good plans), there is also an issue of technical capac-
ity. Providing assistance for the elaboration of such plans could help improve the
quality of local administration, thereby addressing problems at the level where the
consequences of failing to do so are most immediately felt.

Scope for land taxation is not realized. One of the critical elements of decentral-
ization is the scope for establishing a direct link between collection of revenue and
spending decisions. The land tax (impuesto predial) is a major component of the own
revenue that can be assessed by local governments, contributing between 40 percent
and 60 percent to own revenue (Bernal 1999). At the same time, there are wide dif-
ferences in the amount of own revenue collected by municipalities, which varies
from 43 percent of current revenues for advanced municipalities to only to 3 per-
cent for the most backward ones. This implies that the most backward municipali-
ties remain almost completely dependent on transfers, which can distort incentives
and lead to corruption (Bernal and others 1999).

There are a number of options to increase reliance on land tax revenue. The three
main reasons for low collection of revenue from land taxes have been identified as
(a) limited coverage of the cadastre, (b) undervaluation of land,5 and (c) limited
incentives and administrative infrastructure for tax collection. The scope for gener-
ating revenue from land taxes in rural municipalities is limited so that even full col-
lection of the land tax will not be sufficient to establish horizontal equity. Nonethe-
less, proposals to strengthen collection incentives through, for example, schemes
whereby central grants will be allocated at least partly in relation to own revenue
efforts (Bernal and others 1999), could help to strengthen these incentives and
should thus be explored more seriously.

4) Land Access and Landownership as Key Determinants of Household Welfare

Secure rights to land and the ability to access this resource are crucial for the poor
as a factor of production and as a source of livelihood. Access to land that can be

5 Bernal and others (1999) show that the differences between cadastral and commercial land
values are up to 500 percent and that in general this difference is higher in less-developed
municipalities
used for home production provides a safety net to ensure food security and can provide nutritional quality, as indicated, for example, by much higher human development indicators in countries with equal land distribution than in societies where landlessness is widespread. Also, in many developing countries, land is still a main asset owned by the population, and landownership can provide a critical means for poor households to make labor-intensive investments. Policies affecting the distribution of property rights will thus have a far-reaching impact on household welfare.

If land is an important part of a household’s asset portfolio, one would expect to see that ownership of and/or access to land would affect a household’s welfare and survival strategies. Indeed, a recent study of nonfarm employment (Deminger and Olinto 2001) confirms not only the importance of nonfarm activities as a complementary source of income and employment in rural areas, but also provides evidence to support the hypothesis that, in view of the relatively unequal distribution of assets and land, off-farm employment in Colombia falls into two quite distinct categories. A significant share of poor households engage in a combination of wage labor in jobs with low entry requirements plus self-employment in "marginal" on-farm or informal sector activities, neither of which provide the returns required to sustain significant investment and offer prospects for longer-term accumulation. At the same time, nonfarm employment offers increased opportunities for enhanced specialization, which increases the welfare and capacity to invest of households that are able to overcome the associated entry barriers, thereby providing the basis for longer-term development of the rural sector.

This implies that, in addition to creating the preconditions for vigorous growth of the nonfarm sector, government can help to maximize the private and social benefits from such growth through three steps by (a) improving the functioning of land, insurance, and credit markets; (b) investing in human capital; and (c) taking steps to help improve the asset endowments of the poor. By enabling households to specialize and make full use of the opportunities inherent in the development of a nonfarm sector, individual and social welfare will increase. The Asian example is one where there is an environment with relatively egalitarian distribution of income, well-functioning factor markets, and a strong emphasis on educational expansion, and rural nonfarm employment has led to a spurt of broad-based development and rapid income increases for all rural inhabitants (Hayami 1998). This suggests that such a strategy could provide large benefits not only to rural dwellers but to the economy as a whole.

III. Main Issues

To assess the more recent performance of land markets and the structural characteristics underlying such performance, we use data from a survey of about 1,000 rural households that was undertaken by the Departamento Nacional de Planeación (DNP) in collaboration with the Instituto Interamericano de Cooperación Agrícola and the World Bank in 1999. The purpose of the survey, which was limited to cultivated
areas, was to examine factors affecting technical efficiency of different farm sizes, the functioning of rural factor markets, and sources of income and employment of the rural population. It contains comprehensive information on labor use, general household characteristics, asset endowments, migration, and access to government services, which can provide a better understanding of the rural nonfarm economy.

In interpreting these figures, it is important to note that they refer to existing production units only, and that there was considerable attrition in the sense that some units of production had been abandoned or, for security and other reasons, could not be included in the survey.

a) Security of Tenure and Mechanisms of Land Access

Coverage with Title Focused on Large Farmers. Table 3 reveals that, for the whole of the country, 88 percent of area but only 65 percent of plots have title to their property. This implies that, as one would expect, it is large producers that have higher levels of tenure security and that benefit from the provision of such services for free or at nominal costs. Lack of title thus affects mainly small producers and, provided that title has a positive impact, completion of coverage could have a positive impact on equity.

INCORA Has an Important Role in Providing Land Access. Table 4 shows the main mechanisms of land access for producers who started out in different periods (1979–88, 1989–94, and 1995–99). Note that land sales markets are of overriding importance; inheritance has, during the period under consideration, been a relatively minor avenue for gaining access to land, and INCORA has, especially during 1995–99, provided access to land for about 20 percent of the farming population, illustrating the broad importance of land reform (which will be discussed in more detail below). In addition to highlighting that government intervention in land markets has an important role, the data also point toward a considerable rate of desertion among land reform beneficiaries that would warrant closer examination of the long-term impact of this policy measure. Since the number of households that gained access to land via land reform has been relatively constant over the last 20 years, the significant drop in those who can still be found cultivating in the survey would imply that there has been a lot of attrition, and that the long-term impact of land reform on attaining the goal of leading to a sustainable improvement in house-

---

6 Given the concentration on cultivated areas, the survey cannot provide information on the extent to which underuse of land has increased

7 The sample was stratified into 11 agroecological zones. In each of the zones, 10 municipalities, and within these municipalities 10 households, were randomly selected. All households were surveyed twice, once in 1997 and again in 1999. Due to attrition and the inability to visit a number of localities because of violence, the sample in the second round was reduced from 1,075 to 808
Table 3. Means of Land Access, Colombia

<table>
<thead>
<tr>
<th>Region</th>
<th>Plots With Title (percent)</th>
<th>Plots W/O Title (percent)</th>
<th>Plots Rented (percent)</th>
<th>Area With Title (percent)</th>
<th>Area W/O Title (percent)</th>
<th>Area Rented (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valle del Sinu and San Jorge</td>
<td>44.1</td>
<td>25.7</td>
<td>30.2</td>
<td>90.9</td>
<td>6.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Parque Baja del Río</td>
<td>63.5</td>
<td>5.2</td>
<td>31.3</td>
<td>88.7</td>
<td>1.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Magdalena</td>
<td>72.1</td>
<td>24.5</td>
<td>3.4</td>
<td>94.7</td>
<td>5.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Parque Media del Magdalena</td>
<td>71.8</td>
<td>18.3</td>
<td>9.9</td>
<td>95.5</td>
<td>2.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Parque Alta del Magdalena</td>
<td>54.9</td>
<td>20.0</td>
<td>25.1</td>
<td>94.4</td>
<td>2.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Vertientes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nororientales</td>
<td>53.3</td>
<td>14.8</td>
<td>31.9</td>
<td>93.5</td>
<td>0.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Altiplanos</td>
<td>73.0</td>
<td>12.1</td>
<td>14.9</td>
<td>96.6</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Vertiente Central</td>
<td>77.5</td>
<td>16.5</td>
<td>5.0</td>
<td>98.2</td>
<td>1.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Vertiente Sur</td>
<td>59.1</td>
<td>24.7</td>
<td>16.3</td>
<td>29.5</td>
<td>2.8</td>
<td>67.7</td>
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<tr>
<td>Vertiente</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noroccidental</td>
<td>74.3</td>
<td>15.7</td>
<td>10.0</td>
<td>91.1</td>
<td>8.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Piedemonte Llanero</td>
<td>80.8</td>
<td>9.4</td>
<td>9.9</td>
<td>94.0</td>
<td>4.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>65.2</td>
<td>16.8</td>
<td>18.0</td>
<td>88.3</td>
<td>3.9</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Source: Own computations from 1999 Segunda Encuesta de Calidad de Vida y Eficiencia

Hold welfare has not always been met. Descriptive evidence also suggests that those who stay are not, in the long term, significantly more productive than average.

Rental Markets Active in Terms of Participants but Not Area. The survey reveals significant variation in rental market activity across regions with less than 5 percent of producers participating in region 3 compared to more than 30 percent in region 6. The share of producers participating in rental markets is almost 15 percent. Even though this is much lower than the rates found in most developing countries where more than two thirds of producers may be participating in rental markets, it suggests that the impact of earlier legislation that had banned rental may no longer be a significant constraint. While descriptive statistics indicate that the mean area of land owned by households renting is 5 hectares, the median area rented is, at 2 hectares, still quite low, especially if compared to the mean area of 28 hectares owned by those who do not participate in rental markets. This suggests that land

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8. Because it was impossible to include households that had rented out all of their land in the survey, the share of producers who are renting out (or who have sold) is included here only for comparison purposes. In interpreting it, one has to be aware of the fact that we are dealing with a truncated sample.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Valle del Sinu and</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>San Jorge</td>
<td>21.9</td>
<td>1.6</td>
<td>59.3</td>
<td>2.5</td>
<td>34.3</td>
<td>40.3</td>
<td>75.6</td>
<td>-</td>
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<tr>
<td>Parte Baja del Rio</td>
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<td></td>
</tr>
<tr>
<td>Magdalena</td>
<td>76.4</td>
<td>81.7</td>
<td>90.1</td>
<td>23.6</td>
<td>0.5</td>
<td>6.8</td>
<td>17.8</td>
<td>3.0</td>
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<tr>
<td>Valle del Cesar and Ranchería</td>
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<td></td>
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</tr>
<tr>
<td>Parte Media del Magdalena</td>
<td>75.4</td>
<td>43.2</td>
<td>68.7</td>
<td>12.8</td>
<td>24.3</td>
<td>28.1</td>
<td>11.7</td>
<td>32.5</td>
</tr>
<tr>
<td>Parte Alta del Magdalena</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertientes Nororientales</td>
<td>93.2</td>
<td>71.5</td>
<td>70.9</td>
<td>6.7</td>
<td>18.5</td>
<td>29.1</td>
<td>-</td>
<td>10.0</td>
</tr>
<tr>
<td>Altplanos</td>
<td>60.8</td>
<td>15.1</td>
<td>92.7</td>
<td>38.6</td>
<td>43.7</td>
<td>2.4</td>
<td>-</td>
<td>39.9</td>
</tr>
<tr>
<td>Vertiente Central</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertiente Sur</td>
<td>93.9</td>
<td>51.8</td>
<td>57.1</td>
<td>1.8</td>
<td>7.3</td>
<td>41.2</td>
<td>1.6</td>
<td>36.6</td>
</tr>
<tr>
<td>Vertiente Noroccidental</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Predemonte Llanero</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71.3</td>
<td>80.9</td>
<td>78.3</td>
<td>7.6</td>
<td>9.4</td>
<td>19.4</td>
<td>20.5</td>
<td>7.2</td>
</tr>
</tbody>
</table>

*Source: Own computations from 1999 Segunda Encuesta de Calidad de Vida y Eficiencia*
rental markets in Colombia do not allow households to establish an independent farming operation. Although we will explore factors underlying the operation of rental markets in Colombia in more detail below, this suggests that rental markets are unlikely to provide a means of land access for the landless and/or a path that would allow them to escape poverty.

**Land Sales Market Activity—Intermediate but Limited Cross-Stratum Sales.** About 10 percent of producers report having bought land during the previous five years, pointing to an intermediate level of activity in the land sales market, with pronounced regional differences. Almost 80 percent of the plots transacted were acquired from small producers, suggesting that the extent to which land markets at this point contribute to the breakup of larger holdings is limited, and that sales may be affected mainly by small producers leaving agriculture (Table 5).

**Rental Markets Are Not a Pathway Out of Poverty.** To explore the factors increasing a household's propensity to participate in land rental and sales markets, respectively, probit regressions of market participation were run. Results, reported in Table 6, lead to two conclusions. First, land sales and land rental markets distribute land to those with lower initial land endowments, suggesting a somewhat equalizing impact.

### Table 5. Producers' Rental and Sales Market Participation in Colombia, by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Renting in (percent)</th>
<th>Renting out (percent)</th>
<th>Bought Last 5 Years (percent)</th>
<th>Sold Last 5 Years (percent)</th>
<th>Median Area Rented</th>
<th>Number of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valle del Sinu and San Jorge</td>
<td>20.3</td>
<td>1.7</td>
<td>2.5</td>
<td>2.5</td>
<td>1.0</td>
<td>24</td>
</tr>
<tr>
<td>Parte Baja del Río Magdalena</td>
<td>25.5</td>
<td>7.4</td>
<td>10.6</td>
<td>4.3</td>
<td>1.3</td>
<td>24</td>
</tr>
<tr>
<td>Valle del Cesar and Ranchería</td>
<td>4.9</td>
<td>1.6</td>
<td>18.0</td>
<td>3.3</td>
<td>25.0</td>
<td>3</td>
</tr>
<tr>
<td>Parte Media del Magdalena</td>
<td>8.4</td>
<td>2.1</td>
<td>15.8</td>
<td>10.5</td>
<td>1.9</td>
<td>8</td>
</tr>
<tr>
<td>Parte Alta del Magdalena</td>
<td>14.1</td>
<td>4.0</td>
<td>4.0</td>
<td>3.0</td>
<td>4.3</td>
<td>14</td>
</tr>
<tr>
<td>Vertientes Nororientales</td>
<td>30.3</td>
<td>5.6</td>
<td>9.0</td>
<td>3.4</td>
<td>1.0</td>
<td>27</td>
</tr>
<tr>
<td>Altiplanos</td>
<td>10.3</td>
<td>5.7</td>
<td>4.6</td>
<td>6.9</td>
<td>2.4</td>
<td>9</td>
</tr>
<tr>
<td>Vertientes Central</td>
<td>7.4</td>
<td>9.5</td>
<td>12.6</td>
<td>6.3</td>
<td>4.5</td>
<td>7</td>
</tr>
<tr>
<td>Vertientes Sur</td>
<td>15.3</td>
<td>0.7</td>
<td>8.0</td>
<td>4.7</td>
<td>3.0</td>
<td>23</td>
</tr>
<tr>
<td>Vertientes Noroccidental</td>
<td>13.5</td>
<td>1.9</td>
<td>25.0</td>
<td>11.5</td>
<td>0.3</td>
<td>7</td>
</tr>
<tr>
<td>Piedemonte Llanero</td>
<td>7.9</td>
<td>5.0</td>
<td>17.8</td>
<td>8.9</td>
<td>10.0</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.6</strong></td>
<td><strong>4.0</strong></td>
<td><strong>10.3</strong></td>
<td><strong>5.7</strong></td>
<td><strong>2.0</strong></td>
<td><strong>157</strong></td>
</tr>
</tbody>
</table>

*Source: Own computations from 1999 Segunda Encuesta de Calidad de Vida y Eficiencia*
Table 6. Probit Regression for Land Rental and Sales Market Participation

<table>
<thead>
<tr>
<th></th>
<th>Land Rental Market</th>
<th>Land Sales Market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Renting-In</td>
<td>Renting-Out</td>
</tr>
<tr>
<td>Number of household members</td>
<td>0.044**</td>
<td>0.007</td>
</tr>
<tr>
<td>(2.14)</td>
<td>(0.24)</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Head's years of education</td>
<td>-0.020</td>
<td>-0.006</td>
</tr>
<tr>
<td>(0.94)</td>
<td>(0.30)</td>
<td>(1.62)</td>
</tr>
<tr>
<td>Value of nonagr. assets ($1,000)</td>
<td>0.075**</td>
<td>-0.083**</td>
</tr>
<tr>
<td>(2.19)</td>
<td>(2.14)</td>
<td>(2.31)</td>
</tr>
<tr>
<td>Value of agric. machinery ($1,000)</td>
<td>0.048**</td>
<td>0.015</td>
</tr>
<tr>
<td>(2.21)</td>
<td>(1.33)</td>
<td>(0.70)</td>
</tr>
<tr>
<td>Owned land (hectares)</td>
<td>-0.016**</td>
<td>0.001</td>
</tr>
<tr>
<td>(2.31)</td>
<td>(0.88)</td>
<td>(3.10)</td>
</tr>
<tr>
<td>OWNED land in 1994 (hectares)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.02)</td>
<td>(1.10)</td>
<td>(2.32)</td>
</tr>
<tr>
<td>Share of others in Primary Sampling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit w/formal credit</td>
<td>0.001</td>
<td>0.044</td>
</tr>
<tr>
<td>(0.02)</td>
<td>(1.10)</td>
<td>(2.32)</td>
</tr>
<tr>
<td>Share of others in Primary Sampling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit w/informal credit</td>
<td>0.001</td>
<td>-0.025</td>
</tr>
<tr>
<td>(0.06)</td>
<td>(0.79)</td>
<td>(6.34)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.961***</td>
<td>-2.209***</td>
</tr>
<tr>
<td>(5.11)</td>
<td>(6.37)</td>
<td>(6.34)</td>
</tr>
</tbody>
</table>

Observations: 1045 1013 1045 1045

Pseudo R

Log likelihood

* Significant at 10 percent  
** Significant at 5 percent  
*** Significant at 1 percent  
Note: Robust t-statistics in parentheses

In the case of land rental markets, one observes, in addition, a tendency to increase the operational land endowment of those with more family labor. Second, availability of nonagricultural assets is a key determinant for land sales and land rental market participation. Owning US$1,000 more in terms of nonagricultural assets increases the probability of participating in rental markets by 7.5 percent, almost equivalent to the addition of two household members or land endowment that is lower by 5 hectares. We also note that neither availability of formal nor informal credit at the local level had an impact on a household's propensity to participate in land markets, suggesting that activation of financial markets on its own will not lead to better performance of the land rental market. This conclusion is supported by the fact that on the renting out side of the equation, we find that it is poorer households that are renting out.

**Sales Markets Do Not Seem To Be Distorted.** The negative sign of the coefficient on owned land in the buying and the positive one in the selling equation sug-
suggests that, at least for our sample, the trend toward reclassification of land has stopped. This is in line with the notion that the *apertura* of the early 1990s has, by eliminating the economic incentives for land speculation, improved the way in which land sales markets function. At the same time, the negative effect on access to credit and positive impact on ownership of non-agricultural assets suggests that such purchases are undertaken mainly by new entrants in areas where credit markets are imperfect.

Of course, the argument that markets by themselves cannot be relied upon to provide poor people with land has been the justification for government involvement in land reform. Before exploring the effectiveness of such policies in more detail, we describe policies aimed at titling land.

**b) Land Titling**

*Titling Programs Inside the Frontier Affected by Budget Cuts.* The problem of informality has been addressed by various programs which have offered considerable methodological and institutional advances in terms of systematic titling, inclusion of land in the registry, and lowering of costs (by about 30 percent). However, consecutive budget cuts have led to a reduction of scope for systematic coverage from 250 to 4 municipalities, mainly at the frontier rather than in the interior of the country. Evidence from one of these points toward lack of coordination with other authorities (including failure to register the titles and integrate them into the *munícipios* tax base), and lack of supporting infrastructure to make the land productive (Rojas 2001).

*Titling Has Significant Benefits.* Using the survey data described earlier to give a first indication of the potential regarding the value of land title, we find that possession of title increases self-assessed land values between 16 and 18 percent, holding constant factors such as the availability of improvements and other infrastructure. As illustrated in Annex Table 1, other factors that result in increased land values are the presence of temporal or perennial crops, drainage (more than irrigation), and internal paths.

*Titling for Indigenous and Afro-Colombian Communities Offers an Important Instrument for Self-Determination.* There has been a legalization of more than 30 million hectares (almost one third of the national territory) in 588 resguardos indígenas, in addition to 1.6 million hectares for Afro-Colombian communities. These are innovative programs aimed at developing a more comprehensive and inclusive solution to the problems of uncontrolled expansion of the frontier. At the same time, some problems remain, in particular (a) conflicts between the indigenous and the local jurisdictions; (b) lack of consultation between the different indigenous groups involved in the conflicts, many of which could probably be resolved much more easily in this way; (c) shortage of staff and skills within INCORA; and (d) conflicts with small producers, especially in the context of illicit crops. Case studies also found some weaknesses in the organization of the groups themselves that cause entrepreneurial and politically powerful groups within the territory to establish links of
clientelism. Low levels of education (50 percent illiteracy), an overlap with armed conflict and illicit crops, and development plans that are induced from outside are among the main problems, and further action will be needed to address them.

RESERVAS CAMPEÑAS. The establishment of reservas campesinas is intended not only to build on the lessons learned from titling for Afro-Colombian and indigenous communities, but also to provide a mechanism to help end the environmentally and socially unsustainable cycle of clearing and subsequent abandonment of land that has historically characterized much of the frontier. Agrarian Law 160/1994 foresaw two main mechanisms to improve incomes and quality of life of the rural poor—a land market based on a redistribution program and the creation of Zonas de Reserva Campesinas (ZRCs). The ZRCs were seen as the principal instrument of regularizing colonist areas to achieve (a) better access by landless and small peasants to land, services, and development opportunities; (b) effective participation of rural communities in planning and implementation of these development initiatives; and (c) more rational natural resource management at the agricultural frontier. By doing so, the Reservas Campesinas could contribute to peace consolidation, reduce incentives for violence, and foster social justice and democratic participation.

In 1996 the government issued Decree 1777, which established the institutional responsibility and regulatory framework necessary to implement Law 160 in frontier areas affected by violence and illicit activity. So far, INCORA has created five ZRCs in the Departments of Bolívar, Caquetá, Cundinamarca, Guaviare, and Putumayo. While the experience has been generally positive, there are a number of issues that need to be clarified.

c) Land Reform

Given the importance of land reform in government spending, not only in the area of land but in the rural sector, we deal with this issue in somewhat more detail.

i. The Legal Basis for Land Reform

HISTORICAL FACTORS. The dualistic distribution of land in rural areas, while dating back to colonial encomiendas, has been reinforced and exacerbated in more recent times by four policy-related factors. (a) tax incentives for agriculture that caused rich individuals to acquire land to offset taxes on nonagricultural enterprises, (b) legal impediments to the smooth functioning of the land rental and sales markets, (c) credit and interest rate subsidies plus disproportionate protection of the livestock subsector provided incentives for agricultural cultivation with very low labor intensity, and (d) the use of land to launder money that had been acquired by drug lords. Maldistribution of productive resources, especially land, was identified as one of the root causes of economic stagnation by a World Bank mission in the 1950s.

INSTITUTIONAL BACKGROUND. The Instituto Nacional de Colonización y Reforma Agraria (INCORA), which has the mandate to implement land reform and title national land for use by small farmers and indigenous peoples, was established in 1961. Like similar institutions in other Latin American countries (for example, Instituto Nacional de Colonização e Reforma Agrária in Brazil), it has been more effective in titling and distributing frontier land than in reducing inequality of landownership in the country’s interior. Colonization programs involved 14 million hectares, and gave out 427,000 titles. By contrast, the about 1.8 million hectares which were transferred under different schemes to redistribute land had only limited effect, implying that, since 1960, the Gini Coefficient of the ownership distribution of land hardly changed.

GOALS OF LAW 160/94. Although the majority of the land transferred was always purchased by INCORA rather than expropriated, in 1994 the government introduced the idea of land reform based on voluntary negotiation rather than direct intervention (and compulsory acquisition). The goals of this legislation were to:

- Establish an integrated system of land reform
- Reduce bureaucratic dominance and red tape and integrate local government and community groups into the land reform process, thus building beneficiary capacity before the actual transfer of the land
- Help beneficiaries establish a productive agricultural enterprise rather than equip them only with land
- Reduce the cost of land reform to the government by requiring a copayment of 30 percent of the value of land (either based on savings or a commercial credit) from beneficiaries, and to rely on the private sector and markets rather than bureaucratic intervention.

IMPLEMENTATION DID NOT LIVE UP TO THESE GOALS. Probably the key factor that precluded success of the legislation was that, in a rush to demonstrate “results,” INCORA took recourse to the state-owned (and now liquidated) Caja Agraria to finance the 30 percent copayment. Rather than starting small and making a convincing case for private sector involvement under various pilot schemes for land reform, this led to huge amounts of money being spent even before the regulations for the new law (which took three years to complete) were finished. Other structural limitations that prevented attaining the goals mentioned above are:

- Trying to establish the Sistema Nacional de Reforma Agraria at the central level invariably ran into problems and had little impact on the ground where interinstitutional coordination, though sorely needed, was still almost impossible to achieve and where INCORA continued to have almost a monopoly on the process.
- The mandate of local governments and the private sector was ill-defined, incentive structures were weak, and in some cases clashed directly with the
interests of INCORA bureaucrats, making difficult for beneficiaries any attempts at capacity building.

- Having to establish a full-time farm (that is, requiring beneficiaries to purchase a whole UAF), together with the inability to use the grant funds for anything other than land purchases, focused interest on developed lands, precluded beneficiaries from making complementary investments, and — together with the need to finance 30 percent of the land price through either an own contribution or a commercial credit — implied that beneficiaries suffered from serious shortages of working capital.

- In the absence of any credible (or politically feasible) plan to restructure INCORA, greater private sector involvement was always viewed with suspicion by INCORA's huge staff that (rightly) feared that decentralization and private sector involvement would reduce their power and lead to layoffs.

**New Land Reform Law Associated with High and Unsustainable Levels of Debt** In view of these limitations and the half-hearted implementation of the new concepts, it would not be surprising to find that the impact of the land reform program has been below expectations. Given that, under the new model, there is a credit component attached to the land reform program, a review of the portfolio provides a quick indicator of the impact of land reform. Statistics from the Caja Agraria indicate that, despite having received a grant amounting to 70 percent of the value of land, the mean level of indebtedness by beneficiaries under Law 160 in 2001 was 57 percent of the value of the land received. This suggests that there seems to have been no incentive to bring in (or build up) own equity on the side of beneficiaries or for prudential lending on the side of the financial institution. Not surprisingly, almost all of them are in default with repayment, and even though precise figures are difficult to come by, a significant share seems to have already abandoned the land.\(^\text{10}\) This is one of the factors that led to the recent drastic reduction of the land reform budget.

**ii. Public Spending for Land Reform**

**Land Reform Has Been a Major Spending Item.** The importance of land reform, not only from the perspective of social demands by the various sectors of civil society, but also from a budgetary point of view, is illustrated in Table 7. Note that during 1995–97 INCORA's budget alone accounted for 12 to 13 percent of central spending by the Ministry of Agriculture. However, since there was need for additional credit, much of the spending by Caja Agraria has in fact to be added to the bill for land reform, bringing the total amount of resources spent on land reform to more than 20 percent of the central agricultural budget. Clearly, this makes it an important program that merits more detailed analysis.

\(^\text{10}\) In one property on the Atlantic coast, inadequate selection procedures have led to a desertion rate of almost 50 percent (Rojas 2000:192)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total INCORA</strong></td>
<td>3,124</td>
<td>88,243</td>
<td>130,775</td>
<td>124,255</td>
<td>89,340</td>
<td>69,003</td>
</tr>
<tr>
<td>of which technical assistance</td>
<td>19.4%</td>
<td>11.4%</td>
<td>3.0%</td>
<td>3.5%</td>
<td>9.7%</td>
<td>18.6%</td>
</tr>
<tr>
<td>of which grants</td>
<td>0.0%</td>
<td>5.7%</td>
<td>52.1%</td>
<td>55.2%</td>
<td>60.3%</td>
<td>20.1%</td>
</tr>
<tr>
<td>of which infrastructure</td>
<td>41.6%</td>
<td>12.3%</td>
<td>4.7%</td>
<td>16.6%</td>
<td>1.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>of which productive projects</td>
<td>2.1%</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.8%</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>of which indigenous</td>
<td>6.9%</td>
<td>14.0%</td>
<td>8.8%</td>
<td>7.7%</td>
<td>10.8%</td>
<td>33.5%</td>
</tr>
<tr>
<td>of which titling and cadastre (RA)</td>
<td>29.9%</td>
<td>56.4%</td>
<td>31.1%</td>
<td>16.2%</td>
<td>16.5%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Caja Agraria (credit &amp; vivienda)</td>
<td>4,946</td>
<td>32,101</td>
<td>237,266</td>
<td>197,292</td>
<td>81,588</td>
<td>132,614</td>
</tr>
<tr>
<td><strong>INCORA + Caja Agraria</strong></td>
<td>8,070</td>
<td>120,344</td>
<td>368,041</td>
<td>321,547</td>
<td>170,928</td>
<td>201,617</td>
</tr>
<tr>
<td><strong>Total Central Spending</strong></td>
<td>40,276</td>
<td>707,122</td>
<td>1,039,149</td>
<td>931,226</td>
<td>891,420</td>
<td>791,324</td>
</tr>
<tr>
<td>Spending by municipalities</td>
<td>435,119</td>
<td>593,292</td>
<td>764,687</td>
<td>967,614</td>
<td>1,253,710</td>
<td></td>
</tr>
<tr>
<td><strong>Total Min. of Agriculture</strong></td>
<td>40,276</td>
<td>1,142,241</td>
<td>1,632,441</td>
<td>1,695,913</td>
<td>1,859,034</td>
<td>2,045,034</td>
</tr>
<tr>
<td>INCORA of central</td>
<td>7.8%</td>
<td>12.5%</td>
<td>12.6%</td>
<td>13.3%</td>
<td>10.0%</td>
<td>8.7%</td>
</tr>
<tr>
<td>INCORA of total</td>
<td>7.8%</td>
<td>7.7%</td>
<td>8.0%</td>
<td>7.3%</td>
<td>4.8%</td>
<td>3.4%</td>
</tr>
<tr>
<td>INCORA + Caja of central</td>
<td>20.0%</td>
<td>17.0%</td>
<td>35.4%</td>
<td>34.5%</td>
<td>19.2%</td>
<td>25.5%</td>
</tr>
<tr>
<td>INCORA + Caja of total</td>
<td>20.0%</td>
<td>10.5%</td>
<td>22.5%</td>
<td>19.0%</td>
<td>9.2%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

**Source:** Food and Agricultural Organization (2000)
Composition of spending has changed significantly. Exploration of the composition of spending by INCORA reveals large shifts and swings among the different years—while spending in the 1980s was focused toward titling, infrastructure, and technical assistance, the 1990s (especially starting in 1996) saw a shift toward land grants, which then made up between 50 and 60 percent before dropping to about 20 percent in 1999. Part of this reflects a relabeling, but it also suggests that specific strategies were adopted more in response to exogenous demands than in consistent pursuit of a specific objective.

Cost per beneficiary family is high, with considerable variation. The fact that spending on land reform was not allocated in a very rational manner is supported by the fact that, as Table 8 illustrates, there have been wide swings in the total cost per beneficiary.

In addition to land reform being quite expensive overall (with an average cost per beneficiary of about 20 million pesos), this cost varied between 11.7 million pesos and 47.4 million pesos. The fact that these changes in costs are highly correlated with the total land reform budget points toward clear limits of the absorptive capacity. Because of the relatively rigid bureaucratic structure of INCORA’s process, social pressure to increase the land reform budget seems to have been translated into higher prices of land and thus greater transfers to big landowners, rather than an increase in the number of beneficiaries.

Efficiency of spending in land reform has decreased significantly. Data on the composition of INCORA’s spending support the notion that a large part

Table 8. Cost Per Beneficiary Family for Different Modalities of Reform (millions of 1998 dollars)

<table>
<thead>
<tr>
<th></th>
<th>Peasants</th>
<th>Indigenous</th>
<th>Tenant Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>27.2</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>26.4</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>47.4</td>
<td>0.9</td>
<td>0.1</td>
</tr>
<tr>
<td>1989</td>
<td>41.7</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>1990</td>
<td>19.5</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>1991</td>
<td>12.5</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>1992</td>
<td>20.3</td>
<td>4.3</td>
<td>0.1</td>
</tr>
<tr>
<td>1993</td>
<td>13.9</td>
<td>3.7</td>
<td>0.2</td>
</tr>
<tr>
<td>1994</td>
<td>13.1</td>
<td>4.2</td>
<td>0.4</td>
</tr>
<tr>
<td>1995</td>
<td>11.7</td>
<td>3.8</td>
<td>0.6</td>
</tr>
<tr>
<td>1996</td>
<td>20.7</td>
<td>9.9</td>
<td>0.4</td>
</tr>
<tr>
<td>1997</td>
<td>23.1</td>
<td>6.0</td>
<td>0.3</td>
</tr>
<tr>
<td>1998</td>
<td>19.9</td>
<td>1.7</td>
<td>0.2</td>
</tr>
<tr>
<td>1999</td>
<td>24.4</td>
<td>3.0</td>
<td>0.4</td>
</tr>
<tr>
<td>2000</td>
<td>24.5</td>
<td>0.6</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Source: Rojas (2001)
of the land reform budget goes toward financing a huge and relatively stable bureaucracy (Table 9). Since the early 1990s, INCORA has consistently spent about 35 billion pesos (or between 20 and 30 percent of its total budget) on its own operations. Since the budget cuts of 1999 and 2000 were not translated into staff reductions, this has translated into 60 percent and 70 percent of the budget in 1999 and 2000, respectively, being spent on operations, a figure that is clearly unsustainable.

### iii. Impact of the New Program—The Pilot: Toward a Model for More Sustainable Reform

**HISTORY AND MAIN CHARACTERISTICS.** Parallel to the large-scale implementation of the land reform model based on voluntary negotiation, the government embarked on a pilot exercise, with the following key characteristics, in five municipalities:

- Local committees, composed of a majority of potential beneficiaries, had a major role in dissemination and beneficiary selection that would more systematically target the poor.
- A local land reform plan was elaborated and approved by the local leadership, to generate some of the prerequisites for a local market to function, by providing and disseminating information on potential demand and supply of land at the local level. This plan identified model production systems to make

### Table 9. INCORA's Executed Budget, Total and by Component (millions of 1998 pesos)

<table>
<thead>
<tr>
<th>Year</th>
<th>Operations</th>
<th>Debt Service</th>
<th>Investment</th>
<th>Total</th>
<th>Share of Operations (%</th>
<th>Investment (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>16,956</td>
<td>10,692</td>
<td>125,393</td>
<td>153,040</td>
<td>11.1</td>
<td>81.9</td>
</tr>
<tr>
<td>1987</td>
<td>28,303</td>
<td>33,533</td>
<td>111,076</td>
<td>172,912</td>
<td>16.4</td>
<td>64.2</td>
</tr>
<tr>
<td>1988</td>
<td>26,825</td>
<td>24,011</td>
<td>130,618</td>
<td>181,454</td>
<td>14.8</td>
<td>72.0</td>
</tr>
<tr>
<td>1989</td>
<td>47,944</td>
<td>22,556</td>
<td>153,865</td>
<td>224,365</td>
<td>21.4</td>
<td>68.6</td>
</tr>
<tr>
<td>1990</td>
<td>45,923</td>
<td>17,400</td>
<td>163,466</td>
<td>226,789</td>
<td>20.2</td>
<td>72.1</td>
</tr>
<tr>
<td>1991</td>
<td>45,216</td>
<td>15,556</td>
<td>75,910</td>
<td>136,682</td>
<td>33.1</td>
<td>55.5</td>
</tr>
<tr>
<td>1992</td>
<td>45,469</td>
<td>23,651</td>
<td>111,095</td>
<td>180,215</td>
<td>25.2</td>
<td>61.6</td>
</tr>
<tr>
<td>1993</td>
<td>56,607</td>
<td>22,375</td>
<td>78,161</td>
<td>157,143</td>
<td>36.0</td>
<td>49.7</td>
</tr>
<tr>
<td>1994</td>
<td>36,434</td>
<td>16,081</td>
<td>76,223</td>
<td>128,738</td>
<td>28.3</td>
<td>59.2</td>
</tr>
<tr>
<td>1995</td>
<td>40,793</td>
<td>19,631</td>
<td>80,413</td>
<td>140,838</td>
<td>29.0</td>
<td>57.1</td>
</tr>
<tr>
<td>1996</td>
<td>35,516</td>
<td>6,565</td>
<td>130,920</td>
<td>173,001</td>
<td>20.5</td>
<td>75.7</td>
</tr>
<tr>
<td>1997</td>
<td>44,507</td>
<td>4,673</td>
<td>101,475</td>
<td>150,654</td>
<td>29.5</td>
<td>67.4</td>
</tr>
<tr>
<td>1998</td>
<td>34,550</td>
<td>16,936</td>
<td>49,872</td>
<td>101,358</td>
<td>34.1</td>
<td>49.2</td>
</tr>
<tr>
<td>1999</td>
<td>43,460</td>
<td>1,466</td>
<td>27,790</td>
<td>72,716</td>
<td>59.8</td>
<td>38.2</td>
</tr>
<tr>
<td>2000</td>
<td>39,770</td>
<td>520</td>
<td>16,065</td>
<td>56,355</td>
<td>70.6</td>
<td>28.5</td>
</tr>
</tbody>
</table>

*Source: Rojas (2001)*
optimum use of beneficiary family labor and potential links with the private sector for marketing and technology.

- Potential beneficiaries had to undergo a period of systematic training to improve their skills across a broad range of areas that ranged from social interaction, management, and negotiation, to familiarity with specific agricultural technologies.
- In all of this, nongovernmental organizations, in many cases together with the private sector and local government institutions, played a major role, thus establishing land reform as an element in local development strategies.

**Relatively Positive Impact, Despite Obstacles** Evaluations suggest that the impact of the pilot was very positive in a number of respects:

- Rather than deciding to buy the first available property and hugely overpaying, the average beneficiary group visited five farms before deciding on a specific property, and the price paid was between 30 and 40 percent lower than under the government’s process (Deininger 1999).
- Indebtedness was significantly lower than in nonpilot communities; comparing two municipalities, as illustrated in Table 10, a recent study finds that the mean debt load (defined as the value of the debt as a share of the value of fixed equipment) for pilot beneficiaries was 24.6 percent compared to 54.7 percent for nonbeneficiaries. In fact, one pilot community repaid half of its land loan out of the revenue generated from the first harvest (Rojas 2001).
- There was high investment but limitations on working capital. An early evaluation of the land reform pilot indicates that, largely due to the positive

**Table 10. Debt Burden of Different Farms Under Pilot and Nonpilot**

<table>
<thead>
<tr>
<th>Municipio</th>
<th>Farm Name</th>
<th>Debt Burden (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpilot farms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rivera</td>
<td>La Esmeralda</td>
<td>42</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>Gaviotas</td>
<td>33.8</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>Bonanza</td>
<td>61.9</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>El Encanto</td>
<td>64.9</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>Margaritas</td>
<td>70.5</td>
</tr>
<tr>
<td>All nonpilot</td>
<td></td>
<td>54.7</td>
</tr>
<tr>
<td>Pilot farms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rivera</td>
<td>San Mateo</td>
<td>9.1</td>
</tr>
<tr>
<td>Rivera</td>
<td>Las Mercedes</td>
<td>9.6</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>La Esperanza</td>
<td>41.1</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>Española</td>
<td>25.9</td>
</tr>
<tr>
<td>Fuente de Oro</td>
<td>Floresta</td>
<td>37.1</td>
</tr>
<tr>
<td>All pilot</td>
<td></td>
<td>24.6</td>
</tr>
</tbody>
</table>

*Source: Rojas (2001)*
impact of the training, beneficiaries (in contrast to those from the "regular" program) continued to be in good credit standing, but the evaluation also points toward a number of weaknesses. At the same time, it highlights that the inability of using part of the grant for land-related investment continues to be a significant weakness: Beneficiaries were found to have invested in one or two hectares where their production exceeded expectations, but failed to use the rest of the UAF that was given to them (Forero 1999).

IV. Policy Recommendations

This Chapter has shown that, even though the performance of land markets has improved following structural adjustment, land policy in Colombia, especially land reform, continues to be a major spending item. Our analysis suggests that the large amount of money spent on this program has not been very effective. In addition to making institutional and legal changes, a more integrated approach to land management and use is therefore recommended.

a) Systematic Titling

The data indicate that provision of title has had a significant and positive impact on investment and land values. In recent years, Colombia has made considerable advances in terms of providing the basis for secure formal landownership in this form. In view of the fact that it appears to be the poor who are left without title, expansion of ongoing efforts at systematic titling, and integration of cadastre and registry information with a view to reducing the cost of such activity, would have a beneficial impact on equity. In frontier areas and where violence is endemic, additional measures to ensure tenure security and protect rights on the ground, and to coordinate between the institutions involved, will be needed.

b) Fiscal Policy and Land Taxation

Even though Colombia has the instruments that would allow local governments to use land and property taxes as a means of own revenue, most of its rural municipalities lack both the capacity to effectively administer these taxes and, in an environment characterized by continuing violence, the political ability to do so. Failure to tax land for the benefits from public investment is not only regressive but also encourages speculative holding and underuse of land, with negative social consequences. Administrative support to local governments willing to collect such taxes in a more effective manner, and cofinancing schemes that raise the premium on local tax collection, could not only send an important political signal, but also have a bigger impact on supply of land to the market than many of the interventions implemented in the past.
c) Ordenamiento Territorial and Sustainable Land Use

Many of the externalities arising from environmental degradation are relatively localized and can thus be addressed through Planes de Ordenamiento Territorial at the local level, especially if accompanied by appropriate national policy. Experience shows, however, that both the capacity for formulation and implementation of such plans and a mechanism for reflecting global externalities is lacking. This is particularly acute in frontier areas and those characterized by extensive cattle ranching activities where violence compounds these institutional factors and land issues become embroiled in a wider conflict for political power. The instrument of Zonas de Reserva Campesina has been only partly successful in halting deforestation and contributing to sustainable land use. Reviewing the pilot experience with a view toward adopting complementary measures would be warranted.

d) Land Reform

Fifty years of relatively ineffective (and expensive) attempts to implement land reform suggest that most of the changes made in this respect were responding to ad hoc pressure, with no systematic assessment of the lessons from experience, both inside Colombia and internationally. Integrating this experience suggests that the following actions need to be taken:

**Change the Legal Basis To Make it Consistent with a Demand-Driven Model and a Fungible, but Limited, Grant.** Even though inappropriate regulation has contributed much to the failure of the “new” model of land reform in Colombia, Law 160/94 is flawed and:

- The limitation of the grant on the purchase of land needs to be abandoned. This regulation, while bolstering land prices, precludes the establishment of integrated productive projects, which generally have a land and an investment component and, in addition, biases the choices of beneficiaries toward already productive land. It also leads to immediate capital shortages on the newly established farms, forcing them into a highly leveraged position. Given promises by the past two governments, it appears doubtful that this can be done without a change in the law.

- The desire to provide beneficiaries with a whole UAF is fiscally unsustainable and greatly reduces the number of potential beneficiaries. More flexible farm sizes should be accommodated, possibly by allowing for partial disbursement, making it more a guarantee. This might be accomplished through a regulatory change (the price of the UAF is just a regulation).

**Restructure or Liquidate INCORA.** The cost of the land reform program, and in particular the fact that, in 2000, for every peso transferred to beneficiaries, 2.5 pesos were spent in administration, suggests that the current bureaucratic structure is unsustainable. This suggests that there is a need either to eliminate or thoroughly
restructure and decentralize INCORA to make it work in partnership with local
governments and the private sector. To address this the government should create a
decentralized structure for rural development in strong partnership with local gov-
ernment that would integrate the functions of land titling, irrigation investment,
rural housing, training, and enterprise formation. This institution would provide
cofinancing for local development plans rather than specific lines of activity.

**Integrate Land Reform into the Broader Context of Rural Development.**
Colombia's experience amply demonstrates that distributing land without giving
beneficiaries the means to make productive use of this asset is ineffective and does
not constitute a good use of scarce public resources. The pilot experience described
earlier offers a number of lessons that can be built upon to develop a land reform
model that is in line with specific local development needs and that encourages
coparticipation (and supply-side measures such as land taxation). Any such program
should be contingent on a rigorous ex ante evaluation of the productive potential of
land reform projects and be integrated with a system of monitoring and evaluation
to inform policymakers about the impact and to ensure that the resources spent gen-
erate returns that are comparable to those in other sectors of the economy.

**Issues That Require Further Analysis.** Land pricing, land taxation, and the envi-
ronmental impacts of violence and land tenure insecurity exceed the scope of this
Chapter, but a more in-depth analysis of these issues is required.
## Annex

### Annex Table A.1. Determinants of Land Prices

<table>
<thead>
<tr>
<th></th>
<th>Without Improvements</th>
<th>With Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Terrain plain</strong></td>
<td>0.005***</td>
<td>0.005***</td>
</tr>
<tr>
<td></td>
<td>(5.70)</td>
<td>(7.44)</td>
</tr>
<tr>
<td><strong>Terrain steep</strong></td>
<td>0.000</td>
<td>-0.002**</td>
</tr>
<tr>
<td></td>
<td>(0.35)</td>
<td>(2.36)</td>
</tr>
<tr>
<td><strong>Percent of plot with temporal crops</strong></td>
<td>0.640***</td>
<td>0.663***</td>
</tr>
<tr>
<td></td>
<td>(4.23)</td>
<td>(5.01)</td>
</tr>
<tr>
<td><strong>Percent of plot with perennial crops</strong></td>
<td>0.521***</td>
<td>0.936***</td>
</tr>
<tr>
<td></td>
<td>(3.80)</td>
<td>(7.46)</td>
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<tr>
<td><strong>Percent of plot with pasture</strong></td>
<td>0.403***</td>
<td>0.198</td>
</tr>
<tr>
<td></td>
<td>(3.00)</td>
<td>(1.61)</td>
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<tr>
<td><strong>Percent of plot fallow</strong></td>
<td>-0.023</td>
<td>0.284*</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(1.74)</td>
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<tr>
<td><strong>Percent of plot with irrigation</strong></td>
<td>0.003**</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(2.17)</td>
<td>(1.40)</td>
</tr>
<tr>
<td><strong>Plot has tile</strong></td>
<td>0.163**</td>
<td>0.185***</td>
</tr>
<tr>
<td></td>
<td>(2.44)</td>
<td>(3.20)</td>
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<tr>
<td><strong>Plot purchased</strong></td>
<td>-0.082</td>
<td>-0.115**</td>
</tr>
<tr>
<td></td>
<td>(1.22)</td>
<td>(2.09)</td>
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<tr>
<td><strong>Plot from INCORA</strong></td>
<td>-0.085</td>
<td>-0.417***</td>
</tr>
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<td></td>
<td>(1.00)</td>
<td>(5.06)</td>
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<td><strong>House on plot</strong></td>
<td>-0.037</td>
<td>0.360***</td>
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<tr>
<td></td>
<td>(0.58)</td>
<td>(6.53)</td>
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<tr>
<td><strong>Drainage on plot</strong></td>
<td>0.295***</td>
<td>0.183*</td>
</tr>
<tr>
<td></td>
<td>(2.95)</td>
<td>(1.74)</td>
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<td><strong>Coffee processing facility on plot</strong></td>
<td>0.073</td>
<td>0.119</td>
</tr>
<tr>
<td></td>
<td>(0.81)</td>
<td>(1.40)</td>
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<tr>
<td><strong>Stable on plot</strong></td>
<td>-0.190**</td>
<td>-0.366***</td>
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<tr>
<td></td>
<td>(2.34)</td>
<td>(4.92)</td>
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<td><strong>Shed on plot</strong></td>
<td>0.186**</td>
<td>0.228**</td>
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<td></td>
<td>(2.25)</td>
<td>(2.09)</td>
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<td><strong>Internal paths on plot</strong></td>
<td>0.264***</td>
<td>0.106</td>
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<tr>
<td></td>
<td>(2.81)</td>
<td>(1.32)</td>
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<td><strong>Fish pond on plot</strong></td>
<td>-0.003</td>
<td>0.066</td>
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<tr>
<td></td>
<td>(0.02)</td>
<td>(0.67)</td>
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(continues on next page)
### Annex Table A.1. (continued)

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<thead>
<tr>
<th></th>
<th>Without Improvements</th>
<th>With Improvements</th>
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<td>Silo on plot</td>
<td>-0.286*</td>
<td>-0.560***</td>
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<td></td>
<td>(1.96)</td>
<td>(3.97)</td>
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<tr>
<td>Water reservoir on plot</td>
<td>0.240</td>
<td>0.694***</td>
</tr>
<tr>
<td></td>
<td>(1.37)</td>
<td>(4.57)</td>
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<tr>
<td>Time cultivated (years)</td>
<td>-0.000</td>
<td>-0.005***</td>
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<tr>
<td></td>
<td>(0.10)</td>
<td>(3.16)</td>
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<tr>
<td>Plot size</td>
<td>-0.000***</td>
<td>-0.001***</td>
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<tr>
<td></td>
<td>(4.73)</td>
<td>(5.44)</td>
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<td>Plot size squared</td>
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<td>0.000***</td>
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<td>(4.17)</td>
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<td></td>
<td>(5.05)</td>
<td>(2.82)</td>
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<tr>
<td>Constant</td>
<td>5.954***</td>
<td>6.143***</td>
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<tr>
<td></td>
<td>(36.67)</td>
<td>(43.11)</td>
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<tr>
<td>Observations</td>
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<td>2355</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.24</td>
<td>0.37</td>
</tr>
</tbody>
</table>

* Significant at 10 percent  
** Significant at 5 percent  
*** Significant at 1 percent  

*Note* Robust t-statistics in parentheses.
References


Rural Finance

This Chapter was written by Carlos E. Cuevas and Lisa Taber.

I. Background

a) Overview

Participation in formal financial markets by rural households and enterprises in Colombia is relatively low and likely to have declined in recent years. Survey data for 1998 indicate that one in 10 rural households obtained credit from formal financial institutions, including banks and cooperatives (Deininger and Ollinto 2001), a proportion lower than that reported for Mexico before the banking crisis (12 percent in 1994) (World Bank 1995), and only slightly better than in El Salvador (8 percent in 1996) (ibid. 1998), a country with a comparable gross domestic product (GDP) per capita. The proportion of rural households with savings accounts, however, about one fourth of the total, appeared surprisingly high compared to other Latin American countries.\(^1\) This may be associated with the widespread presence of savings and credit cooperatives throughout the country at the time of the survey, a scenario that has changed drastically since then. Reforms and political instability in recent years have conspired to create conditions that depress the provision of financial services in rural areas.

The institutional landscape for public and private financial institutions operating in Colombia’s rural sector has shifted dramatically in recent years, as affected by crisis and reforms in the financial sector. The rural sector is likely to have experienced a worse-than-average contraction in formal credit flows than that observed for the economy as a whole, which suffered a decline of about 37 percent in private sector

\(^1\) Rates of rural household participation in formal savings for Mexico were only 9 percent in 1994, and 6 percent in 1999 (World Bank 2001)
credit in real (dollar) terms in 2000 compared to 1998. The closure of Caja Agraria in 1999, the significant reforms affecting the cooperative sector, and the predominantly rural nature of increased violence and conflict have compounded the natural inclination of commercial banks to retreat first from the rural sector. In fact, changes in the legal and regulatory framework have led to a massive restructuring of bank and nonbank financial intermediaries in Colombia, with mergers and liquidations drastically reducing the number of banks, cooperatives, and finance companies operating in the country. Overall the retail financial outlets ratios relative to population have shrunk, thus increasing the transaction costs of both providing and accessing financial services (see Figure 1).

Because actual and perceived risks are higher in rural areas, the financial sector’s overall contraction has hit this sector harder than others. While the density of bank branches relative to total population has nearly recovered to 1998 levels (Figure 1), the urban bias of bank branch realignment is reflected in the fact that the number of cities and towns with at least one bank branch has decreased by almost 20 percent since 1996 (see Table 1).

Figures for the agriculture sector indicate a low and declining share of the sector in financial system credit. This share was 8.5 percent in 1998, down from 11.5 per-

Figure 1. Density of Retail Financial Outlets Supervised by the SuperBancaria

![Graph showing the density of retail financial outlets supervised by SuperBancaria from 1996 to 2001.]

Source: SuperBancaria, World Development Indicators
Table 1. Cities and Towns with at Least One Bank Branch

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of cities or towns with at least one bank branch</td>
<td>766</td>
<td>765</td>
<td>765</td>
<td>628</td>
<td>622</td>
<td>621</td>
</tr>
<tr>
<td>Percent decline from previous year</td>
<td>0.1</td>
<td>0.0</td>
<td>17.9</td>
<td>1.0</td>
<td>0.2</td>
<td></td>
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</table>

Source: SuperBancaria

cent in 1996, and it has continued to decline as annual disbursements have fallen by 16 percent in real terms between 1998 and 2001, while real agricultural output increased by 6 percent during the same period. This is in sharp contrast with the sector's participation in GDP (14 percent) and in total exports (28 percent).

b) Market Destruction and Distortion Due to Conflict and Violence

Migration and forced displacement caused by the armed conflict in many regions has and still is changing the size and nature of financial markets in rural areas. While "planned" migration may just switch a financial institution client from one rural area to another (likely urban) location, forced displacement simply destroys a marketplace and justifies institutions moving out of rural areas. In addition, as a consequence of conflict and violence, a "war syndrome" is likely to be plaguing financial institutions portfolios in Colombia. Population displacement and forced mobilization by all forces in conflict induces rescheduling and refinancing of outstanding obligations of the displaced and the mobilized that result in a growing debt overhang in loan portfolios.

A critical major consequence of the retreat of financial institutions away from conflict zones is the disappearance of safekeeping options for rural household savings, safety being the highest value rural depositors place in savings instruments. The increased prevalence of illicit crops and the drug trade in the rural economy, on the other hand, have distorted the functioning of financial markets both by creating monetary circulation outside of the formal (regulated) sector, and by making money laundering a permanent source of concern for financial authorities.

c) Crisis and Reform in the Financial–Cooperatives Sector

A boom in the cooperative sector that began in the 1980s, partially spawned by an absence of legal controls and oversight, peaked in 1996 when financial cooperatives encompassed about 2,300 entities and accounted for nearly 9 percent of financial systems assets, or 6 percent of GDP (Ruiz and Lopez 1998). Membership in finan-

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2 Preliminary data. Annual disbursements to agriculture represented 4 percent of agricultural GDP in 2001, down from 5 percent in 1998.
cial cooperatives reached 2.1 million, and total depositors numbered close to 3 million, or an estimated 12 percent of all depositors in the financial system. Serious deficiencies in the regulatory and supervisory framework for financial cooperatives, liquidity and solvency problems in several cooperatives that led to their intervention, the ensuing loss of confidence among depositors in the cooperative system, and an overall contraction in the economy made 1997 and 1998 years of crisis and collapse in this sector. As of December 1998, 40 cooperatives were intervened, mostly for liquidation, affecting nearly 900,000 depositors (see Annex 1).

Changes in the legal and regulatory environment for cooperatives were effected in 1998 with the passage of Law 454, which placed the largest financial cooperatives under the supervision of the Bank Superintendency (the SuperBancaria) and created the Superintendencia de la Economía Solidaria or SuperSolidaria, to oversee the rest of the sector, which is made up of savings and credit cooperatives, multipurpose cooperatives that include savings and credit services, and nonfinancial cooperatives. Only the financial cooperatives under the SuperBancaria are authorized to operate with nonmembers, and differential rules for minimum capital apply to these cooperatives, among other dispositions. Assets held by financial cooperatives represented about 3.3 percent of banking system assets, and its deposits amounted to about 2 percent of those held in the banking system as of December 2000 (Table A.I.1). In terms of numbers of clients and overall outreach, however, the significance of the financial cooperative sector cannot be disputed, even after its major shakeup of recent years.

Financial cooperatives under the SuperBancaria account for three fourths of total membership in the cooperative sector. In spite of their still delicate financial situation, these institutions and a select subset of those cooperatives under the SuperSolidaria offer a promising institutional base to expand financial services in rural areas. While their activity is concentrated in the same regions favored by the banking sector (Antioquia, Distrito Capital, and Valle), their local roots and diverse client base may provide a better platform than the public sector for improved access to financial services by rural households and small rural enterprises.

Moreover, the so-called nonfinancial cooperatives, numbering in the thousands and covering a large diversity of financial activities, include many organized around agricultural activities, which play a role in input supply and output marketing and processing (Tables A.I.2 and A.I.3). Their presence in rural areas cannot be ignored as actual or potential retail agents for financial products such as remittances and insurance.

d) The Public Sector

The government, on the other hand, has taken significant steps toward eliminating distortions in rural financial markets and rationalizing public support to agricultural and other rural enterprises, beginning with the closure of Caja Agraria. The programs and institutions currently aimed at increasing access to finance among rural-
based agents include the Banco Agrario, created in place of Caja Agraria to maintain banking outlets in communities with limited access to financial services, Fondo Emprender, which channels funds to small and medium-sized enterprises; and several guarantee and titling programs administered through FINAGRO (see Annex II). The effectiveness of these reforms remains nonetheless questionable, as Banco Agrario and FINAGRO have reportedly deviated from their originally mandated clientele, and smallholder access to credit has decreased in recent years.

Lending from public sector sources is estimated to account for about one fourth of all agricultural credit (Table A. II. 1). Overall, farm credit for small-scale producers is deemed to have fallen by 60 more than 80 percent from 1996 levels, in spite of the guarantee funds administered by FINAGRO covering up to 80 percent of the loan principal. Even Banco Agrario has adopted highly conservative lending policies requiring 100 percent of the loan amount in admissible guarantees and not accepting land as collateral (although forward contracts are accepted). The lack of guarantees for the remaining 20 percent of principal has all but excluded producers of crops not formally linked to commodity markets (World Bank 2001).

e) Alternative Sources of Finance

The economic recovery of 2000–01, which has been characterized by growth in traditional and nontraditional exports, has so far not been accompanied by a growth in credit flows from the financial system to the rural sector. Increased reliance on alternative sources of finance such as producer cooperatives, product traders, and input suppliers, and financing arrangements involving multiple parties, including banks, producer groups, or storage or processing facilities, are likely to be on the rise as a way of overcoming informational barriers and high transaction costs, particularly enhanced in an environment of conflict and violence. As indicated above, formal linkages with commodity markets seem to facilitate access to credit, while subsistence crops remain mostly self-financed.

An important element to consider here is the fact that nonfarm sources of income contribute a substantial share of household income (45 percent on average), especially among low-income households (60 percent and 51 percent in the lowest two quintiles of per capita expenditure) (Deminger and Olinto 2001). The traditional perception, therefore, that rural creditworthiness relies solely on the profitability of agriculture can be highly misleading, and may be preventing the develop-

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3 Survey data for 1997 and 1999 show that of the 15 percent of rural households receiving credit, one third of these relied on informal intermediaries (3.5 percent of households used traders and 2.6 percent used informal lenders).

4 Small farmer cooperatives engaged in industrial crops in the Magdalena Medio, for example, have been able to access FINAGRO subsidies and credit lines, with technical assistance and purchase agreements provided by the private companies that process and market the crop. Such arrangements are difficult to organize for non-industrial crops.
opment of financial instruments better adapted to the income flows and cycles of rural households than traditional farm-credit instruments.5

A well-established microfinance sector in Colombia, including Banco Caja Social and Women's World Banking, has thus far been timid in entering the rural sector in any significant measure.6 It remains, however, a sector more open to innovations and better able to take higher credit risks than most banks. In addition, there are numerous nongovernmental organizations in rural areas that constitute a potential base for the provision of complementary services, such as technical assistance and training in basic financial literacy to typically underserved segments of the population such as rural women and indigenous peoples.

II. Main Issues

While the large-scale withdrawal of public banks and the consolidation of private sector institutions may have set the stage for the growth of more competitive and stable financial intermediaries, their impact thus far upon the availability and terms of services for different strata of rural households and firms is unknown. Likewise, the effectiveness of the remaining government institutions and programs in terms of their costs, sustainability, and scope and depth of outreach has yet to be measured. If agricultural lending by formal financial institutions has fallen in real terms for the last four years, while agricultural output has grown at rates above those of total GDP in the same period, what does this say about the changing structure of agricultural finance in the country?

1. Significance of Banco Agrario and FINAGRO

The share of public banks in total agricultural lending has remained relatively stable in recent years at about 24 percent, with the exception of the crisis year of 1999 (Figure 2). Even during the last three years of Caja Agraria, its significance as a provider of financing for agriculture was questionable. As Table A.1.2 shows, the share of agriculture in the financial system loan portfolio increases by less than 3 percentage points when Caja Agraria lending is included in 1996, this effect dropping to less than 2 percentage points in 1998.

Moreover, the performance issues that resulted in the liquidation of Caja Agraria are likely to threaten the viability of its successor Banco Agrario, because the root

5. For example, microfinance instruments such as short-term loans payable in monthly or biweekly installments, or short-but-fixed-term deposit instruments may perform well among low-income households, but are not typically available from traditional financial institutions.

6. For example, Women's World Banking limited its handling of Fondo Nacional para el Desarrollo Rural (FONADER) funds to only a few kilometers outside the major cities where they operate.
causes are probably still there. Central among these is the lack of financial discipline engendered in the rural population by the perception of “beneficiaries” receiving government funds. To reduce the risks that this perception represents, a typical reaction of public banks is to turn “commercial” and go “urban,” Banco Agrario apparently already showing signs of this tendency. In this manner, the institution diverges from its original mandate to serve the rural sector, while facing a disadvantage in terms of image and managerial capacity vis-à-vis its private commercial competition in the urban setting.

As for FINAGRO, the main funding source for Banco Agrario and for agricultural lending by private banks (Table A.II.1), and administrator of the agricultural guarantee fund, the usual questions of additionality and cost-effectiveness apply. Both lending through private banks and guarantee use are likely to be concentrated in a clientele that would otherwise have similar access to financial services. The failure of the guarantee fund to improve small-farmer access to credit highlights the seriousness of the collateral issue as a constraint to access.

7 The recent behavior of Mexico’s Banco Nacional de Crédito Rural (BANRURAL) comes to mind
Aside from the FINAGRO programs, a large number of other special government programs, for the most part fragmented and ineffective, represent fiscal burdens and coordination challenges with questionable accomplishments (see Annex II). Most of these programs involving special credit lines, such as Fondo Nacional para el Desarrollo Rural (FONADER), face serious bottlenecks in intermediation capacity to reach their rural target groups in a sustainable fashion.

A perhaps not totally apparent issue is the effects of the internal conflict on the demands placed on public institutions. In addition to the debt overhang syndrome described above associated with displacement and forced mobilization, these phenomena generate pressures on government for which subsidized credit is an appealing but deadly solution. These pressures are likely to increase as the conflict continues and, in a favorable scenario of peace, by the demands of the demobilized.8

ii. Credit Risks, Rural Risk Assessment, and Risk-Management Issues

Banks and other financial institutions have limited means of assessing credit risks when lending to agricultural and other rural concerns, and therefore restrict their activity to collateral-based or fully guaranteed lending. On one hand, lack of participation of small farmers and rural entrepreneurs in financial markets means no credit history; on the other hand, the high transaction costs of directly assessing client creditworthiness and risk in rural areas keep banks from entering the sector based on their own risk assessments.

Commodity price and yield fluctuations are at the root of perceived agricultural credit risks. They make it difficult for producers to allocate resources efficiently, adversely affect their access to credit or the terms in which funding is obtained, and lead them to employ low-yield, low-risk production techniques, thereby lowering income. Systematic, institutional means of assessing credit risks and modern price and yield risk management techniques are for the most part lacking in Colombia.9 As a result, agricultural commodities with depressed or unstable prices, and cash crops severely exposed to weather and other production risks, face additional barriers to accessing financing. Small producers, especially, are solely reliant on government debt forgiveness and other fiscally burdensome means of relief in the event of catastrophe.

In addition, the lack of security prevailing in large portions of the territory compounds the risk perceptions that financial intermediaries traditionally hold of rural markets. Not only commodity price and yield fluctuations affect credit flows, but violence and instability in rural areas impinge upon the safety of cash and instru-

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8 The public agricultural bank of El Salvador bore the burden of most special lines of subsidized credit to the demobilized upon completion of the peace accords in the early 1990s, with devastating effects on its balance sheet.

9 Crop insurance was for many years available only for bananas in selected areas of the country. Coverage has recently been expanded to cotton, sugarcane, and potatoes, under a government-subsidized mechanism.
ment transfers between rural towns and major cities, thus making deposits and remittances unsafe

iii. An Uncertain Environment for Nontraditional Collateral

An element compounding the risk factors referred to above is the absence of a clear framework for pledging property and moveable assets as loan guarantees. The norms regulating collateral use vary in an ad hoc manner according to the different types of financial intermediaries and guarantees, preventing the efficient use of the assets that rural households and firms are most likely to possess—including accounts receivable, crops, livestock, inventories, and equipment\(^\text{10}\)—to secure financing for investment or working capital. Where the securitization of different types of movable assets is legally feasible, difficulties in establishing creditor priority and the transaction costs associated with registering and potentially repossessing collateral often render these transactions too costly or risky.

III. Policy Recommendations

a) The Role of the State: Banco Agrario, FINAGRO, and the Effectiveness of Public Interventions

A careful but expeditious assessment of the costs and benefits of increasing sustainable financial services outreach to rural areas, and especially to the rural poor using alternative institutional arrangements, should be at the top of the new administration's finance agenda. Against the current scheme anchored in Banco Agrario and FINAGRO, other options for public intervention are likely to be not only more cost-effective, but also a means of redefining the role of the State in rural finance. Recommendations from work carried out by the World Bank and the IMF under the joint Financial Sector Assessment Program (FSAP) in several countries point toward a shift in the role of the State from retail and second-tier lending to an institutional development role with substantial private sector involvement and enhanced effectiveness of (reduced) public sector subsidies.

Caution is needed, however, to avoid dismantling or reducing the size of a system based on public institutions before a new system more reliant on the private initiative is in place. In particular, it must be kept in mind that the precarious security and the violence prevailing in rural Colombia will represent both an obstacle to the functioning of public institutions and a deterrent to private-sector involvement.

\(^{10}\) Deininger and Olimpo (2001) calculate that the mean asset endowment of rural households amounted to about 25 hectares of land and about US$4,500 in machinery, livestock, vehicles, and nonfarm enterprise assets. If these assets could be pledged to complement the government-provided guarantee, the average household could borrow up to the equivalent of US$22,500, or 10 times the per capita GDP.
i. Banco Agrario and FINAGRO

The key policy question with respect to Banco Agrario is: why maintain an institution that represents a fiscal drain with little benefit on the side of reaching the rural population? A comparable question applies to FINAGRO, especially in what relates to its guarantee fund. A new administration has a unique, perhaps a "once and only" opportunity to address these issues head-on, as pressures for preferential treatment via soft credit from different sectors are likely to mount during electoral campaigns.

Moreover, a new administration pressed to tackle rural poverty may feel inclined to resort to subsidized credit intended to smallholder agriculture as a means of fighting poverty while avoiding large fiscal outlays. Such temptation should be resisted as both domestic and international experience show that subsidized credit is often captured by medium and large-scale farmers, and little if any reaches the intended beneficiaries. Direct transfers programs would be much more effective in reaching the very poor, usually without repayment capacity to acquire debt. As for credit to small and medium-scale farmers and especially for the sustainable provision of non-credit services (deposits, remittances), on the other hand, initially subsidizing private sector involvement in rural finance is likely to prove more effective and more fiscally sound than the current model anchored in FINAGRO and Banco Agrario.

ii. Alternative Means of Public Intervention

The provision of incentives for intermediary capacity building focused on bank and nonbank institutions to expand their services in rural areas should be considered and assessed in terms of outreach benefits and fiscal sustainability. Of particular consideration should be the advantages of subsidizing institutional capacity building in lieu of guarantee funds and other mechanisms that are perceived as government funds that do not need repayment.

Why would private initiatives succeed in a market where government efforts have fallen short? First, private intermediaries do not convey the image of transfer and subsidy associated with government entities. Second, at this juncture in Colombia's political situation government facilities become targets, while private initiatives are often able to engage local participation and ownership. Third, private intermediaries are much more likely to adopt or at least experiment with innovations that overcome or mitigate the constraints associated with rural finance. Mobile banking, part-time (market-day) branches, and e-finance should be among the array of instruments that private entities use in rural areas, with some degree of government subsidy to the institutions in the early (pilot) stages.

Three types of nonbank institutions deserve mention as possible foci of capacity-building efforts. First, the financial—cooperatives sector, with its reliance on local savings mobilization, has the potential to restore safe deposit options for rural households. Second, the nonfinancial cooperative sector includes entities closely linked with the productive chains organized around major cash crops and livestock, or organized around communities with multiple purposes. Many of these organizations are already providing services equivalent to short-term loans to their members,
and could develop others in which they serve as agents for financial intermediaries.¹¹ Third, the rather specialized microfinance institutions already well established servicing the urban poor, such as Women’s World Banking (in five cities) and especially Banco Caja Social, are well positioned to innovate and develop rural services, provided the right incentives are in place.

The ongoing consolidation of the financial–cooperatives sector should be closely followed to identify opportunities for institution strengthening aimed at rural areas. As shown by the experience of El Salvador and to some extent Ecuador, and the current developments in Mexico, this sector may provide relatively low-cost options to build institutional capacity for financial services in rural areas. This type of institution, moreover, recognizes the multi-activity of the rural household, relies heavily on locally mobilized savings, and establishes a more comprehensive client–institution relationship involving a variety of financial products, compared to the traditional agriculture-oriented, project-based bank–farmer relationship.

For the financial–cooperatives sector, it is essential to capitalize on the reforms already enacted in the legal and regulatory framework and provide the necessary support in technical assistance and training that enable the institutions to adjust to the new rules. Further adjustments in the regulations and in the supervisory mechanism may be required, especially as the SuperSolidaria consolidates its hold on the sector outside the domain of the SuperBancaria, and the latter reaches a stable relationship with the entities that remain under its authority.

Other measures that enhance the effectiveness of public interventions, such as ensuring adequate linkages between transfer programs and development of institutional capacity for rural financial intermediation, need to be explored and tested. For example, it will be desirable to monitor the performance of the Alliance for Peace program for potential replication in additional regions and with different products.

b) Modernizing Rural Risk Assessment and Risk Management

Breaking the vicious circle of no credit access therefore no credit history therefore no credit access is essential. The capacity-building efforts with private intermediaries outlined above should include incentives to adopt innovations that reduce the costs of assessing risk and creditworthiness of new clients with no traditional collateral. Many of these innovations are already in use in the microfinance field in Colombia, although primarily in urban areas, and elsewhere—for example, in El Salvador and Peru—in urban and rural areas. Subsidization of the initial pilot stages of adaptation of these tools to rural markets has shown to yield high returns in terms of sustainable outreach to previously unserved sectors.

¹¹ For example, some of Mexico’s Fideicomiso Instituido en Relación con la Agricultura (FIRA) programs use this kind of specialized lending agent to do the client-assessment, disbursement, monitoring, and collection work for private banks that use FIRAs partial loan guarantees.
Modern assessment and mitigation mechanisms for traditional price and yield risks should be studied and encouraged. Innovations that reduce transaction costs and spread risks more effectively, such as index-based insurance and commodity price hedging, ought to be adopted more widely than seems their current practice in Colombia.

In particular, index-based insurance, to our knowledge nonexistent in Colombia, offers a credible promise to extend catastrophic weather-related insurance to small producers, substituting for fiscally burdensome and distortionary means of responding to natural disasters. Countries with large exposure to weather-related risks such as Argentina, Mexico, and Morocco are piloting index-based insurance products. Colombia would be well positioned to follow their lead and benefit from the lessons those pilot programs yield.

In addition, specific mechanisms to deal with the prevailing insecurity in rural areas should be designed and tested in key regions such as the Magdalena Medio. The current conditions seem to enhance the scope of possibilities for e-finance as a means of bypassing conflict areas. Specific actions in this respect are contingent upon verifying that the required preconditions in terms of legal framework, communications, and technology infrastructure are present.

c) Enabling the Use of Nontraditional Collateral

International experience shows that reforming the legal and regulatory environment for secured transactions so as to enable and expand the use of moveable property as collateral can yield a substantial payoff in terms of access to credit. Improving this environment for forward contracts, for example, or other instruments associated with commodity value chains, may go a long way toward resolving the collateral issue in agriculture finance.

In Colombia, a review of the framework for secured transactions with a view to eliminating fragmentation and contradictory legal mandates seems called for. This critical review should involve not only the legal statutes that apply to moveable property, but also the feasibility of establishing accurate and accessible registries and the adequacy of the judiciary and off-court mechanisms for contract enforcement and conflict resolution.

In addition, innovations in collateral substitution already in use in urban microfinance, such as joint liability, could be easily adopted in rural areas. In particular, the rural nonfarm economy, so active and dynamic in Colombia, is likely to benefit from the introduction of good microfinance practices as part of the expansion of private financial intermediaries in the rural sector.
Annex I
The Cooperative Sector

The cooperative sector has been in a process of restructuring and adjusting to the new regulatory framework enacted in 1997. Under the new framework, cooperatives fall into three main categories: (a) financial cooperatives that can service the general public, which are supervised by the SuperBancaria; (b) financial cooperatives that can service only their members (Cooperativas de Ahorro y Crédito and multipurpose cooperatives with savings and credit services), supervised by the SuperSolidaria; and (c) nonfinancial cooperatives, which provide limited credit services to members only, and are also supervised by the SuperSolidaria.

Following the legislative reforms adopted in 1997 and 1998, 10 of the financial cooperatives transferred to the SuperBancaria were intervened, and another 47 were closed by Departamento Administrativo Nacional del Sector Social (DANSOCIAL), the institution that oversees the SuperSolidaria. As of December 2001, the SuperBancaria was supervising 13 financial cooperatives, with assets totaling US$135 million (see Table A.I.1), though only one of the institutions had been certified by the Superintendent as having met all prudential standards.

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
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</thead>
<tbody>
<tr>
<td>Financial Cooperatives—SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assets</td>
<td>587</td>
<td>530</td>
<td>518</td>
<td>604</td>
</tr>
<tr>
<td>Loans</td>
<td>280</td>
<td>244</td>
<td>245</td>
<td>292</td>
</tr>
<tr>
<td>Deposits</td>
<td>312</td>
<td>262</td>
<td>217</td>
<td>312</td>
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<tr>
<td>Financial Cooperatives—SuperBancaria</td>
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<td></td>
<td></td>
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<tr>
<td>Assets</td>
<td>345</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
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<td>96</td>
<td></td>
<td></td>
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<tr>
<td>Deposits</td>
<td>139</td>
<td>86</td>
<td></td>
<td></td>
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<td>261</td>
<td>99</td>
<td></td>
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<tr>
<td>Commercial Banks</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Assets</td>
<td>20,130</td>
<td>17,030</td>
<td>15,497</td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>20,435</td>
<td>16,461</td>
<td>15,107</td>
<td></td>
</tr>
<tr>
<td>Deposits</td>
<td>17,086</td>
<td>14,219</td>
<td>13,480</td>
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<td>Financial Cooperatives as a Portion of Commercial Banks</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Assets</td>
<td>0.029</td>
<td>0.031</td>
<td>0.033</td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>0.014</td>
<td>0.015</td>
<td>0.016</td>
<td></td>
</tr>
<tr>
<td>Deposits</td>
<td>0.018</td>
<td>0.018</td>
<td>0.016</td>
<td></td>
</tr>
</tbody>
</table>

Sources: CONFECOOP, IMF
The *SuperSolidaria* has the mandate to supervise more than 6,450 diverse financial and nonfinancial cooperatives that have reported to DANSOCIAL at least one time within the last four years. The vast majority of cooperatives are classified as nonfinancial associations, formed around, for example, places of employment, economic activities (such as production of a particular crop), landholdings, education or health services, infrastructure works, or cultural activities. These associations, depending on their particular classification, may draw upon member contributions to extend credit to the same group.

The cooperatives supervised by the *SuperSolidaria* are difficult to characterize or evaluate, given their heterogeneity, lack of consistent reporting, and the shifting of cooperatives from one supervision category to another. The *SuperSolidaria* relies on a contractual relationship with CONFECOOP, the Confederation representing the cooperative sector, for the collection, analysis and reporting of key financial and operational indicators for each cooperative. Table A.I.2 shows that as a whole and on average, the assets, capital, deposits, and loan balances of reporting financial and

<table>
<thead>
<tr>
<th>Table A.I.2. Number and Balance Sheet Aggregates of Cooperatives Supervised by the SES, US$ Millions as of December of Each Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Coops—SES</td>
</tr>
<tr>
<td>No. institutions</td>
</tr>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Loan portfolio</td>
</tr>
<tr>
<td>Deposits</td>
</tr>
<tr>
<td>Capital</td>
</tr>
<tr>
<td>Nonfinancial Coops—SES</td>
</tr>
<tr>
<td>No. institutions</td>
</tr>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Loan portfolio</td>
</tr>
<tr>
<td>Deposits</td>
</tr>
<tr>
<td>Capital</td>
</tr>
<tr>
<td>Average per Reporting Cooperative, US$ Millions</td>
</tr>
<tr>
<td>Financial Coops—SES</td>
</tr>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Loan portfolio</td>
</tr>
<tr>
<td>Deposits</td>
</tr>
<tr>
<td>Capital</td>
</tr>
<tr>
<td>Nonfinancial Coops—SES</td>
</tr>
<tr>
<td>Assets</td>
</tr>
<tr>
<td>Loan portfolio</td>
</tr>
<tr>
<td>Deposits</td>
</tr>
<tr>
<td>Capital</td>
</tr>
</tbody>
</table>

Source: CONFECOOP
nonfinancial cooperatives remain below their 1997 levels. The numbers for financial cooperatives are skewed by the transfer of one very large financial cooperative from the SuperBancaria to the SuperSolidaria last year that is manifest in the jump in the average assets from 2000 to 2001. Due to the potential for adjustment of data and late and irregular reporting, the degree to which the cooperative sector has tended recently toward the merging, closure, or movement of institutions from the classification of financial to nonfinancial is unknown.

The biases in Table A.1.2 due to irregular reporting are controlled for in Table A.1.3, which shows the performance of 205 financial and 1,414 nonfinancial cooperatives for which data are consistently available for 1997 to 2001. The numbers indicate that this subset of financial cooperatives has recovered and slightly surpassed 1997 levels of capital, assets, and loan portfolios, but that deposits remain well below 1997 levels in real terms. Nonfinancial cooperatives have yet to recover to their 1997 levels of capital and assets, but have surpassed 1997 loan balances.

**Table A.1.3. Number and Balance Sheet Aggregates for a Subset of Cooperatives Consistently Reporting to the SES, US$ Millions as of December of Each Year**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Financial Coops—SES</td>
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<td></td>
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<tr>
<td>No Institutions</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
</tr>
<tr>
<td>Assets</td>
<td>597.3</td>
<td>586.5</td>
<td>530.4</td>
<td>518.3</td>
<td>604.1</td>
</tr>
<tr>
<td>Loan portfolio</td>
<td>290.7</td>
<td>280.1</td>
<td>243.8</td>
<td>244.8</td>
<td>292.0</td>
</tr>
<tr>
<td>Deposits</td>
<td>867.7</td>
<td>312.5</td>
<td>261.7</td>
<td>216.6</td>
<td>312.3</td>
</tr>
<tr>
<td>Capital</td>
<td>265.8</td>
<td>280.3</td>
<td>258.4</td>
<td>264.3</td>
<td>289.7</td>
</tr>
<tr>
<td>Nonfinancial Coops—SES</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No Institutions</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
<td>1414</td>
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<tr>
<td>Assets</td>
<td>908.9</td>
<td>911.7</td>
<td>827.6</td>
<td>790.5</td>
<td>831.3</td>
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<td>Loan portfolio</td>
<td>407.5</td>
<td>425.9</td>
<td>392.5</td>
<td>379.4</td>
<td>424.4</td>
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<tr>
<td>Deposits</td>
<td>448.4</td>
<td>454.1</td>
<td>410.5</td>
<td>401.5</td>
<td>414.2</td>
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</table>

Average per Reporting Cooperative, US$ Millions

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Coops—SES</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Assets</td>
<td>2,914</td>
<td>2,861</td>
<td>2,587</td>
<td>2,528</td>
<td>2,947</td>
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<tr>
<td>Loan portfolio</td>
<td>1,418</td>
<td>1,366</td>
<td>1,189</td>
<td>1,154</td>
<td>1,425</td>
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<tr>
<td>Deposits</td>
<td>4,233</td>
<td>1,524</td>
<td>1,277</td>
<td>1,057</td>
<td>1,523</td>
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<tr>
<td>Capital</td>
<td>1,296</td>
<td>1,367</td>
<td>1,260</td>
<td>1,289</td>
<td>1,413</td>
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<td>Nonfinancial Coops—SES</td>
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<tr>
<td>Assets</td>
<td>0.643</td>
<td>0.645</td>
<td>0.585</td>
<td>0.559</td>
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<tr>
<td>Loan portfolio</td>
<td>0.288</td>
<td>0.301</td>
<td>0.278</td>
<td>0.268</td>
<td>0.300</td>
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<tr>
<td>Deposits</td>
<td>0.317</td>
<td>0.321</td>
<td>0.290</td>
<td>0.284</td>
<td>0.293</td>
</tr>
</tbody>
</table>

Source: CONFECOOP
While the SuperSolidaria and CONFECOOP are both receiving support from the IDB for implementation of the new framework for sector supervision, adjustments to the regulation and supervision mechanisms are needed to improve compliance and facilitate the sound expansion of cooperatives in the rural sector. Anecdotal evidence indicates, for instance, that small rural cooperatives which were providing deposit and credit services have eliminated savings services in response to the new regulations, which may be overly restrictive given the characteristics of these institutions.
Annex II
Public Sector Institutions and Programs in Rural Finance

I. Background

Prior to recent reforms, the bulk of public resources dedicated to increasing access to finance in rural areas were applied directly through state-owned banks—interventions that characteristically produced regressive distributional effects and the accumulation of fiscal expenditures. Beginning in 1999, the government embarked on a wide-reaching set of reforms aimed at significantly diminishing the liabilities and presence of state-owned financial institutions and shoring up the regulatory framework for private financial intermediation. Major progress has been achieved in terms of the resolution or privatization of public institutions, including the Caja Agraria, Banco Uconal, Banco del Estado, and Banco Central Hipotecario. The government is also considering options for the privatization or dismantling of Banco Cafetero and Granahornar.

While these reforms have dramatically reduced the amount of loans held directly by state-owned institutions, the magnitude and impact of public intervention in rural financial markets, applied through numerous programs and institutions, is still very large and of undetermined impact.

II. FINAGRO

Commercial lending to the agricultural sector in Colombia is subsidized through the legal obligation that banks have to purchase Agricultural Development Bonds (ADBs), at lower-than-market rates for instruments of comparable safety, as a portion of their deposits. These bonds fund the state’s second-tier agricultural lending institution, FINAGRO, which on-lends the funds to public and private banks and finance companies for loans to the agricultural sector. Banks can also substitute loans made directly to agriculture for equivalent amounts of ADBs. Between 1998 and 2001, agricultural lending by private and public banks diminished by 22 percent and about 5 percent, respectively, in real terms (see Table A II.1). The portion of private banks’ “substitute” funds increased from 16 percent of total agricultural lending in 1998 to 22 percent in 2001. Though the absolute total of agricultural lending has decreased, private banks have increased lending “own funds” to agriculture, or to activities classified as agricultural, to avoid having to purchase ADBs. Even with the closure of Caja Agraria after 1999, state bank lending to agriculture, as a percent of total agricultural sector lending, increased from 24 percent in 1998 to about 27 percent in 2001.

FINAGRO also administers a number of other rural finance-oriented incentive programs, including the Fondo Agropecuario de Garantías (FAG), the Programa
<table>
<thead>
<tr>
<th>Type of Intermediary</th>
<th>FINAGRO Discounted Funds</th>
<th>Own “Substitute” Funds</th>
<th>Total Agriculture Sector Loan Disbursements</th>
</tr>
</thead>
<tbody>
<tr>
<td>State banks*</td>
<td>150.03</td>
<td>40.42</td>
<td>128.62</td>
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<tr>
<td>Private intermediaries**</td>
<td>372.35</td>
<td>344.02</td>
<td>266.09</td>
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<tr>
<td>Others***</td>
<td>0.00</td>
<td>20.19</td>
<td>19.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>522.38</strong></td>
<td><strong>404.63</strong></td>
<td><strong>413.71</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Type of Intermediary</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private intermediaries</td>
<td>100.41</td>
<td>113.86</td>
<td>121.57</td>
<td>114.95</td>
</tr>
<tr>
<td>Others</td>
<td>0.00</td>
<td>4.12</td>
<td>3.10</td>
<td>1.71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.41</strong></td>
<td><strong>117.98</strong></td>
<td><strong>124.67</strong></td>
<td><strong>116.66</strong></td>
</tr>
</tbody>
</table>

* State banks include Casa Agraria (1998–99), Banco Agrario (1999–2001), and Bancofe (1999–2001)
** Private intermediaries include banks and finance companies
*** Others include Bancodelx and the Instituto de Fomento de la Industria
Source: FINAGRO

Nacional de Reactivación Agropecuaria (PRAN), and the Incentivo a la Capitalización Rural (ICR). The FAG, which provides producers with equity of less than 34 million pesos with guarantees of up to 80 percent of the loan value, and medium- and large-sized producers with guarantees of 60 percent and 50 percent, respectively, currently backs more than 200 billion (current) pesos in loan balances. The ICR subsidizes loans for the purchase of land, machinery, and other assets, transfers that amounted to 30.7 billion pesos last year. The distribution of FAG and ICR benefits, arising from direct transfers, loan losses, or the subsidized cost of funds, has not been analyzed with respect to beneficiary income levels, administrative costs, or potentially distortory effects on financial markets or investment decisions.

For the PRAN, the government has set aside 100 billion pesos to purchase the debt of agricultural producers from commercial banks and to refinance them on concessionary terms. The objective of the program is to improve the access of these producers to credit from private banks by removing them from the lists of defaulting debtors, an approach which may have unintended distributional and incentive effects.

While the FAG, ICR, and PRAN represent several of the largest funds managed by FINAGRO, a number of others, including the Fondo Nacional de Riesgo
Agropecuarios, also remain to be analyzed from a cost-benefit perspective of their impact on the supply and demand for financial services in rural areas

III. Banco Agrario

Banco Agrario was created in 1999 in place of Caja Agraria to maintain banking outlets in communities with limited access to financial services. Banco Agrario had US$1.6 billion (equivalent) in assets as of November 2001, with outstanding loan balances of US$355 million, and deposits totaling US$1 billion. While the institution has so far performed in line with sector standards, members of the banking community have publicly expressed concern that the bank is unfairly competing with private institutions and may impede their penetration into these areas (see Table A.II.2).

IV. Other Interventions

The programs that direct funds toward rural sector investments are numerous in Colombia, and constitute a fragmented approach to stimulating rural investments, in terms of the number of different instruments, targeted groups, and strategic approaches. These programs include Fondo Emprender, aimed at stimulating business development through venture capital; Plan Nacional de Desarrollo Alternativo (Alternative Development Plan, PLANTE), which provides subsidies for the production of nonillicit crops; crop insurance subsidized through La Previsora, an insurance company; Certificados de Incentivos Forestales, which subsidizes longer-term investments in the forestry sector, and FONADER, which supports nonfarm rural enterprises.

Table A.II.2. Distribution of Financial System Loan Portfolio by Sector, 1996–98

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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Including Caja Agraria</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>11.5</td>
<td>8.9</td>
<td>8.5</td>
</tr>
<tr>
<td>Commercial</td>
<td>16.7</td>
<td>14.0</td>
<td>14.9</td>
</tr>
<tr>
<td>Other</td>
<td>71.8</td>
<td>77.1</td>
<td>76.6</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Without Caja Agraria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>8.6</td>
<td>6.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Commercial</td>
<td>17.3</td>
<td>14.3</td>
<td>15.1</td>
</tr>
<tr>
<td>Other</td>
<td>74.1</td>
<td>79.4</td>
<td>78.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance
The Alliance for Peace program is an innovative financial support mechanism that brings producers, input suppliers, product traders, banks, and other potential investors together into contractual relationships aimed at minimizing the costs and risks associated with the different links in the chain of economic activity around agriculture. The alliances are structured to distribute risks along the chain such that incentives exist for each agent to minimize those over which he or she has the most information and available instruments to control. Futures contracts, for example, can be negotiated by processors or traders, permitting them to fix price, quality, and quantity standards with producers. Banks can negotiate and administer credits with input suppliers or product traders, substantially lowering the transaction costs and uncertainty of dealing with numerous, physically dispersed clients.

In this program, the role of the government is twofold. First, the Alliance for Peace acts as an honest broker between parties entering into a contractual arrangement, bringing producers together who are willing to form associations and cooperatives where they do not already exist, and helping to establish the contractual relationships between these groups, input suppliers, merchants or processors, and financiers. The program has predetermined regions and crops and has conducted financial and sensitivity analysis to determine the appropriate portion of risk and financial support for which each participant should be responsible.

Second, for those crops that are unviable because of the scarcity of capital for long-term financing (in the case of timber, for example), or are not sufficiently profitable, the government either provides longer-term financing to fill the gap or pays a subsidy, respectively, as needed, to reach a determined internal rate of return. In the case of providing longer-term financing, the government is essentially acting as a venture capital firm.
References


Sharing the Fruits of Growth
with All Colombians
Education

This Chapter was written by Eduardo Velez with contributions from David Harding and Alfredo Sarmiento.

I. The Big Picture: Colombia’s Education and Challenges

Colombia’s economic growth is likely to be driven by its educated labor force, which means that productivity, and reduction in the poverty depend to a large degree on the performance of the education sector.

Today, the average formal education of Colombians 5 years old and above is roughly 7 years—a substantial gain from the level of 2.4 years in the 1960s. It took more than 20 years to double the educational achievement. However, Colombia still lags behind its neighboring countries Uruguay and Argentina with 13 years and Mexico, with 8 years formal education.

Net enrollment for children at the primary school age level is estimated at only 88 percent, about 54 percent in the basic secondary years, and 15 percent in tertiary education (MEN 2002). At the preschool level it is estimated that only 37 percent of children 3–5 years of age are enrolled. Major gains in schooling coverage were achieved in the decade of the 80s and early 90s, but stagnation in educational growth were felt beginning 1995, and got worse since the beginning of the crisis in 1998–99.

The most recent trends in Colombia’s education system indicates that it faces major challenges:

- Highly inequitable access to schooling. Education access by the poor, especially rural children represents the main challenge. About 12 percent of children 6–11 are still out of school, nearly all of these children excluded from participation belong to the lowest income groups. Data from the most recent surveys (Sarmiento, 2000) shows that the education gap between the richest income decile and the poorest decile is roughly 7 years, and has increased over
the years. The picture is even worse for the secondary and tertiary levels, where the poor is largely excluded from schooling participation.

- **Schooling quality is low, perhaps deteriorating.** Despite the increased public expenditures for education, quality of schooling is low and has deteriorated in recent years. Based on tests conducted by the Instituto Colombiano de Fomento para la Educación Superior (ICFES), the percentage of schools with low achievements increased from 30 percent in the 1980s to 50 percent in the 1990s. The most recent international achievement tests in math and science for grade 7 and 8 students ranked Colombia way below countries in East Asia and OECD countries, more than one-standard deviation below the mean achievement scores.

- **Sector efficiency is low.** The Colombian education system faces high rates of failure in all grades, particularly of repetition and drop out rates in the primary grades. For every 10 students enrolling in grade 1, only 6 will complete the primary cycle, and 3 will finish secondary school. Repetition in grade 1–4 is very high, particularly among the rural schools.

- **Public expenditures for education increased, but allocation efficiency is poor.** Public spending for education has increased markedly over the last 30 years, from 3.7 percent of GDP in 1984, to 5.1 percent of GDP in 1991, to 5.7 percent in the late 1990s. The large increase in the early 1990s resulted from passage of the new 1991 Constitution which mandated a fixed proportion of spending for social expenditures. Public education expenditures in Colombia is higher than most Latin American countries. The growth in public expenditures for education has largely been progressive especially at the primary level where the poorest income groups received the largest gains. However, at higher education the expenditures have been regressive—expenditures accrued to the higher income groups.

- **Household demand for schooling in Colombia is high.** Household surveys indicate that urban families spend as much as 20 percent of their incomes on education. In aggregate terms, overall spending by all households represent roughly 4.3 percent of GDP, which implies that private household expenditures approximate public sector allocation on education. Poor households spend a high proportion of their incomes to schooling (textbooks, notebooks, stationery, uniforms). Thus, although the public school system has free tuition, associated schooling expenditures are quite high, particularly for the poorest income groups.

- **Decentralization of the education service delivery is a positive development, but its implementation has been inefficient and inequitable.** The decentralization of education management and operation is clearly a major achievement of the 1991 Constitution. However, the implementation has been inefficient. The fiscal reforms trailed behind decentralization. The government concentrated its efforts on financial and administrative reforms without strengthening local capacity at Department, Municipal and
in institutional levels. It has been inequitable because the financial transfers favored the richer municipalities.

- **The Negative Impact of Violence and Social Displacement on Schooling.** Violence in Colombia has been identified as one of the key development constraints affecting schooling. Homicide rates increased by 167 percent between mid 1980s to 1990s. In many of the hard-hit areas, violence has limited the access to schools by both the teachers and the students. Death threats and killing of rural teachers by guerilla and paramilitary forces have resulted in abandoning of schools. Family conflicts, gangs, neighborhood drug abuse, and prostitution have strongly influenced school drop out rates, particularly of the secondary school students. Displacement of populations in many rural areas also affected schooling.

These issues are discussed in-depth in this Chapter and options are presented for consideration of the new government. These are highlighted alongside current and past government responses to address the problems. The policy options will serve as points of departure for a more thorough debate on improving the educational system of Colombia to respond to the emerging problems. Clearly, if Colombia must redress the income inequality (which is one amongst the worst in the region), it can begin with the education system. Education is key to growth, it is key to social cohesion, it is key to improvements in the whole social sectors—in health, social security and poverty alleviation.

### II. Colombia’s Education System: Organization and Recent Trends

A Decentralized Administration of the Education System. There are three territorial levels in the administrative organization of the public education sector in Colombia. The first is the National Ministry of Education (MEN), which is in charge of designing educational policies, formulating a minimum curriculum, and designing a basic set of rules and standards for the administration of the sector resources (human, physical, and financial). The second level is the Department, in charge of organizing the provision of the state educational services. Its main function is the management of teachers, school directors, and administrative personnel. It also provides technical support to the municipalities. The third level is the Municipality, in charge of actually delivering the state educational services, including the construction, maintenance, and equipment of the physical infrastructure. By law, municipal resources from the national budget must be directed to expenditures other than teacher salaries.

Educational Levels in Colombia. The formal education is delivered in approved educational establishments, subject to progressive curricular rules and leading to
graduations and title. Today, Colombia’s basic education system is divided into three levels, namely:

- the first level of preschool, with three grades (only the last one is mandatory),
- the second level which includes five years of primary school and six years of secondary school,¹ with the last two years of secondary education are called diversified middle education.
- a third level is post-secondary, with three sublevels: technological, of three years' duration; university, of five to seven years' duration; and the postgraduate sublevels, with masters and doctorate degrees.
- the system also includes non-formal and informal education.

Trends in each of the educational levels in Colombia can be summarized as follows:

**a) Preschool Enrollment: Coverage is Low**

Enrollment in preschool programs is low—only 37 percent of children 3–5 years were enrolled in such programs in 2001, with only 4 percent participation in the rural areas (MEN, 2002). In addition, coverage varies by poverty level—only about 26 percent of students from poor households are enrolled compared to about 63 percent in the richest 20 percent of the population. A program of community-managed childcare homes (*Hogares de Bienestar Infantil*) reaches over 827,000 children (see Box 1). A second program, the Pre-School Child Care Centers, reaches over 150,000 children at risk of abandonment, malnutrition, or parental abuse, or who are members of lower-income families with working parents.

**Box 1. Hogares de Bienestar Infantil**

*Hogares de Bienestar Infantil* (HBI) are community-managed, home-based childcare programs targeted at promoting the development of children under 7 years of age from poor households. Each HBI is run in the house of a Community Mother, who is selected by parents, and food, social stimulation, and health services are provided. By 1996, the program had reached over 827,000 children. This program is managed by the *Instituto Colombiano de Bienestar Familiar* (ICBF), which also runs other preschool program, the Pre-School Child Care Centers, which are center-based facilities operated by professional childcare attendants.

¹ The last grade of preschool, the five of primary school, and the first four of secondary school are defined as basic education.
b) Primary Enrollment Trends: High Coverage, But Stagnating with 12 Percent Still Out of School

Despite increases in access in the 1990s, the net enrollment rate at the primary level (about 88 percent in 2001) is far from universal, and growth in coverage barely exceeds population growth (MEN, 2002). Coverage reveals severe inequities to the detriment of the poorer sections of society and to the rural areas, where 70 percent of Colombians in absolute poverty live. Gross enrollment rates at the primary level exceed 100 percent (due to overage children in primary schools), but this masks the fact that 12 percent of this population, particularly the poor, do not attend school compared with about 9 percent for the rest of Latin America and 6 percent for countries in the lower-middle per capita income range. Only about 30 percent of children entering first grade finish basic education (grade 9), and dropout and repetition rates for primary school are significantly higher in rural areas and among the poor in general.

Since 1995 the enrollment growth in primary and secondary schools stagnated. During 1995–98, the overall enrollment increased for medium-low and low-income groups, whereas in private primary schools the enrollments for the high-income groups fell. Students from these families moved in great numbers to the public sector. There was a sustained increase in primary enrollment from 1996 to 1998. However, since 1997 (just before the beginning of the economic crisis in the country), data from Household Surveys indicate that there is evidence of a decrease in enrollment, especially of students from the bottom quintile. The public schools are absorbing part of the decline of the high-income groups participation from the private schools, while the lower-income students are dropping out (see Figure 1).

Reasons given for nonenrollment are the high opportunity costs of schooling, lack of money, and the need to work (Misión Social 1999, using data from 1997 when the crisis did not yet exist). Family income and the capacity to pay exert a great influence on enrollment.

c) Secondary Enrollment Trends: Coverage is Low Especially the Poor

Secondary schooling in Colombia is characterized by low coverage, with about 54 percent of the school-age population enrolled nationally in 2001 (MEN, 2002). Less than 15 percent of the school-age population enrolled in the rural areas. Net enrollment in the basic secondary level (grade 6 to 9) is estimated at 52 percent and 26 percent in the upper secondary education level. The recent economic crisis appears to have badly affected the poorest income quintiles. It is notable that after the significant expansion in 1996 and 1997 of 265,000 students, 40,000 students dropped out in 1998. Increases in enrollment from the highest income quintile are accompanied by significant decreases in enrollments from the poorest quintiles 1 and 2. However, there is evidence that over 59,000 students have dropped out from quintile 4. Those who dropped out at the end of primary school are concentrated in the lower-income groups.
d) Higher Education Trends: Very Low Coverage and Favors the Rich

Enrollment rates in higher education institutions doubled from 1980 to 1994 (Figure 2), with an unparalleled growth in private institutions. Today about 65 percent of tertiary school students attend private educational institutions. This has been mainly because of the increases in the number of private institutions. In fact, this is the only educational level with an increase in private sector participation. However, coverage is still low—with about 15 percent of the age group enrolled in 2000 (compared with 21 percent in Chile and 27 percent in Argentina). Again, serious inequalities exist, with the majority of students in higher education coming from the upper two quintiles of income distribution. It is also significant that the universities are located within a geographically poor distribution in urban areas (50 percent of enrollments are located in Bogotá).

New universities have sprung up with limited teacher or pedagogic resources, resulting in poor quality of instruction. For example, only 2 percent of instructors hold doctoral degrees (compared with 25 percent in Brazil). Many programs offered at the tertiary level tend not to be adapted to the needs of the economy or labor market. Only 3 percent of tertiary enrollment are at the postgraduate level, compared to 10 to 15 percent in Organization for Economic Cooperation and Development (OECD) countries.

It is important to observe the rapidly declining enrollment in universities during the last three to four years, which can be attributed to the general economic situa-
Figure 2. Higher Education Gross Enrollment in Selected Countries, 1980 and 1994

![Graph showing enrollment rates](image)

*Source: UNESCO (1998a)*

...tion in the country. Although data are not yet available on the emigration of families from Colombia because of violence or the threat of violence, this may be accompanied by student withdrawal and falling enrollments. This seems to be the case for both private and public institutions although, for economic reasons, dropout is affecting private universities more. For example, *La Universidad del Rosario*, a prestigious private university in Bogotá, reported a 25 percent drop in the number of students a couple of years ago.

III. Policy Issues and Options in the Education Sector

Seven key issues in the Colombian education system are addressed in this section, namely:

- inequity in access to schooling
- low sector efficiency
- low and deteriorating quality of education
- weak links between education and labor demand
• poor public expenditure allocation within the sector
• weak decentralization and institutions at the local level; and
• the negative effects of civil conflict.

ISSUE 1: WIDENING EDUCATIONAL GAP BETWEEN RICH AND THE POOR. Disparities in educational attainment among the poorest, middle-income, and richest groups have increased over the last few years in Colombia, and there are indications that the gap between the richer and poorer income groups is widening. Colombia has a higher Gini coefficient (.444), than any other country in the region, such as Mexico (0.335) and Chile (0.254), and this mirrors the educational coverage that discriminates against the poor and rural areas of the country.

In Colombia, the average number of years of formal education for people over 5 years of age, increased from 2.4 years in the mid-1960s to nearly 7 years in 1999. It took more than 20 years to double the educational level achieved—a significant but slow effort. Mexico has a better school achievement level, with about 8 years of education on average, and Argentina and Uruguay have even more, with more than 13 years of formal education.

The first push for rapid growth, with the creation of a fixed percentage of institutional resources directed to education, started in 1958. This initial improvement lasted until the mid-1980s. A second impulse started at the beginning of the 1990s, affecting the urban but not the rural sector. The pace of growth in the first 20 years was an average of one grade of education for 10 calendar years. In the last six years people in the urban sectors have gained one year of formal education, a good achievement that may not be sustained due to the current fiscal situation. The implication is that, if the historical tendency is maintained, the rural sector will continue to be more than 30 years behind in relation to the urban sector.

To compare achievements in equity, Sarmiento (2000) looked at the evolution over the last 10 years of average years of formal education by income decile for people over 5 years of age and for the Economically Active Population (EAP). The difference in achievement between the first and last income decile is seven years. The richest 10 percent of the population have more than double the education of the poorest. The relative difference decreases until the fourth decile, and increases from there on, both for the population as a whole and for the EAP, which shows that education has been distributed more and more equitably in basic education and increasingly inequitably above this level. This difference widens between the 1980s and the 1990s, in absolute and relative terms, up to the fifth decile.

ISSUE 2: SECTOR EFFICIENCY IS POOR. The Colombian education system is characterized by high rates of failure at all grade levels, and particularly repetition in the first grades of primary education. Rural dropout rates are particularly high; in 1998 it was

2. National Planning Department (Departamento Nacional de Estadísticas, DANE) household surveys, conducted in September of each year.
50 percent for fifth-grade students. Although the internal efficiency of the system is improving, some changes still need to be made. For three cohorts analyzed between the late 1970s and the late 1990s, retention at the primary level has increased from 47 out of 100 to 65 out of 100. The average time needed to complete primary education has decreased by 5 percent. However, even at the end of the 1990s, out of every 1,000 children between ages 7 and 11, 73 did not go to school (most from the poorest quintile), 650 finished primary school, but only 600 went to secondary school. Of these, only 360 finished secondary school. Today, in 2002 the number of school-age children and youth out of school has increased to 2.3 million.

The high repetition and drop out rate particularly in the lower primary levels are also due to the poor readiness of young children for schooling. The low coverage of early childhood development programs puts a majority of poor children at a disadvantage when enrolling in grade 1. Students with no preschool experience, and those who were malnourished and disadvantaged early years, are the children who experience high repetition and dropout rates at the primary level. This calls for the scaling up of early childhood interventions, to considerably increase the present coverage of 3–5 year old children from the present rate of only 37 percent.

**ISSUE 3: POOR EDUCATION QUALITY AND LACK OF RELEVANCE.** Despite large and increasing public expenditures on public education, empirical evidence based on the Instituto Colombiano de Fomento para la Educación Superior (ICFES) test suggests that quality is decreasing (the percentage of schools with low achievement has increased from 30 percent in the 1980s to 50 percent in the 1990s) and that quality of private schools is better and the difference widening, with a difference of about 3 standard points in favor of private schools in 1991 and almost 7 standard points in 1998. Out of the 186 schools in 1998 in the top decile of the test, 94 percent were private schools. The first public school comes out in place 15 and the next one in place 63.

Since 1991, the National Evaluation System for the Quality of Education (SABER) has administered achievement tests in mathematics, language, and science for students in grades 3, 5, 7, and 9. These tests have repeatedly shown that a majority of students in grades 3 and 5 of elementary school have an academic level below that of their age level. The performance of Colombian students on the recent UNESCO/OREALC assessment was broadly on a par with their counterparts in Brazil and Mexico, and in a median position when compared with other countries in the region (Statistical Annex Table A.1). However, scores indicated a high level of disparity between the achievement of urban students and their rural counterparts, who scored consistently lower. Based on data from the same study, relative to other Latin American countries Colombia does much better in rural areas, mainly in math. Only Cuba does better. These results are due in part to the success of several effective pedagogical models, in particular Escuela Nueva (EN), to be described later.

However, when compared with countries outside the region (Table 1), the performance of Colombian students in mathematics indicates that the standards of the region may be considerably lower. Colombia participated in the Third International
Table 1. Average Math Achievement Test Scores of Eighth Graders, Selected Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Score</th>
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<tbody>
<tr>
<td>Singapore</td>
<td>643</td>
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<td>Korea</td>
<td>607</td>
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<tr>
<td>Ireland</td>
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<td>Colombia</td>
<td>385</td>
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<td>South Africa</td>
<td>354</td>
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Source: IEA (1996)

Math and Science Study (TIMSS) during 1994 and 1995. The study measured performance in mathematics and science against international standards among students in grade 7 and 8 in 40 countries. The results of the TIMSS indicate that there is a significant gap between curriculum content and actual learning of Colombian students. Although the syllabus content was on a par with that of most other countries, student performance in Colombia is significantly below the international mean, and students from private schools, on the whole, did better than students from public school.

National educational assessments indicate the inadequacy of both primary and secondary education. A national level assessment conducted in 1999, SABER/ICFES, indicated the inadequacy of education standards, with students in rural areas of most departments consistently performing worse in achievement tests than those from urban areas, particularly in such tasks as knowledge application and problem solving in language and mathematics.

Reasons for Colombia's low education quality. Low educational quality in Colombia's basic and secondary education is due to both school-related factors and broader socioeconomic conditions, such as poverty. These include:

- **Poor quality of teachers.** Although the proportion of teachers with a Licenciatura is increasing, and although there have been some good examples to improve the quality of teachers with pre- and in-service education and training, some key changes in the school have yet to happen. Teaching practices in the classroom, based on the frontal model (the method widely used by Colombian teachers outside of the Escuela Nueva and the accelerated models), have proved to be ineffective in increasing quality of education.³

- **Inadequate pedagogical supervision.** One of the greatest problems facing Colombia's basic educations is the inefficient system of teacher supervision. This applies to both technical-pedagogical supervision and administrative oversight. This results in (a) teachers who receive little or no feedback on their teaching techniques and effectiveness, (b) high teacher absenteeism, and (c)

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³ The frontal model is the traditional way of teaching, with a teacher at a blackboard in front of the students, who are seated at desks that are arranged in rows. The teacher speaks (lectures) to the students while writing on the blackboard, repeating what is already in the textbooks, and the students repeat what is being written on the blackboard.
an important disconnect between what the curriculum defines and the actual teaching that goes on in the classroom. Weak supervision is partly due to a lack of funds with which to hire and mobilize supervisors, and partly to the lack of involvement of parents and community in the education process.

• **Need for curriculum reform.** Colombia is moving in a positive direction in producing a more relevant curriculum and making it more flexible, particularly in accommodating people’s views on priorities. A basic problem, however, is the need to expand active learning in the curriculum, changing the teachers’ traditional role as sources of knowledge (together with the textbooks) and custodial controller of students, to one where they play a role of facilitator, ensuring that written instructions are understood, motivating students to do extra work, counseling students with problems, helping students learn through cooperative learning interaction (group work), using peers to facilitate teaching, and increasing self-determination. The *Escuela Nueva* model follows this active learning approach, which also incorporates in a much more practical way local content and community information. The implementation of the model could be expanded to schools where it is not in use, and this could contribute to the improvement of quality by strengthening its student-centered curriculum, by using detailed self-instructional guides, and by establishing a student government body to develop civic and democratic values, stimulate leadership and organizational skills, and involve students in school management. In addition, in spite of curriculum-related improvements, it is also necessary to make use of more modern multicultural approaches, and especially to concentrate on indigenous and Afro-Colombian groups, where little has been achieved.

• **Poor quality of school environment.** Factors that determine the quality of the school environment include textbooks, school infrastructure, teaching materials, and experimental science facilities. Although Colombia has made some effort to produce and distribute textbooks in an efficient way, with the strong collaboration of the private sector, the quality of textbooks needs improvement. *Escuela Nueva* student guides can be improved too. Unfortunately an effort to publish a revised version of these guides, undertaken a couple of years ago, did not result in improvements.

• **Ineffective assessment system.** It is necessary to further use the results from the standard education assessment, SABER, for policymaking. They have been applied in most Departments but have not been properly used to provide feedback to policymakers. It is necessary to establish a quality assurance system, with established benchmarks. Establishing clear standards for what students should learn by the end of various levels and with different modalities of education, and standards for teacher qualifications and development is something that will be beneficial not only to monitor quality, but also to facilitate effective decentralization. In addition, results from this assessment need to be disseminated to keep parents and the community at large informed about educational achievement of the system.
• Teacher absenteeism and use of time. There are several problems with time on task in Colombia. One is the actual number of days and hours a day the teacher is present in the school. Anecdotal but systematic evidence indicates that this is a serious problem mainly in rural and urban marginal areas. Some researchers have estimated the number of teacher absentee days in rural areas to be half of the prescribed days. Another problem is that a great amount of time is spent organizing the group and in mechanical repetition exercises, with little pedagogical value. In some rural areas affected by the armed conflict attendance is a major issue.

Issue 4: Weak link between Colombia’s education system to labor market demand. One concern of education policymakers is the linkage between the educational system and the labor force, specifically the correspondence between the education system’s output and the demand for educated labor. Economic growth and productivity are enhanced if the abilities of all citizens are fully developed and used in the most productive occupations possible. The Colombian education system needs to improve to properly develop human resources into employable citizens with the skills to engage in productive sectors of the economy in an efficient way. The system needs to improve the development of cognitive skills to increase the income-earning potential of its citizens. The educational structure of the labor force has improved, and the expansion of secondary and higher education has meant an increase in the proportion of the labor force with more education. Analysis of the household surveys demonstrates an increase in the educational levels of the labor force. The average years of education of the economically active population grew from 6.5 in 1991 to 7.3 in 1997 (Table 2). This is a slightly lower increase than that of the educational average between 1978 and 1991.

Since 1970, however, the overall rate of return for an additional year of education in Colombia has declined from about 16.7 percent in 1971 to a still relatively good 12 percent in the 1990s. This signifies a troubling trend of weakening links between the education and the labor market, despite the relatively good returns to education as a whole. The links are much lower in the rural areas. Sarmiento’s findings (2000) indicate that in rural areas the returns to education are significantly lower than in urban areas, and without a clear trend of change during 1991–97. Likewise, the profitability of experience is lower in rural areas.

Issue 5: Financing of education in Colombia: Public expenditure inefficiencies and contributions from households. Colombia has a very strong priority for education and this is reflected in the high and increasing share of education as a proportion of the GDP. Between 1973 and 1997 total social spending (for education, health and social welfare) in Colombia increased fivefold in real terms. This increase was particularly high in the 1990s, with continuous growth since 1991. Public spending on education quadrupled in real terms over that period, while the school-age population (aged 5 to 25) grew by only 30 percent. Unit cost grew most
Table 2. Average Years of Education by Income Decile, 1991–97

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Source: Sarmiento (2000) based on DANE, National Household Surveys
rapidly in the 1990s, from 62,000 Colombian Pesos at the beginning of the decade to 128,000, about US$127 in constant prices. This differs from the experience in most Latin American countries, where it decreased during the period.

Currently, however, the country is going through a difficult economic situation, which will make it impossible to maintain this trend. In fact, public spending started to decrease in 1998. Public spending on education had reached 3.7 percent of GDP in 1984, but started to decrease beginning with the economic adjustment of 1985, reaching 3.1 percent in 1991, the lowest participation since 1979. Since 1991, as an effect of the support of social spending provided by the 1991 Constitution, it reached 5.7 percent in 1996. If we add to this percentage the 4.2 percent from private spending, the resulting percentage is above the average for Latin America.

As a proportion of all government expenditures, education accounted for 11.1 percent in 1989 but reached only 13.6 percent in 1996, far from the 21 percent in the first half of the 1970s. This is because government spending increased considerably in recent years and the increase was mainly in health and social security.

Inefficiencies in expenditures have been observed. An analysis of the structure of expenditures in education by level (primary, secondary, and higher education), shows that in the last 20 years the expenditure that grew most was on administration overhead, moving from 0.2 to 0.83 percent of GDP. Until 1995, higher education was the level with the highest growth at 447 percent compared to a growth of 352 percent for the primary education level, it is worrisome that it was expenditures for administration that grew the most. Expenditures for primary education decreased the most as a result of the adjustment of 1984. Its financing in constant pesos diminished from 1983 to 1986, but then recovered. In the last five years it doubled in constant terms and as a percentage of GDP. Expenditures on secondary education grew the least, but since 1992 they have doubled.

Public expenditures on education had for the most part been progressive in the primary education sub-sector, but highly regressive in the higher education levels. Sarmiento and Caro (1998) analyzed public spending per student by income level and found that for 1997 spending at the primary level clearly favored the poorest 50 percent of the population in both the urban and rural sectors. The growth of the expenditure on secondary education during was clearly redistribute, especially in the rural sector. In terms of impact, the rural primary and secondary expenditure represents 40 percent of the real income of the poorest 10 percent of families, both rural and urban. For the second decile, it represents 18 percent in the urban zone and somewhat more than 50 percent in the rural zone, while this proportion is less than 4 percent for families above the fifth income decile.

The cost of primary education has increased relatively more than the cost of secondary education. Between 1985 and 1997, the cost per student in primary school rose by 145 percent in real terms, while at the secondary level it rose by only 39 percent. This higher cost is due to the unification of primary and secondary teacher pay scales, and to the increase in access to post-secondary education and training, which raised teacher salaries. The efficiency of the sector measured by average cost has
improved notably for the secondary level and somewhat for the primary level. Over this 16-year period the time needed to graduate primary school has been reduced by about 1.6 percent. The system is more expensive and only a little more efficient. At least 15 percent of the additional cost is due to a decrease in the student-teacher ratio.

Public spending on education is distributed in a progressive manner, that is, the lower-income groups receive the largest part of public expenditures, especially at the primary level. In the case of higher education the distribution is regressive—expenditures are concentrated in the higher-income quintiles. Only 12 percent of the poorest 40 percent attend a university, and 60 percent of those attend private universities where they pay for their education. In addition, more than 40 percent of those who belong to the highest quintiles go to public institutions, even though they could pay the tuition of a private institution.

**Household expenditures for education.** As part of the analysis of education financing, it is also important to review the structure of family spending on education, including the related payments that a family makes—not only the fees, but also other expenses such as textbooks, uniforms, and transportation. Urban families, on average, spend about one fifth of their income on education. The most important item is for tuition and fees, which account for 51 percent of total expenses when universities are included and 30 percent when they are not. In relative terms, the middle-income levels make the largest expenditures for fees, since they tend to finance private secondary education. Although the children of the poorest 20 percent of the population usually go to public schools when they go to school at all, they must pay amounts which do not appear to be important in absolute terms but which represent close to 40 percent of their monthly expenses.

Spending for universities (tuition, graduation fees, and subsistence) is another large expense for the highest-income deciles. Families in the lower four deciles dedicate only between 3.8 and 7.3 percent of their expenditures to university, compared to between 27 and 46 percent for the highest four deciles (Statistical Annex Table A.2).

The percentage of expenses that low-income families dedicate to school supplies (textbooks, notebooks, and stationery articles in general) is high, representing 8 percent for the richest decile and 40 percent for the poorest. The poorest 20 percent of the population spend 53 percent of their education budget on supplies and uniforms, while the richest spend only 12 percent. The policy implication is clear: for poor families free tuition is not enough because spending for such things as notebooks and textbooks is very high.

In the aggregate for the whole country, family spending represents about 4.3 percent of GDP, which means that families dedicate to education a percentage very similar to the State's expenditure. These are very significant private investments.

**Issue 6: Decentralization: Governance is weak, inefficient, and inequitable.** By decentralizing the educational system, the government made the argument for
increasing local resource mobilization, cost sharing, and greater community and parental involvement in education. The 1991 Constitution set out to redirect the actions of the state to serve the community more promptly and efficiently and sought to create a culture of results-oriented public sector management. With respect to education, the Constitution increased local responsibility for the delivery of quality education programs and distributed administrative functions at different levels.

The decentralization process had limited success and there has been a wide gap between intentions and actions, with continued weaknesses in the social sector ministries (including a high turnover at the ministerial level, an overly complex budgeting process that generates perverse incentives, inadequacies of the national cofinancing system affecting the flow of external loans to the local entities, and confusion concerning the different responsibilities of each level in the system.

An overriding concern has been to ensure that decentralization is developed within a sustainable fiscal framework. Fiscal reform trailed behind decentralization developments with the effect of impeding these developments. The cofinancing system was overly centralized and bureaucratic, with the delays in the transfer of funds to the local level blamed on the lack of capacity for planning and budgeting at the local level. To a large extent this is true in that the government has concentrated on financial and administrative reforms without sufficiently strengthening local capacity at the Department, Municipal, and institutional levels. Moreover, financial transfers to local levels tend to favor the richer municipalities with, for example, surplus teachers in richer municipalities while, at the same time, there is a lack of teachers in the poorer, especially rural, areas.

Clearly, the central government has a role in ensuring a more equitable distribution of these resources in the sector. The role of Departments is ambiguous in this system and there is little will or responsibility to redress these inequities at the Municipal level. A considerable amount of technical assistance will be necessary to assist in building the capacity for management and planning at the municipal and institutional level.

From the point of view of public spending, the contribution of the 1991 Constitution is the obligation to transfer resources to the Departments and Municipalities, leaving the initiative for spending to them. The transition to this form of transfer was made in a very short time, generating all kinds of management problems and, at the end of the day, increased levels of regional indebtedness. This has meant serious fiscal difficulties for a large portion of the departmental and municipal entities. This needs to be corrected and recent legislation has moved in the right direction (Law 715).

The fiscal decentralization, expenditures at the territorial level since 1991 grew by 323 percent, municipal expenditures multiplied almost 10 times, departmental expenditures 6 times, and national expenditures also increased significantly.

The decentralization of management and operation of educational service delivery has been a clear achievement since the 1991 Constitution. It has most clearly affected the role of the municipality. However, evidence on the way this spending is
done raises doubts about the quality of the fiscal management of several of these departments and municipalities.

The attempt to achieve more than one policy objective with the same instrument can be seen in what has occurred in the distribution of transfers in recent years. Even though the Constitutional reform was done in 1991, the initial effect has been very large in the allocation of transfers since 1994, because the formula for distribution is applied gradually to a growing part of expenditures.

The problem with the formula is that it tries to have the greatest percentage of resources distributed by a poverty indicator, but seeks to have this corrected at the same time by administrative efficiency and by fiscal efficiency and effort. The intent is laudable because it tries to avoid fiscal laziness and reward the most efficient. What experience has shown, however, is that in a given year these objectives can be contradictory.

When the Departments are placed in order of the Quality of Life Index, where those with the highest indexes are the richest and are compared with the national average, it is seen that the effect of the formula clearly favors some departments. Departments from the Atlantic coast and Cauca, Huila, Meta, and Narino are discriminated against.

Changing Roles of the Ministry of Education (MEN) in Decentralization. Lack of clarity in the roles between the center and regions began to emerge in the process of decentralization. The problem of distribution of resources is due not only to the unwillingness of the central level to change, but also to the fact that authorities from Municipalities and Departments expect the central level to solve their financial problems. Law 715 is a positive way to deal with the issue. Another related problem is that MEN staff has not been prepared to accommodate to their new functions, and frequent turnover is a big problem. In the past decade a new minister was appointed every nine months, a period too short to absorb and adjust to the demands of the sector. These changes are also reflected in changes of key technical personnel, making difficult if not impossible the development of the technical capacity to advise and evaluate the territorial entities. Consequently, key but low-level staff prefers to continue doing their traditional jobs.

Clearly, one of the major limitations to adequate decisionmaking is access to valid information. For years the MEN has struggled to develop an efficient Education Management Information System, but the traditional annual census (introduced by UNESCO in the majority of Latin American countries) is inadequate. It is necessary to encourage development of systems for the evaluation of management; ways of using the standardized quality evaluation systems, which already exist but which have not been regularized or used for administrative and planning purposes; and the precise and continual measurement of costs. In this area it is necessary to overcome the sector's traditional mistrust of quantitative measurement and the erroneous attempt to replace it with a set of unsystematic opinions which
are defended with the strange argument that qualitative observation conflicts with the quantitative.

Further, lack of accountability has been replaced by allowing the opinions of the authorities to predominate over fact. This is clearly reflected in the resistance of teacher organizations to evaluations. The most undesirable effect of this lack of accountability is the difficulty in getting the communities (parents, students, and nonschool institutions) involved in school management and education matters.

**ISSUE 7: INTERNAL CONFLICT, VIOLENCE, AND SOCIAL DISPLACEMENT: NEGATIVE IMPACT ON SCHOOLING.** The lack of educational and employment opportunities has been cited as one of the main contributing factors to the burgeoning crime rate and to violence among Colombian youth. A 1994 World Bank study attributed this to the limitations on the availability and quality of primary and secondary education. More education will lead to reduced violence only if it also leads to increased employment. Underresourced schools in rural areas offer few incentives for youth, many of which turn to the guerillas as their sole source of employment (World Bank 1999). Drug traffickers shrewdly recruit the more successful secondary school students, who know only too well that employment opportunities are negligible in the poorer neighborhoods. Leading Colombian experts on child abuse believe that abusive childrearing practices are responsible for the transmission of trauma, and that the growth of a subculture of violence through the socialization process and the interpersonal relationships of individuals living in similar conditions, convey the message that violence is acceptable, normal, and necessary.

National homicide rates during 1980–95 for males aged 14 to 44 increased from 167 to 394 homicides per 100,000 (an increase of 136 percent). An extremely high proportion of perpetrators and victims of urban crime are minors. Internal displacement, a result mainly of the armed conflict, affects mainly females (58 percent) and those under 25 years of age (75 percent), and disproportionately affects indigenous groups.

Violence in Colombia has been identified as a key development constraint affecting macro- and microeconomic growth and productivity, and reducing the government's capacity to reduce poverty, inequality, and the exclusion experienced by the majority of its population in both urban and rural areas. The 1999 World Bank study on violence shows that the level of violence has increased dramatically since 1985. Less than 20 percent of homicides are categorized as "political" and attributed to the paramilitary, guerilla, and army. The remaining 80 percent of nonpolitical homicides are the result of economic violence, both organized crime (related to drug trafficking and organized kidnapping) and unorganized delinquency (including robberies, carjacking, and kidnappings), and social (interpersonal) violence, particularly related to alcohol, drugs, or handgun-related deaths.

Violence has had the effect of limiting access to educational facilities by both students and teachers. Death threats to and killing of rural teachers by guerilla and paramilitary forces have resulted in the abandoning of schools across the country. There is also considerable evidence that family conflicts or scandals, presence of
gangs, neighborhood drug abuse, and prostitution have a strong influence on the school dropout rate. In the violence-prone zones, teachers are regularly subjected to intimidation or violence, students are not able to pass through guerilla, paramilitary, or gang-controlled areas, and the violence results in the physical destruction of school property.

The number of internally displaced people in Colombia has increased over the last decade because of the high incidence of violence among the army, guerillas, and paramilitary groups. It is uncertain whether the displaced will return to their rural communities. Therefore, services such as housing, social welfare, and employment opportunities will remain overstretch in the urban areas to which these people migrate. The challenge facing the education sector is to develop an emergency response to the huge increase in population in urban areas caused by displaced families who have abandoned schools across the country.

IV. Government Strategy: Addressing Education Sector Issues

In the last decade, the Colombian government has placed an emphasis on social sector development as reflected in the National Development Plan of the last two Administrations. Many of the specific priorities clearly responded to the main education sector issues laid out in the previous chapter.

Government priorities included (a) the development of human capital with a focus on universal coverage and better quality of education and health, (b) improved coverage and quality of secondary education, (c) increased competition among service providers and freedom of choice to consumers in the choice of schools, (d) greater private sector involvement in the social sector, and (e) support for well-targeted programs aimed at reducing poverty and rectifying inequities.

a) Programs and Policies Responding to Issues of Educational Access and Equity

Among the programs that have produced important lessons and present opportunities for improvements in the sector are the following.

INTerventions FOR Positive Discrimination AND Inclusion. Starting with the 1991 Constitution, an important goal of the educational system has been redistribution of expenditures in favor of the poorest. Thus, however, presents a challenge to assuring changes in current expenditure. Management of the education sector becomes a key element in the efficient use of new available resources. It is necessary to create or find personnel with skills to lead the effective management of current expenditures. Universal access to basic education is an essential element to help the country achieve a higher level of development.

In the 1990s, program instruments affecting current expenditures provided were advanced, including: (a) stability in public financing for basic education, (b) reori-
entation of national transfers toward the poor in a decentralized framework; (c) implementation of the Nueva Escuela and other innovative programs, as quality intervention aimed at the poorest; (d) a set of instruments and programs, still being evaluated, which tries to involve civil society in the management of public education, like the concession program in Bogotá (private administration of public institutions); and (e) some form of voucher, like the Programa de Ampliación de la Cobertura y Mejoramiento de la Calidad de la Educación Secundaria y Media (Program to Improve Access and Quality in Lower and Upper Secondary Education, PACES) grants at the national level or the fellowships program in Bogotá.

**Demand-side financing: The PACES school vouchers.** In 1992 the Ministry of Education and DANE initiated a grant program called the Programa de Ampliación de la Cobertura y Mejoramiento de la Calidad de la Educación Secundaria y Media (Program to Improve Access and Quality in Lower and Upper Secondary Education, PACES), to allow poor students to pursue their studies in grades 6 to 11. In 1997 this program reached a total of 216 municipalities (out of about 1,200 in the country), and about 90,000 students in more than 1,800 private schools participated in the program. The majority of participating schools were in urban areas, where private schools are concentrated. Fifty-five percent of the students with grants and 62 percent of the participating schools were from the 10 largest municipalities.

The program had its widest coverage in 1995. It has declined and now is applied only in selected municipalities. The decline is explained by the declining political support for the program as a consequence of the change of mayors in 1996. An evaluation (see Angrist and others 2000) showed that voucher recipients had higher educational attainment and that only a minority of the voucher value substituted for educational expenditures families would have undertaken in any case.

By income quintile there is a more progressive distribution for public than for private aid. Some 50 percent of aid from public agencies goes to the poorest 40 percent of the population, while this group receives only 30 percent of private aid. The richest 40 percent still receive 23 percent of public aid, indicating that there is still room for better targeting of state subsidies.

**Experimental government programs to increase education access of the poor.** Some other programs of positive discrimination, which have not yet been evaluated, are indicative of the efforts made by the MEN and other entities to find effective ways to improve access to quality education by the poor. Among these the government is piloting the following programs:

- **Accelerated Schools.** Their objective is to attack the issue of overage children (that is, children who are older than average or usual age for grade) in Colombia by developing a pedagogical model characterized by a student-centered approach, with independent work and special educational material inducing reading, problem solving, and learning by doing. To cover all five
grades of primary education. The model is an adaptation of a successful Brazilian model

- **Sistema de Aprendizaje Tutorial (SAT)**. The objective of this program is to expand secondary and middle education in rural areas based on a local curriculum, including improvement of the following skills: numeracy and calculation, scientific thinking, communication, and technology, and promoting community service.

- **Postprimaria Rural**. This program closely follows the principles of the Escuela Nueva, which include active, flexible pedagogy to accommodate the needs of rural students.

- **Telesecundaria**. The models replicate the Mexican experience, a cost-effective approach to expand access to secondary education in rural areas in Colombia.

Other programs include the additional day, which is applied in the context of the educational development plans supported in the schools since 1998. This additional day facilitates access for students in the poorest public and private schools to extracurricular activities, including cultural and recreational ones such as theater, sports, and music, and to informational and interactive media such as libraries, the Internet, and lectures. In this way poor students have access to educational inputs that improve educational achievement.

Another activity is designated administration or peer assistance. A program is being implemented in several cities to give schools with administrative problems support in improving management. This support is provided by schools of accepted excellence or by nongovernmental organizations of recognized experience, such as Fe y Alegría and the Fundación Carugal, or private sector entrepreneurs interested in education. In some cases the municipality contracts these advisors, while in other cases an individual firm “adopts” a school, and in others an organization makes a commitment to manage one or several public schools.

### b) Programs and Policies Responding to Problems of Quality and Sector Efficiency

In the area of instruments of positive discrimination with generalized effects, the Escuela Nueva model should also be mentioned as an opportunity for efficient investment. This educational model has favored basic education in the rural sector, especially among the poor. Rural education is characterized by (a) high repetition and dropout rates due in part to the dispersion of the population and the inadequacy of traditional pedagogical models; (b) difficulties in keeping children in school all year because of the propensity of parents to use them in seasonal production and harvesting work; (c) deficient training of teachers to accommodate the curriculum to rural areas; (d) frequent absence of teachers who must travel long distances from the school to receive their salaries, get certified, or be trained; and (e) lack of parental involvement. Escuela Nueva was consolidated as a model for resolv-
ing these problems in an economically sustainable and pedagogically efficient manner. It has the advantage of the unitary school of offering up to all grades, but it does so with modern, semi-individualized methods which let the teacher guide the learning process by groups at the pace that the children learn, breaking the rigid scheme that has traditionally been used. The combination of the use of group and individual methods allows the students to go at their own pace. The model is also flexible regarding attendance, allowing students to work or otherwise help their parents and return to their studies when they have the time. The school has guides for teachers and students that unify the content of learning, provide a pedagogical guide to teachers and students, and indicate the moment for teacher intervention, private study, group discussions, and use of support materials.

In addition, Escuela Nueva has developed forms of interaction which, while making the children more responsible for their own education, also support their participation in the organization and management of the school. It has gained the support of parents because they can participate in both the way the school is organized and in the production of support materials. The educational microcenters also allow teachers to exchange experiences and solutions, thus becoming an efficient method of in-service training.

More than each particular element, what is important about Escuela Nueva (EN) is the synergism of all the factors (see Box 2). Based on the results obtained in systematic evaluations, we believe this is a desirable model for the entire rural sector, and even the urban marginal sector. The design of the program and the location of the schools clearly have had a positive effect on the poor. Evaluations (Psacharopoulos, Rojas, and Velez 1992; McEwan 1995), various tests conducted by SABER (Misión Social 1999), and efficiency studies and analysis by the Latin American Quality in Education Laboratory (UNESCO/OREALC 1998) have all found that the EN model has improved the quality of education of the poor. EN students achieve better results in learning, self-esteem, creativity, and in the formation of democratic values, and are more likely to remain in the system, and there have been significant effects of the model on activities such as agricultural extension and sanitation campaigns (Rojas and Castillo 1998). In terms of standardized tests, the 1997 study found top achievements in language and very similar achievements in mathematics. The UNESCO study found that Colombian students in rural areas score higher than students from Argentina, Brazil, and Chile. The model also increases parental participation.

c) Programs Addressing Effectiveness of Decentralization

Transferring resources to the poorest Departments and Municipalities. The reorientation of national transfers toward the poorest Departments and Municipalities has been the most important instrument of positive discrimination as part of the decentralization process in the 1990 because it has strongly affected the way in which current expenditures on education are made. The main characteristics of this form of intervention are (a) the stability of sector financing, (b) the clear objec-
Box 2. Colombia’s Escuela Nueva: A Tested Strategy for Reaching the Rural Poor and Improving Quality

Based on its study detailing major weaknesses in the provision of rural basic education, the government of Colombia gave top priority to rural education and produced a 10-year rural education program, which built heavily on the Escuela Nueva (EN) program. EN was created in 1976 after a decade of experimentation and has been supported at various times by UNICEF, USAID, the IDB, and the World Bank. By 1978 more than 500 schools were involved, and this gradually expanded under World Bank financing to 17,948 schools by 1989, serving 800,000 students. Major characteristics of EN include (a) one or two teachers offering all five years of primary education in one or two multigrade classrooms, (b) flexible promotion, special instructional materials for individual and group work, and teacher guides; (c) curricula relevant to the rural community; (d) school government to ensure participation of students, parents, and community; (e) study corners and class libraries, and (f) self-monitoring mechanisms for students. Rojas and Castillo (1988), Pschorrpolos, Rojas, and Veléz (1992), and McEwan (1995), have found that EN schools had significantly improved student outcomes, reduced dropout rates among the rural poor, and student and community participation as measured by activities such as adult education, agricultural extension, athletic competitions, health campaigns, and community celebrations. Social self-esteem and civic behavior were higher in EN schools than in traditional schools. Moreover, EN schools have high benefits relative to cost (parent volunteerism reduces monetary outlays for building and construction and contributes to gains in student achievement).

Although over 60 percent of rural schools in Colombia have some form of the EN approach, the initiative has lost momentum. Commitment by the MEN has diminished considerably over the last few years amid skepticism about its sustainability in the poorest rural areas and its “top-down approach” in such areas as teacher development and curriculum design. The challenge facing EN is to be able to adapt itself to the rapidly changing realities of educational decentralization in rural areas.

tive of favoring the poorest (although more needs to be done), and (c) decentralization of its management and operations.

Figure 3 illustrates the expansion of the transfer programs and their volume of resources. It has been rapid and incremental, reflecting a series of decisions, many ad hoc and not planned in advance. Since 1996 the central government, in response to a deficit due to the increase in the number of teachers and their salaries, had to create the Fondo Educativo Compensatorio (FEC) with an amount equivalent to 1.1
percent of central government current income. By 2000 it increased to represent 3.4 percent of central government current income. This continuous support from the central government—the government has picked up the cost year after year—has given the wrong signal to Entidades Territoriales (Territorial Entities), which keep hiring new teachers. Allocation of education transfers is driven by the supply of teachers, not the need for allocation of teachers to meet student education needs. Bogotá is trying a promising approach to correct this policy, and it should be monitored for its expected potential. For a detailed analysis of this problem see the Chapter on Intergovernmental Fiscal Relations.

V. Conclusions and Policy Recommendations

The new Administration needs to find solutions to the problems described in Section 2 on Issues in the Education Sector. Perhaps the priority is improving student learning. This is evident from the low learning achievement scores of many students at all levels. Improving student learning is fundamental to the future of Colombia and its ability to fully take advantage of accelerating technological progress and global competition.

To meet these challenges, the country would have to develop their own vision and strategy based on institutional-level realities. Decentralization has given the
Departments and Municipalities responsibilities for the development of the basic education system and opportunities to accommodate to national norms and to try out new ways to improve quantitative and qualitative indicators.

Solution of the inequities in the system is another priority. Colombia needs to selectively expand accessibility at the initial, preschool and higher education levels, at the same time that efforts are made to reach pockets of population that traditionally have not benefit from public investment in basic and middle education levels. Demand side financing such as the PACES programs would be important in reaching those excluded from school participation. Investments in preschools and early childhood development will definitely improve the efficiency of the primary education system through its impact on readiness of children for schooling. Investments are also needed to expand the opportunities for those in the labor force, through Life Long Learning Programs which seek to invest in the skills and education of the labor force to better adapt to the rapid and technical changes which would reinforce the country's economic competitiveness will be important in the next years. Colombia would increasingly be integrated into the global knowledge economy, and the education system needs to prepare its students to adapt to such changes. Finally, the country will need to support the decentralization process by improving governance of the sector, providing guidance and supervision.

Specific program options to address demand and supply side constraints are presented in Table 3 addressing educational issues facing Colombia. Most of these options have already been tried in Colombia, which need to be scaled up selectively to achieve the goal of achieving universal education, and quality labor force to support the country's economic and social development.

Given the key issues outlined above and possible options to respond to the situation, in Annex I some suggestions for short-term and medium-to-long-term support are presented as topics to be taken into account to design future investment and research.
<table>
<thead>
<tr>
<th>Key Educational Issues</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inequity of coverage</td>
<td>Selectively target areas with poorest urban, poorest rural, indigenous, and Afro-Colombian populations to increase coverage at all education levels. Promote decentralized planning with community participation and more equitable transfer of resources to local entities.</td>
</tr>
<tr>
<td>Sector efficiency</td>
<td>Pilot education innovations, like telesecundaria, accelerated schools, and expand STA, postprimaria rural and other cost-effective models, mainly in rural areas but also in poor urban ones. Support for closing gaps in retention, and learning achievement between poor and nonpoor rural and urban. Focus on learning.</td>
</tr>
<tr>
<td>Quality of education</td>
<td>Pilot education innovations, like telesecundaria, accelerated schools, and expand STA, postprimaria rural and other cost-effective models, mainly in rural areas but also in urban ones, and expand more cost-effective models. Establish National Evaluation System and development of school networks for teacher in-service training Reform of teacher education (escuelas normales). Strengthen multicultural education Focus on learning.</td>
</tr>
<tr>
<td>Education relevance</td>
<td>At least maintain levels of government expenditures. Support strengthening of student loan schemes. Promote life-long learning programs.</td>
</tr>
<tr>
<td>Resource allocation</td>
<td>Maintain present levels of government education expenditures while controlling administration expenditure and deal with pension issues (see Chapter on Pensions) Finding alternative sources for middle and higher education financing. Allocation of education of transfers driven by student education needs.</td>
</tr>
<tr>
<td>Inefficient decentralized system</td>
<td>Developing legal framework for clarification of roles, and programs to build capacity at all levels. Development of national monitoring system and management information system Keep process of human resources rationalization. Improve governance of the sector.</td>
</tr>
<tr>
<td>Internal conflict and violence</td>
<td>Support Education for Peace initiative. Introduce and promote democratic values, tolerance, social cohesion and social participation in curricular activities. Networking with other countries in region on education for conflict prevention and resolution. Develop strategies for education in conflict/postconflict areas, offering Peace Scholarships, and citizenship training for adult population.</td>
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Annex I
Possible Activities to be Implemented by the New Administration to Respond to Critical Education Sector Issues

a) Program Response to Educational Access Issue

Demand-side financing incentives. Under the present economic crisis, support is needed on an emergency basis to prevent the dropout mainly of children from the poorest households (quintile 1) from the public school system (this is already supported by the Familias en Acción program). A high priority needs to be assigned to developing demand-side financing mechanisms in the form of conditional cash transfers to attract and retain children in school. Interventions to reduce the direct and indirect costs of education for the rural poor and for displaced populations in urban and peri-urban areas will need to be carefully targeted. Possible interventions could be subsidizing families for lost earnings (opportunity costs) through the provision of scholarships, and building on the experience of a flexible school calendar and school hours for seasonal work obligations, such as those in Escuela Nueva. Financial incentives could be given to parents to send children to school and to keep them there through the provision of allowances accumulated as the child transfers from one grade or level to another. The experience of the school voucher system for poor students to attend private (or privately administered) schools should be evaluated for this reason. Such interventions would be targeted particularly at the very poor and indigenous populations, and at Afro-Colombians, who have proved to be the most vulnerable in this time of macroeconomic crisis and whose participation and achievement in school is most affected. Financial incentives in the form of grants for school attendance, like the system that has been piloted in Bogotá in the last couple of years, should be introduced in more Entidades Territoriales. Schools will also need to be helped in terms of resources in order to cope with the influx of students transferring from private schools (mainly from urban areas). Management of schools following the concession model experiment in Bogotá should also be promoted to gain efficiencies. A study of the effectiveness of the school voucher scheme giving access of the poor to private schools, introduced under the PACES program, was positively evaluated and indicates that this scheme to secondary school students should be expanded and that it may be used to apply a similar scheme for basic education students.

Higher education reform process. Support of the national initiative to introduce reforms in higher education institutes should be continued (see Chapter on Higher Education in this same volume for a detailed discussion). This would ensure that access to higher education is further extended to students of low-income fami-
lies and rural youth; that management of these institutions becomes more efficient, transparent, and accountable; and that the quality of teaching and learning is substantially improved. Most important, new financial resources in the way of student loans should be identified and designed.

Benefit-incidence analysis shows that higher education consumes a relatively high proportion of public expenditures, while the basis of cost recovery is higher at this level. In addition, public spending at the higher education level is regressive—that is, it favors the wealthy, and enrollment is very low. Primary education investment is considerable and public spending at this level is pro-poor. As a result, it is recommended that a student loan and fellowship plan be designed to expand enrollment at the higher education level, while at the same time improving access to higher education for capable poor students.

BUILDING HUMAN CAPITAL IN UNDERSERVED AREAS. Mechanisms should be established for building "intellectual capital" in rural areas which conventional higher education institutes have not served. The adoption of the community college model offering programs that serve local communities has been considered during the national debate (Sintegracián) on reforming higher education (see Box A1.1). Colombia already has an extensive network of university extension colleges, and the community colleges could perhaps be integrated with this model. A concern here, however, would be remaining faithful to the model of a community-managed facility rather than one governed by academia. Yet another concern that would have to be addressed would be the potential disparity in status between the proposed local community college and the existing university extension.

As a mechanism to build human capital in underserved areas, proven cost-effective models like the Escuela Nueva should be expanded. Currently, only about a third of rural schools are covered under this method, and it should be expanded gradually to cover rural isolated areas. Other innovations like SAT, Telesecundaria, and accelerated schools should also be evaluated to see if isolated communities and students can be reached. Studies must be conducted to identify cost-effective models at the early childhood development and preschool level with the same purpose.

b) Programs to Improve Quality of Education

Reforming teacher development programs and measuring teacher performance. Low standards of education have been closely linked with the inadequate training programs for teachers provided by the teacher training institutes—the escuelas normales superiores (normal schools) and the faculties of education. The following steps need to be taken to reform the teacher development system and to improve the quality of teaching:

- Teacher development programs (both in-service and preservice) should be made more relevant and practical, particularly for teaching in rural areas.
Box A1.1 Applying the Community College Model to Colombia

Community colleges could give broad access to education and training opportunities in the country, enabling the education system to reach out to youth and adult populations that are currently not able to receive appropriate skills training or to gain access to higher education institutions, which are concentrated in the urban areas of the country. One major constraint in education has been the lack of “intellectual capital” in the towns and rural areas of the country, limiting social and economic development and discouraging good professionals with families, such as teachers, from serving in these areas for long periods.

The community colleges would provide a comprehensive range of courses, tailor-made for the communities within which they operate and catering to the specific economic, technological, and developmental needs of a given area. Courses, therefore, would cater to those needing literacy and numeracy classes; skills training; and a vehicle for entering the formal education system, such as university, business training, and leisure learning. A critical consideration would be developing mechanisms to maintain rigorous quality assurance in the design of the curriculum and support systems.

The community colleges would be public, comprehensive institutions offering general education, including academic transfer to other institutions of higher education; technical and vocational education training; and compensatory, remedial, and community education. As such, the community colleges would have their foundation in the community (local population, business, and the labor sector), and would respond to the needs of the community. These colleges would be established in collaboration with the community within which they were situated, and the community would be represented in the governance, administration, and management systems of the institutions, thus enabling communities to participate actively in the governing and decision-making process. Partnerships among those already providing service could be built into the community college structure to deliver adult basic education and training, further education and training, and some access to the higher education sector. The community college concept is also rooted in the principle of democratic, community decision-making processes, and in the belief that learners at different stages in the lifelong learning process learn together as a community. For such colleges to succeed, substantial financial resources would be essential, with funding coming from a variety of sources: government (central and state), the private sector, and communities. Sources of funding could include national or international donors, fundraising events or campaigns, existing government allocations, student fees, the community, and employer contributions.
• Closer linkages need to be made between the normal schools and the faculties
• Quality assurance mechanisms need to be developed to measure the quality of teacher development programs and their impact on teacher performance and student outcomes.
• Evaluation of teacher performance (which features prominently in government policy) needs to be related to specific standards and the evaluation of the impact of teacher development institutes (this needs to be designed and implemented with the participation of teacher associations and unions).
• School networks, being piloted in the Pasto and Rural Education Projects, could be linked with the teacher training institutions to make preservice and in-service programs more responsive to the needs of the schools and teachers.
• Mechanisms need to be explored for linking teacher incentives and compensation to teacher performance.
• Education development plans of the teacher development institutions (Acreditación Previa) should be based on a specified profile of teacher competency and should be linked with the PEIs of the schools and those of the municipalities to ensure greater accountability and transparency.
• Teacher performance could be evaluated at at least three stages in a teacher's career: at recruitment, after preservice training, and after a period of teaching (five years, for example), in order to measure the effectiveness of preservice and in-service development programs.

Standards should be formulated for teacher development programs within the Faculties of Education and the escuelas normales superior, establishing quality assurance mechanisms together with all stakeholders (to include the participation of teachers and teacher associations and unions).

TELECOMMUNICATIONS AND DISTANCE EDUCATION. Because of the high incidence of violence, the need for rapid, affordable, accessible, and effective communications is critical. The learning needs of the rural poor are considerable, and it will take a long time for face-to-face learning processes to arrive in these areas. Modern information technologies would permit a vast array of learning resources to reach remote populations (see Box A1.2). The major universities, institutes, and nongovernmental organizations are interested in collaborating on distance education programs, and this can be seen as a mechanism for these institutions to increase student numbers at a time of falling enrollments due to economic constraints and security considerations. The marrying of telecommunications with the concept of community colleges, community learning and information centers, decentralized teacher training, and virtual education programs for youth and adults, would provide an effective strategy for addressing many of the education problems mentioned above.
Box Al.2 Mexico’s Telesecundaria: Increasing Access to Secondary Education for the Rural Poor

*Telesecundaria* provides a combination of distance and onsite secondary education for grades seven to nine in rural areas of Mexico where schools or teachers are in short supply and education is of poor quality. Educational television programming is broadcast through EDUSAT, Mexico’s educational broadcast system, and transmitted through Solidaridad 1, a government satellite, to 13,785 schools in two sessions daily. A school can be equipped and wired to receive *Telesecundaria* broadcasts for a total cost of US$2,000. Technical adaptations are made where necessary. For example, 10 percent of *Telesecundaria* schools use solar power. *Telesecundaria* schools are initiated at the request of local communities that demonstrate that 15 or more primary school graduates will participate and can identify a location for school facilities. The Mexican Ministry of Education then provides a teacher, a television set, a satellite dish, instructional programs, and textbooks. Today, 16 percent of secondary students in Mexico attend *Telesecundaria* programs instead of traditional or technical schools.

c) Program and Policy Response to Effective Decentralization

**Lack of Local Accountability for Management of Education Resources.**

Central government financing has created a disincentive for local entities to take steps to achieve greater fiscal efficiency through innovation and local fiscal effort. It is widely recognized that there are serious inefficiencies in the allocation of resources in Colombia’s public education system. These inefficiencies include the setting of teacher salaries and benefits by the central government, the generosity of the pension system for teachers, and the allocation of education resources to *Entidades Territoriales*. It is also widely mentioned that the expensive teacher force is in general ineffective in reaching academic goals. In fact, in spite of the tremendous effort on the part of the central government to improve teacher salaries, internal efficiency indicators have not changed since before 1994. Although policy recommendations on these topics are included in the Chapters of Pension Reform and on Intergovernmental Fiscal Relations, it must be mentioned that it is necessary to revise current transfer formulas to avoid a bias in favor of the *Entidades Territoriales* with better *Índices de Calidad de Vida* (Quality of Life Indicators, ICVs).

**Capacity Building at all Decentralized Management Levels.**

The impact of institutional strengthening will be measured in terms of more equitable distribution of resources in the form of funding and teacher supply and, ultimately, in the improvement in learning outcomes among the poorest sections of the country. To support this process it is critical that the MEN change its role from policymaking and control to one of knowledge management, evaluation, and supervision. Priority
should be given to the definition of clear responsibilities (*competencias*) at each level for the financing and management of human resources in the sector. We recommend as a priority the implementation of a human resources census to rationalize use of available resources. Some exercises have already been conducted on a sample basis in most *Entidades Territoriales*. As a consequence of conducting a census to rationalize human resources, Bogotá in particular is realizing some savings (about 10 percent of the payroll). This exercise will permit identifying possibilities for amalgamation of groups and schools, streamlining of academic work for teachers, application of Decree 3011/96 (full-time teachers), relocation of commissioned teachers, and identifying irregular appointments and teachers who have not fulfilled legal requirements.

**Establishing an Evaluation Unit within the Ministry of Education.** The decentralization process is worthwhile only if it improves the quality and equity of the education services. The role of the central ministry is crucial to ensuring that decentralized entities have the capacity and information at their disposal to effect changes in their education programs at the level of municipal subprojects. Learning from the many education programs implemented in the country in the past is as crucial as looking for innovative experiences in other countries. The establishment of rigorous monitoring and evaluation mechanisms is essential for this role of knowledge dissemination and piloting, and is one of the biggest challenges facing the central ministry. The PEs and the education plans prepared and executed by the department and municipal levels will need to be monitored and evaluated carefully to ensure that national goals relating to quality and equity are being achieved.

The MEN will have to play a significant part in piloting and evaluating educational strategies appropriate for the rural areas. Such pilots and evaluations, as mentioned, will include *Escuela Nueva; Telesecundaria; Aceleración del Aprendizaje* (Brazil’s accelerated learning program); and Colombia’s nonformal approach to secondary education in rural areas, the Tutorial Learning System (SAT). The great challenge for achieving the universalization of basic education while sustaining the stability of financing is to improve social efficiency by means of positive discrimination more decidedly in favor of the poor. With these innovations there is an opportunity to increase the social efficiency of allocation by better using current resources. But it also implies social mobilization in favor of the poor and social control of quality.

In addition, the SABER test results should be systematically disseminated to teachers, parents, and the community at large.

d) **Program Response to Mitigate Negative Impact of Violence and Displacement**

**Technical assistance in establishing networks in education in conflict areas.** Efforts should continue in the areas of peace education and education for societies in conflict and postconflict situations. UNICEF has models that have been successfully used in other countries experiencing conflict.
PILOTING STRATEGIES FOR SCHOOL–COMMUNITY LINKAGES AND CLASSROOM METHODOLOGIES FOR PROMOTING PEACEFUL COEXISTENCE. Strategies should be pursued for increasing social capital in rural areas susceptible to violence by introducing peace studies and conflict resolution and prevention in the curriculum and classroom methodology, and by developing more participatory school governance by establishing closer links between the school and the local community and parents.

BUILDING SOCIAL CAPITAL. Building social capital has to be given priority within the education system to support efforts to decrease violence and conflict in the country. Some successful pilots will need to be taken to scale after rigorous evaluation of their effectiveness in reducing violence and building social capital. This is a prerequisite for achieving any degree of sustainable development in the education sector and it should be a critical component of the next Administration’s development strategy.

EDUCATIONAL SERVICES FOR INTERNALLY DISPLACED POPULATIONS. Educational equity in Colombia is a great challenge at the start of the 21st century. Equity is not a value judgment, but rather a condition for growth. Since hundreds of thousands of people have been and continue to be displaced from the rural areas under conflict to the urban and peri-urban areas of the country without any prospect of returning to their homes, short-term support is needed for the large municipalities and districts (where more desplazados are moving) to strengthen the educational services in these areas for displaced populations and for people in zones of violence. This may mean support of learning resources to cope with the increased number of school-age population, or it may mean additional school buildings (or portable facilities). Early childhood facilities (such as those provided under the community-based HBI model described above, if proven cost-effective) would be needed not only to ensure that these displaced children have all the benefits of early stimulation and care, but also, as at all educational levels, to help these children recover from trauma related to conflict and displacement, and to release parents to join the workforce.
### Statistical Annex

**Table A.1. Country Scores in 1998 UNESCO/OREALC—Assessment of Student Outcomes in Latin America and the Caribbean**

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*Source: UNESCO/OREALC (1998)*
Table A.2. Distribution of Family Spending on Education, 1997

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Source: Sarmiento (2000) based on HHS data from DANE 1994–95 (Conducted every 10 years)
Table A.3. Distribution of the Primary and Secondary Education Subsidy by Income Decile, (constant 1996 pesos)

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<td>4,327</td>
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Source: Calculations by the Misión Social based on the Encuesta de Calidad de Vida (Quality of Life Survey), DANE, 1997
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<th>Department</th>
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<th>PERCAP</th>
<th>1998 with FEC</th>
<th>ICV</th>
<th>PERCAP</th>
<th>Variation 1994-98</th>
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<th>PERCAP</th>
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Departments with ICV below the national average and per capita transfers below average

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<th>PERCAP</th>
<th>1998 with FEC</th>
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<th>Variation 1994-98</th>
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<th>PERCAP</th>
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Departments with ICV below the national average and per capita transfers above average
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<td>(27,626)</td>
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Departments with ICV above the national average and per capita transfers below average

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*ATTNN = Territorios Nacionales

Source Calculations by the Misión Social based on DNP-UDT (transfers), DNP-UDS (FEC), Misión Social, “La educación en cifras” (enrollments), Misión Social, ICV 1993
References

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Health

This Chapter was written by Maria-Luisa Escobar and Panagiota Panopoulou.

I. Introduction

Colombia ranked first among 191 member states in terms of fairness of financial contribution and financial risk protection, according to The World Health Report 2000 (World Health Organization 2000). The report defined fair financing as a situation where "the risks each household faces due to the costs of the health system are distributed according to ability to pay rather than to the risk of illness." Fair financing constitutes one of the three goals to be achieved by national health systems, the others being good health and responsiveness to the expectations of the population. Good health was measured by two indexes—disability-adjusted life

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1 This Chapter was prepared by the authors based on information provided by a wide variety of Colombian institutions, agencies, and professionals in the health sector. The authors are grateful to Juan Pablo Urbe and Pablo Gortrer for their most valuable input, and to all others who contributed to the research process.

2 The index of fairness of financial contribution is given by the following formula:

$$\sum_{i=1}^{n} \left( \frac{HFC_i - \overline{HFC}}{1 - \frac{1}{125}} \right)$$

where $HFC_i$ is the financial contribution of household $i$ and $\overline{HFC}$ is the average financial contribution across households. The household's contribution to the financing of the health system is defined as the ratio of total household spending on health to its permanent income above subsistence. For more details see Chapter Five and the Statistical Annex, The World Health Report 2000.

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expectancy, and the index of equality of child survival. Responsiveness to the expectations of the population was based on a survey of key informants and facility surveys on issues like prompt attention, quality of basic amenities, choice of care provider, and so forth. Although Colombia is currently spending a high share of its GDP on health (9.3 percent), it is ranked 22nd worldwide according to an overall health system performance index defined in the World Health Organization report, and is first among Latin American countries\(^3\) (Figure 1).

This is an admirable achievement for a country that, before 1993, was characterized by a segmented health system that divided the different social groups into three categories: the Ministry of Health, the social security institute(s), and the private sector. Under this system, individuals covered by a specific health plan were either those employees whose companies paid part of their contribution (social security) or individuals who could afford and opted for private insurance. The rest of the population resorted to the services of the national health system and received care according to the availability of resources in medical institutions financed by the government.

By the beginning of the 1990s the health system was experiencing a number of serious problems, among which were low levels of coverage and access to health care services, inequity in the distribution of public subsidies for health, low quality of services in government health care facilities, and inefficiency in the use of public health resources. There was, therefore, a need for radical changes to make the system more cost-efficient, equitable, and accessible. These changes were effected through the passage of Law 100 (Ley 100) in December of 1993, which reformed the health system in Colombia.

Undoubtedly the biggest success of the reform has been the increase in affiliation, with health insurance coverage increasing from 24 percent to 55 percent of the population between 1993 and 1997, according to the data of the National Health Superintendency. However, high unemployment rates had an adverse effect, especially on the contributory regime, thus lowering affiliation rates to 54 percent by 2000. Rural areas experienced a much higher increase in coverage since they appeared to increase their affiliation rate from 7 percent in 1993 to 48 percent in 1997. Furthermore, increases in coverage were concentrated in the lower-income deciles where, for example, insurance coverage in the first decile rose tenfold, from around 4 percent in 1993 to 40 percent in 1997. In terms of access to health care, of the total number of individuals who reported ill in 1993, 68 percent received health care services by a professional. Four years later, the proportion of individuals who received health care services increased to 74 percent.

Despite these improvements, a number of issues have threatened the stability of the health sector reform. The slow transformation of supply to demand subsidies has hampered the affiliation process in the subsidized regime and provided no incentives

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\(^3\) Colombia was ranked 22nd with an uncertainty interval of 14–29, while Chile was ranked 33rd with an uncertainty interval of 22–43 (see Annex Table 10, Statistical Annex, *The World Health Report 2000*).
Figure 1. Overall Health Performance and GNP per Capita (PPP)

Sources: Data of World Health Report 2000, World Development Indicators (2001)
for public hospitals to restructure and compete with the private sector. At the same time, delays in transfers from national territories (departments and municipalities) to Administradoras de Régimen Subsidiado (Administrators of the Subsidized Regime, ARSs) and ultimately to health care providers have created an accumulated debt and jeopardized the viability of the system. Evasion in the contributory regime has deprived the Compensation Account of the Fondo de Solidaridad y de Garantía (Solidarity Fund, FOSYGA) of valuable resources and resulted in a limited amount of transfers to the subsidized regime through the “solidarity point” mechanism. Lack of information among the population eligible for the subsidized regime has created confusion between the concepts of the Sistema de Selección de Beneficiarios para Programas Sociales (Selection System of Beneficiaries for Social Programs, SISBEN) and affiliation, while the complicated nature of the SISBEN index has not allowed its frequent updating. Financial imbalances in the Instituto de Seguros Sociales (Institute of Social Security, ISS) health services have increased the economic fragility of the system, while the Treasury has covered ISS losses. Finally, the system has been challenged to cover expenditure for health care services not included in the health care benefit package of Law 100 based on the Constitutional “right to life.”

This Chapter analyzes the challenges facing the Colombian health sector, and at the same time recognizes the important steps achieved after the 1993 reform. It aims to inform policymakers about the issues and policy options that will contribute to universal coverage, solidarity, and quality of health care services, principles that characterize the most advanced health systems in the world and that are the main goals of Law 100. Its main findings are:

- The Colombian health system does not suffer from lack of funds. The resources available are sufficient to achieve full coverage and consequently finance the health care benefit package for the poor in the subsidized regime, provided that they are distributed accordingly.
- The elimination of evasion and elusion, the transformation of the full amount of available resources of the Situado Fiscal, and the use of the accumulated reserves of FOSYGA for increasing coverage would mean the expansion of the subsidized regime by 6.2 million individuals (or 65 percent of the population already affiliated to the subsidized regime).
- The restructuring of public hospitals, which are currently financed by government subsidies and not by providing (selling) their services will, in 10 years, accumulate a net savings of US$2 billion (in 2000 dollars), equivalent to 3 percent of the 2000 GDP.
- The reform of the ISS can provide, in 10 years, a fiscal savings varying between 1.2 and 2.4 percent of the 2000 GDP, depending on the type of the reform.
- The implementation of information and education campaigns regarding health sector reform is crucial for increasing coverage and access to health care.
- The lack of definition regarding the content of the Plan Obligatorio de Salud (Mandatory Health Plan, POS) poses serious problems for the viability of the
health system. The current void can be filled by the redefinition of the content of the health care benefit package and approval of a _ley estatutaria_ for the health sector.

This Chapter will focus on the issues of financing, organization, and management.

II. Background

_a) Before the Reform_

Like in other Latin American countries, such as Argentina and Mexico, the Colombian health system before the reform was organized as a three-tier system: the public (or official) sector, the social security (or decentralized) sector, and the private sector. Both health service provision and financing were segmented for each group of the population. The hub of the public sector was the _Ministerio de Salud_ (Ministry of Health, MOH), which, in collaboration with other agencies, was responsible for the provision of health care services to the low-income population not protected by a social security mechanism, estimated to be around 70 percent (Zukin 1985). The social security sector accounted for around 15 percent of the population, while the remaining 15 percent were covered by the private sector.

The social security sector was composed of two types of organizations: (a) _Cajas de Previsión Social_ (Social Health Insurance Funds, CPSs) such as the ISS for employees in the private sector and the _Caja Nacional de Previsión Social_ (National Health Insurance Fund, CAJANAL) for public sector employees, and (b) _Cajas de Compensación Familiar_ (Family Compensation Funds, CCFs). The first were quasi-public agencies providing sickness and maternity insurance and income maintenance plans, such as retirement and old age pensions. The largest and by far the most important CPS was the ISS, to which 12 percent of the population were affiliated and which operated and continues to operate its own national network of hospitals and outpatient facilities. The CCFs, on the other hand, were private legal entities organized along the lines of consumer cooperatives. Enrollment was mandatory and was made effective through the employee's firm. Besides health care services, these funds provided other benefits, such as recreation, education, and merchandising.

The private sector is comprised of private health insurance companies, hospitals, and clinics, and was financed by out-of-pocket expenditures of the wealthy.

Before 1993 the Colombian health system was facing problems with respect to low levels of coverage and access to health care services. Around 45 percent of the urban and 80 percent of the rural population were not covered by any insurance scheme and were heavily dependent on the public provision of services or on the private sector (Molina, Giedion, and Alviar 1993). According to the 1992 National Household Survey, one quarter of the population that had a health problem did not have access to the health care system. This situation affected 34 percent of the lowest-
income decile and only 2 percent of the highest-income decile, providing evidence of inequity among different socioeconomic groups (Plaza, Barona, and Paredes 1999). In addition, 40 percent of all outpatient visits and procedures and 45 percent of hospitalizations were in private facilities, suggesting that the public sector, offering services for free, was considered to be of low quality and/or rationed demand (ibid.). Furthermore, in 1992, 12 percent of hospitalizations and 20 percent of surgeries in the public sector were for patients in the wealthiest income quintile of the population. This implied that the wealthy might not have used the public sector for primary-type services (outpatient care, dentistry, and so forth), but mainly for complex and high-priced procedures (Bétrán y Asociados 1998). This phenomenon suggested inefficiency in the use of public resources for health, and inequity in their distribution.

b) The Reform: Law 100 of 1993

Law 100 of 1993 mandates the creation of a new system characterized by universal national health insurance coverage, involving cost-sharing between the affiliate/insured and the insurance entity on the financing side, and a pluralistic system of provision, involving both private and public providers on the supply side. The new law has three main goals: universal coverage, solidarity, and efficiency with adequate quality.

According to the universal coverage principle, every citizen, regardless of financial means, has access to basic health care services. Those who are able to pay are treated under the contributory regime (régimen contributivo) and are liable for a monthly contribution equal to 12 percent of their wage income, of which the employee pays 4 percent and the employer pays 8 percent. Self-employed individuals are obliged to pay the total 12 percent of the contribution. Public employees have a minimum income base for contributions one minimum monthly wage, while the self-employed have two minimum monthly wages.

On the other hand, the poor and indigent do not make any insurance contribution and are covered under the subsidized regime (régimen subsidiado). The insurance entities of the subsidized regime are called Administradoras de Régimen Subsidiado (Administrators of the Subsidized Regime, ARSs). To be eligible for the subsidized regime, individuals must be classified by the municipalities as SISBEN level 1 or 2, SISBEN being a proxy means-tested index. After complete coverage of the population at SISBEN levels 1 and 2, further beneficiaries come from the SISBEN level 3 population, starting with the households of lower to higher SISBEN scores. Individuals who are eligible for affiliation to the subsidized regime but have not yet been affiliated are called vinculados, and have the right to receive health care services at lower prices in public hospitals. However, in many cases public hospitals provide health care services for free to vinculados who claim that they cannot afford to pay.

Every eligible contributor freely chooses the Empresa Promotora de Salud (Health Promotion Entity, EPS) to which he or she wants to affiliate. The individual then selects the preferred family physician and referral hospital available within the EPS. Changes of selected insurers and/or providers are allowed once a year. EPSs are
responsible for the collection of contributions. These contributions, in turn, are concentrated in a single fund, the *Fondo de Solidaridad y de Garantía* (Solidarity Fund, FOSYGA), with EPSs receiving a capitation payment for each affiliate (*Unidad de Pago por Capacitación*, Capitation Payment Unit, UPC). The subsidized regime allows free choice of insurer. The subsidized regime is financed from government subsidies and a solidarity mechanism called the “solidarity point” (*punto de solidaridad*) that mandates that 1 percentage point of the 12 percent wage contribution of the members of the contributory regime should be directed to the subsidized regime.

Both regimes have access to a basic benefit package, but members of the contributory regime enjoy additional services to those received by members of the subsidized regime. The main difference between the *Plan Obligatorio de Salud* (POS) for the contributory regime and the *Plan Obligatorio de Salud Subsidizado* (Subsidized Mandatory Health Plan, POSS) is that the POSS includes second- and third-level hospitals services. Thus, the UPC for the subsidized regime is 40 percent of the value of the UPC for the contributory regime. The health care benefit package offers family coverage. In addition to the POS, most EPSs offer extra services in the form of complementary health plans (*Plan de Atención Complementaria*, Complementary Health Plan, PAC) or prepaid medicine plans (*Plan de Medicina Prepagada*, Prepaid Medicine Plan, PMP). For an individual to have a PAC or a PMP he or she should be affiliated to the contributory regime. Both private and public health care providers (*Instituciones Prestadoras de Salud*, IPS) are responsible for the provision of the POS. The IPSs are supposed to be contracted, on a competitive basis, by the insurance entities. However, the fact that certain EPSs construct their own IPS and suggest to their affiliates the use of the specific units violates this principle and has created serious concerns. Figure 2 illustrates how the Colombian health care system is organized, while Table 1 presents a review of health sector indicators.

By 2000, 13.4 million individuals were part of the contributory regime (around 32 percent of the total population), while 9.5 million individuals were part of the subsidized regime (22 percent of the total population), giving a national coverage rate of around 54 percent, according to data of the National Health Superintendency. Given that in 1993 only 24 percent of the population were insured, the introduction of the health reform increased health insurance coverage by 30 percent, with the majority of newly insured being poor individuals. However, as can be seen in Table 1, the number of affiliates in the contributory regime decreased after 1998 due to the economic crisis and the increase in unemployment, while the number of affiliates in the subsidized regime increased only marginally between 1999 and 2000.

As was expected, the creation of ARSs introduced a number of new insurance entities in the subsidized regime, while there was also a 45 percent increase in the number of insurers in the contributory regime. The number of EPSs increased to roughly 30 (two thirds of which are private); the number of ARSs exceeded 200, many of which were later severely criticized for lack of managerial capacity and

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4 Law 100 does not prohibit vertical integration.
Figure 2. The Colombian Health System After the Reform of 1993

Note: Service flows are shown as broken lines and financial flows as solid lines accompanied by the currency symbol ($).
transparency. The result is that regulations implemented in 2001 decreased the number of ARSs to below 50.

In terms of resources assigned to health, there was an important increase in the last 10 years as a result of Law 100 of 1993, Law 60 of 1993 (the Decentralization Law), and the Constitution of 1991. Total public expenditure for health in 1991 was slightly higher than 1 percent of GDP, reaching 5.2 percent of GDP by 2000. Before 1993 these resources were mainly used for the financing of public hospitals in the form of supply subsidies (historical budgets). Law 100, however, mandated the transformation of supply subsidies to demand subsidies in the form of UPCs available to insurance entities for the financing of the health care plan of the subsidized regime (for more details see section on Financing). As a result, by 2000, demand subsidies as a percentage of total health resources were equal to 47 percent.

c) Implementation of the Reform

The implementation of the reform affected all areas of the health sector. Given the wide spectrum of the reform, this section will concentrate on insurance coverage, access to health care, quality of health care, and equity issues within these categories.

i. Insurance Coverage

The most impressive results of health sector reform have been observed in the area of insurance affiliation. Coverage reached its peak in 1998, with around 24 million affiliates in both regimes accounting for 60 percent of the total population (Table 2). However, high unemployment rates had an adverse effect, especially for the contributory regime, resulting in a decrease of affiliation in 2000 to 54 percent.\footnote{Sources other than the National Health Superintendency offer slightly different estimates of the number of affiliates to the system. According to the 2000 Demography and Health Survey, the level of affiliation as a percentage of the total population was higher, at around 58 percent. The corresponding percentage of the 2000 National Household Survey was 53 percent.}
Table 2. Number of Affiliates, 1996–2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Contributory Regime</th>
<th>Percent</th>
<th>Subsidized Regime</th>
<th>Percent</th>
<th>Total Affiliates</th>
<th>Percent</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>13,728,297</td>
<td>34.9</td>
<td>5,981,774</td>
<td>15.2</td>
<td>19,710,071</td>
<td>50.2</td>
<td>39,295,797</td>
</tr>
<tr>
<td>1997</td>
<td>14,969,278</td>
<td>37.4</td>
<td>7,026,690</td>
<td>17.5</td>
<td>21,995,968</td>
<td>54.9</td>
<td>40,064,092</td>
</tr>
<tr>
<td>1998</td>
<td>16,090,724</td>
<td>39.4</td>
<td>8,527,061</td>
<td>20.9</td>
<td>24,617,785</td>
<td>60.3</td>
<td>40,826,815</td>
</tr>
<tr>
<td>1999</td>
<td>13,652,878</td>
<td>32.8</td>
<td>9,325,832</td>
<td>22.4</td>
<td>22,978,710</td>
<td>55.3</td>
<td>41,586,018</td>
</tr>
<tr>
<td>2000</td>
<td>13,409,888</td>
<td>31.7</td>
<td>9,510,956</td>
<td>22.5</td>
<td>22,919,654</td>
<td>54.2</td>
<td>42,321,386</td>
</tr>
</tbody>
</table>

Note: Percentages are of total population.
Source: Data of the Ministry of Health

Urban areas appear to have a higher number of affiliates than rural areas. However, the rate of increase in rural areas has been higher than the rate of increase in urban areas. Coverage in rural areas increased from 7 percent of the total population in 1993 to 48 percent of the total population in 1997. At the same time, the increases in coverage have concentrated in the lower-income quintiles (Figure 3). For example, in the first quintile insurance coverage rose nearly seven times, from 6 percent in 1992 to 43 percent in 1997, while in the fifth quintile coverage rose modestly, from 60 to 75 percent. Within the new system the ISS continues to play an important role. Before 1992, around 15 percent of the total population appeared affiliated to the ISS, while by 1997 this number had grown to just over 22 percent. More recent data confirm that by 2000 the ISS was in a crisis, losing affiliates to other EPs (Table 3).

Although coverage increased considerably after the reform, one has to take into account that, according to figures of the Ministry of Health for 2000, around 32 percent of the poor population are still not covered by the system.6 In addition, despite the fact that according to the law only individuals categorized as SISBEN levels 1 and 2 and in some cases as SISBEN level 3 are the strictly eligible population for the subsidized regime, data show that individuals with a higher SISBEN score and with the capacity to pay have affiliated to this regime (Ministerio de Salud 2000; World Bank 2001, Panopoulou 2002).7

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6 According to data of the Ministry of Health, around 9.5 million people were affiliated to the subsidized regime in 2000, and the national population was around 42 million. Given that approximately one third of the population is expected to become affiliated to the subsidized regime (13.9 million), the number of nonaffiliated individuals as a percentage of the eligible population is around 32 percent (4.4 + 13.9).

7 Estimates of the exact number of individuals who belong to the subsidized regime but are in SISBEN level 3 and higher should be treated with caution given that for all studies mentioned above, the SISBEN level of the individual is constructed based on information available in national surveys and is not reported by the individual himself or herself. According to the estimates of the first two studies, approximately 10 percent of individuals with a SISBEN classification document are in SISBEN levels 4 and 5.
ii. Treatment Rates

Insurance is a necessary but not a sufficient condition to receive health care services. Estimates of treatment rates (that is, the ratio of the number of individuals reporting receiving medical care to the number of individuals reporting being ill) offer an approximate measure of receiving health care. From the total number of individuals that reported being ill in 1993, 68 percent received medical attention by a professional. By 1997 the proportion of individuals who received health care services when ill had increased to 74 percent. In 1997, the treatment rate among affiliates reached as high as 79 percent, while among nonaffiliates the treatment rate was much lower, at 64 percent. Unfortunately, data available for 2000 (Encuesta Nacional de Hogares 2000, National Household Survey 2000, ENH/2000) are not comparable with the data for 1993 and 1997.

iii. Quality of Health Care

The data of the 1997 National Quality of Life Survey show that among individuals who received health care services after the reform, the great majority—more than 80

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8 The surveys used for the calculation of the treatment rates are Encuesta de Caracterización Socioeconómica 1993 (Survey of Socioeconomic Characterization, CASEN/93) and Encuesta Nacional de Calidad de Vida 1997 (Survey of Quality of Life, ENCV/97).
Table 3. Changing Patterns of Health Insurance, Percentage of Affiliates

<table>
<thead>
<tr>
<th>Year</th>
<th>Not Insured</th>
<th>ISS</th>
<th>Other EPSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>68.9</td>
<td>15.0</td>
<td>0.0</td>
</tr>
<tr>
<td>1997</td>
<td>43.2</td>
<td>22.1</td>
<td>12.2</td>
</tr>
<tr>
<td>2000</td>
<td>47.7</td>
<td>15.3</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Note: Percentages are of total population. Percentages do not add up to 100 percent horizontally because of the existence of other types of insurance entries.

percent—reported that the quality of health care services was good (Table 4). In terms of timing, the percentages reporting that the service was prompt (servicio oportuno) were equally high. Satisfaction levels did not differ between chronically ill individuals and individuals that had a health problem within the last 30 days. Similar are the results obtained by the data of a 2000 national survey carried out by the Defensoría del Pueblo for general consultations, where 42 percent received a consultation on the same day that they requested one (Table 5). However, in the case of a consultation with a specialist, 25 percent had to wait from 15 to 30 days.

d) Financing

Health system resources are derived from all levels of government—national, departmental, and municipal. At the national level the most important role is played by the FOSYGA. The FOSYGA was created by Law 100 to monitor the financing and administration of the contributory and subsidized regime, the promotion of public health, and the payment of health care services that result from traffic accidents and catastrophic and terrorist events. It consists of four accounts: Compensation, Promotion, Solidarity, and Traffic Accidents and Catastrophic and Terrorist Events (ECAT) (Figure 4). The Compensation Account manages the resources of the contributory regime. The latter is financed by the contributions of the affiliates to the

Table 4. Quality of Health Care, 1997

<table>
<thead>
<tr>
<th></th>
<th>Ill</th>
<th>Chronically Ill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service: Prompt</td>
<td>85.5</td>
<td>83.8</td>
</tr>
<tr>
<td>Service: Delayed</td>
<td>14.5</td>
<td>16.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Service: Good</td>
<td>83.6</td>
<td>80.0</td>
</tr>
<tr>
<td>Service: Regular</td>
<td>13.1</td>
<td>16.1</td>
</tr>
<tr>
<td>Service: Bad</td>
<td>3.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Percentages add up to 100 percent vertically.
Source: Departamento Nacional de Planeación (2001).
Table 5. Waiting Time to Receive Treatment

<table>
<thead>
<tr>
<th>No. Days</th>
<th>General Consultation</th>
<th>Specialized Consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 0 to 1</td>
<td>42.7</td>
<td>26.6</td>
</tr>
<tr>
<td>From 2 to 3</td>
<td>14.7</td>
<td>15.3</td>
</tr>
<tr>
<td>From 4 to 14</td>
<td>14.1</td>
<td>27.3</td>
</tr>
<tr>
<td>From 15 to 30</td>
<td>10.5</td>
<td>25.5</td>
</tr>
<tr>
<td>More than 30</td>
<td>1.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Do not inform</td>
<td>16.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note* Percentages add up to 100 percent vertically

*Source: Departamento Nacional de Planeación (2001)*

Regarding EPSs are responsible for the collection of these contributions. If the difference between the contributions received (12 percent of the wage income of each affiliate) and the total amount of risk-adjusted premiums for the affiliated population of the insurance entity is positive, the insurance entity sends the surplus to the FOSYGA Compensation Account. On the other hand, if the difference is negative, the insurance entity receives the difference by the same account. The FOSYGA Compensation Account appeared to have surpluses from 1996 to 1999, while in 2000 it recorded a deficit of COP81,000 million (US$33 million). According to MOH officials, the deficit was the result of the full inclusion of affiliates of the ISS, the largest insurance entity in the contributory regime, in this account.

The Solidarity Account manages the resources of the mechanism of the solidarity point, which is used for the financing of the subsidized regime. Other national resources which are used for the financing of the subsidized regime are a portion (between 5 and 20 percent) of the resources administered by the CCFs, the Situado Fiscal, and the Rentas Cédulas.

**Figure 4. Financing of the Health System**

<table>
<thead>
<tr>
<th>Resources</th>
<th>FOSYGA</th>
<th>Compensation Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Family Compensation Funds (CCF)</td>
<td>Promotion Account</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Solidarity Account</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ECAT Account</td>
</tr>
<tr>
<td>Departmental</td>
<td>Fiscal Situation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transferred Rents</td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td>Participations of Current National Income (PICN)</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Data of Institute of Social Security*
The definition of most of the sources of funding at the national level have been created by Law 100 of 1993, while departmental resources have been defined by Law 60 of 1993 (the Decentralization Law). The latter defines the Situado Fiscal and the Rentas Cedidas to be allocated to the health sector. Although these resources were initially destined for hospitals as supply subsidies, both Law 100 and Law 344 of 1996 mandate their gradual transformation to demand subsidies which are going to be used for increasing the insurance coverage in the subsidized regime. Table 6 gives the proportion of the total transfer that has to be transformed into demand subsidies. Nevertheless, as seen later in this Chapter, this transformation was not completed.

<table>
<thead>
<tr>
<th>Transfer</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal Situation</td>
<td>15</td>
<td>25</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>Transferred Rents</td>
<td>0</td>
<td>15</td>
<td>25</td>
<td>60</td>
</tr>
</tbody>
</table>

*Note: Figures are percentages of the size of the demand subsidies

*Source: Law 344 of 1996

Another form of financing comes directly from the national government. Initially, the national government was obliged to put 1 peso in the FOSYGA Solidarity Account for every peso transferred from the contributive regime through the solidarity mechanism. However, the government did not fulfill this obligation between 1995 and 1998, accumulating a considerable debt. In 1998, and in accordance with the modification of Law 100 of 1993 by Law 344 of 1996, the government cannot contribute less than a quarter of a peso for every peso received by the mechanism of the solidarity point.

Recognizing the rather complicated nature of the financing of the subsidized regime, the Colombian government recently approved Law 715 of 2001 which reforms Law 60 and consequently the system of allocation of resources within the subsidized regime (for more details on Laws 60 and 715 see section on Delays in Transfers from National Territories to ARSs and Ultimately to Health Care Providers).

III. Sector Issues

a) The Social Security Institute

The Social Security Institute (ISS) is the largest EPS in the country and the most important among all public insurance entities. Given that the process of transformation of the "old" to the "new" system is still incomplete, the ISS plays a key role in the health system and in health reform. Because of its size and history, the ISS decisively influences the market; because of its particularly critical financial situation
and lack of complete information on its beneficiaries, the ISS is a net burden to the FOSYGA Compensation Account, importantly contributing for the first time in 2000 to a deficit in this account of COP81,000 million (US$33 million).

The ISS was created in 1946. The approval of Law 100 gave the ISS the legal form of an Empresa Industrial y Comercial del Estado (Industrial and Commercial State Company). The ISS is authorized to manage retirement pensions, workers' compensation, health insurance (ISS–EPS), and health service delivery (ISS–IPS). Each area—pensions, workers' compensation, and health insurance—is treated separately from an accounting perspective. However, in health, the EPS business and the IPS business are budgeted and accounted for jointly. With the introduction of health reform of 1993, the ISS health arm showed itself to be an inefficient institution, unable to compete with the private sector. ISS difficulties, including noncompliance with minimum financial indicators, arise primarily from (a) the mixture of financing (EPS) and delivery (IPS) of services; (b) difficult labor issues and high fixed costs relative to service provided, which make the ISS–IPS noncompetitive in the market; (c) inadequate planning and control, and (d) poor quality of services.

i. Mixed Financing and Delivery

One of the major problems facing the ISS is the mix of financing and delivery. According to the ISS formal structure, financing is managed by the ISS–EPS, which also manages the Centro de Atención Ambulatoria (Centre for Ambulatory Care, CAAs). On the other hand, the ISS hospitals are managed under the ISS–IPS unit. Currently, the ISS has 35 hospitals and 240 ambulatory service centers. Notwithstanding ISS formal structure, the cross-subsidy from EPS to IPS is reflected by the huge leaps and declines in liabilities and returns assigned to the ISS–IPS and to the ISS–EPS by ISS's formal balance sheets and income statements. The unlikely behavior of these and other variables imply that liabilities, revenues, and expenditures are likely being assigned arbitrarily between the IPS and the EPS. Moreover, EPS budgets are approved based on historical behavior and revenues, and do not reflect market prices for services that the ISS–EPS would be able to obtain elsewhere if not forced to purchase services from the ISS–IPS.

ii. Labor Issues and High Fixed Costs

One of the major problems of the ISS–Health is its high and inflexible costs derived primarily from high labor costs and generous labor agreements. In reality, the ISS enjoys a "preferred treatment status" among public institutions when it comes to labor issues. ISS's high labor costs derive from its large number of employees and generous benefits, effectively defended by a strong coalition of internal unions and outside political support. As of February 2000, the ISS–Health had a total 33,000 workers, of which 19,000 were permanent or regular employees deriving all benefits from labor contracts or special agreements with labor unions, and 14,000 were contracted workers. Health workers (both permanent and contracted) represented 90 percent of ISS's total number of employees. Similarly, ISS health salaries represented 88 percent
percent of ISS total payroll. Moreover, ISS salaries have been increasing in real terms as a result of labor agreements. The last agreement generated a real increase of the basic salary of 2.4 percent in 1997, 1.48 percent in 1998, and 8.21 percent in 1999. The problem is compounded by the fact that the basic salary is used as a base to calculate all other fringe benefits, which implies that such increases in real terms had compounded effects on total expenditures. As a result, labor costs (including extraordinary pensions or out-of-pocket pension benefits, administrative salaries, salaries to medical personnel, and fringe benefits) have been increasing as a percentage of total expenditures from about 37 percent in 1996 to over 60 percent in 2000 (Figure 5).

A major consequence of ISS's high fixed costs is that it is competitive neither as an administrator of insurance (EPS) nor as a health services provider (IPS). Private EPSs are able to contract services with lower-cost health providers and increase quality and choice. The ISS–IPS is virtually unable to sell its services to outsiders. In 2000 less than 0.5 percent of total ISS revenues derived from such sale of services, despite having highly specialized hospitals with top-level technology.

iii. Absence of Planning and Control
The absence of adequate planning and control mechanisms has led ISS to make abrupt and costly decisions. For instance, in 1997, facing an initial decline in the number of

Figure 5. ISS Expenditures

![Graph showing ISS expenditures over years]
affiliates, the ISS promoted the entry of beneficiaries without applying a minimum enrollment period for service eligibility. As a result, 24 percent of ISS’s medical expenditures are spent on high-cost, low-incidence events (for example HIV patients requiring hemodialysis or transplants) compared to only 11 percent in competing EPSs. Similarly, that same year, the ISS allowed affiliates to freely choose their provider (libre adscripción). This dramatically increased its costs and worsened its debts toward third parties, which later could not be honored. Total liabilities increased 44 percent in real terms between 1997 and 1998, hurting other private providers as they saw their working capital tied up in nonperforming accounts receivable from the ISS. As credibility and credit with the private sector diminished, so did outside purchases of medical services, which dropped 67 percent in real terms between 1997 and 2000, and therefore increased the number of ISS beneficiaries moving to private EPSs.

Another major problem is that the ISS does not have reliable systems and controls, which results in (a) an unreliable database of affiliates; and (b) inadequate and unreliable budgeting, treasury, and financial reporting. Such inadequate reports make it extremely difficult for authorities to make on-time and appropriate decisions. External auditors have been reluctant and, in fact, have expressed no opinion with respect to the ISS–Health financial statements; (c) inadequate inventory controls. The ISS has little control over inventories, which may lead to abuse and higher costs, and (d) inadequate information regarding the health profile of affiliates. The absence of this information leads to higher costs as services concentrate on curative measures rather than family primary care.

iv. Poor Quality of Services
The ISS does not have manuals, systems, or the capacity to perform quality control of service delivery. This has led to client dissatisfaction as reflected by more than 2,100 complaints received by the Superintendency of Health in fiscal year 2000. These complaints have resulted in a massive exit of affiliates from the ranks of ISS, which dropped from over 7.5 million in 1997 to only 4.1 million in 2000, according to the National Health Superintendency. High fixed costs stemming from high labor costs, while simultaneously facing decreased revenues as a result of the exit of dissatisfied clients, have resulted in negative returns to ISS. On the basis of expenditures of US$813 million as of 31 December 2000, and a UPC of US$130, the ISS would require close to 6.3 million affiliates to break even. The ISS claims to have 5.2 million affiliates, but has been able to prove and be compensated (that is, receive risk-adjusted premiums from FOSYGA) for only 3.6 million affiliates.

v. Noncompliance of Minimum Financial Indicators
The problems facing the ISS have led to an institution that is insolvent, illiquid, and which shows negative returns. As can be seen from Figure 6, the ISS consolidated statements for EPS and IPS show a negative equity starting in 1998. Negative equity reached a total of US$267 million as of 31 December 2000. Total liabilities increased 66 percent in real terms between 1996 and 2000, reaching a total of
US$749 million by 31 December 2000, equivalent to 155 percent of total assets. Decree No. 882 of 1998 defines solvency margin as the amount of liquidity that an EPS must have to be able to meet obligations with third parties within 30 days. When an EPS is unable to pay such debts within 30 days, among other sanctions, it will be prohibited from adding new affiliates. Total ISS arrears with maturities beyond 30 days amounted to US$37 million as of 31 December 2000. As a result of arrears beyond 30 days, the Health Superintendency prohibited the ISS from incorporating additional affiliates until recently. The sanction also implied that current ISS affiliates may exit the ISS at any time.

The ISS has a huge liquidity constraint. Working capital requirements amounted to about US$266 million at end 2000. Current assets represented only 37 percent of required payment to short-term liabilities. The ISS consolidated EPS and IPS income statement has been presenting losses for over five years. Total losses for fiscal year 2000 amounted to about US$65 million. Cumulative losses to the same date amount to US$441 million (Figure 7). The Treasury has been covering ISS losses. However, in 2000 the government decided not to allocate more resources until the situation of ISS is resolved.

b) Public Hospitals

In an effort to separate financing from provision of services, Law 100 introduced two major changes in the way the public network of providers operates. First, it
altered the way public hospitals are financed from direct budget support to demand subsidies paid by intermediary insurance entities and their affiliates. Second, it gave autonomy to public hospitals by transforming them into Empresas Sociales del Estado (ESEs). By 1999, around 72 percent of second- and third-level public hospitals had been converted to ESEs. The public network of hospitals, health centers, and posts is supposed to compete with and complement the private network of providers in order to sell its services to the affiliated population through the EPSs and ARSs. By the same token, since the entire population is not already covered by the Sistema Nacional de Seguridad Social en Salud (National System of Social Security in Health, SNSSS), the public hospitals should deliver services for those not affiliated.

Although both measures introduced by Law 100 were implemented up to a certain level, the health system is still under transition and this creates important problems at the hospital level. The transformation from supply subsidies to demand subsidies mandated by the reform has moved very slowly, if not stalled, because of the pressure to continue financing public hospitals through supply subsidies. This creates a vicious circle, where supply subsidies are not transformed into demand subsidies and the low level of resources in the subsidized regime does not allow individuals to become affiliated. In turn, hospitals have to attend a nondecreasing number of inscritos which, combined with low efficiency levels, results in public hospitals requesting even less transformation of supply subsidies to take place. Among the problems to be addressed are...
• Public hospitals have not adjusted their cost structure and efficiency levels to a competitive market, thus becoming less competitive than private health care providers and less attractive for the EPSs and ARSs. In 1998, less than one third of the total income of public hospitals was derived from selling health care services (Table 7). In the case of Bogotá, only 11 percent of total income stems from contracts with EPSs and ARSs, while the rest is provided as budget support by the Secretaría Distrital de la Salud (District Health Secretary, SDS) (Giedion, López, and Marulanda 2000). At the same time, expenditures for medical supplies, which in 1993 represented 33 percent of total expenditures, in 1998 represented only 19 percent, suggesting a deteriorating effect on the quality of services (Table 7).

• Labor costs have increased 40 percent since 1995 due to salary negotiations, distorting even more the cost structure of public hospitals and forcing them to request even more resources from the Treasury. In fact, as can be seen in Figure 8, resources to public hospitals increased in real terms by 148 percent from 1993 to 1999. In 1998, 68 percent of these resources were used to pay salaries (Table 7).

• Public hospital expenditures increased not only in actual value but also as a percentage of GDP. In particular, in 1996 public hospital expenditures were nearly 1.8 percent of GDP, while in 2000 they represented nearly 2.8 percent of GDP (Table 8). Taking this into account, all health expenditures in the system were 9.3 percent of GDP in 1999. The tendency has been for hospital expenditures to increase and become a larger burden on the system's finances.

• Although hospital expenditures and income have both increased, there is no evidence that public hospital efficiency has improved. Data of the 1995 Harvard Efficiency and Capacity Survey show that public facilities are less

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### Table 7. Distribution of Total Expenditure and Total Income of Public Hospitals of Levels I, II, and III, 1993 and 1998

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sruado Fiscal</td>
<td>45.0</td>
<td>33.0</td>
<td>Salaries</td>
<td>64.0</td>
<td>68.0</td>
</tr>
<tr>
<td>Other national resources</td>
<td>2.0</td>
<td>7.0</td>
<td>Medical supplies</td>
<td>33.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Rentas Cedidas</td>
<td>20.0</td>
<td>7.0</td>
<td>Transfers</td>
<td>–</td>
<td>6.0</td>
</tr>
<tr>
<td>Other departmental resources</td>
<td>3.0</td>
<td>3.0</td>
<td>Debt services</td>
<td>–</td>
<td>2.0</td>
</tr>
<tr>
<td>Municipal resources</td>
<td>4.0</td>
<td>6.0</td>
<td>Investment</td>
<td>3.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Other municipal resources</td>
<td>–</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision of services</td>
<td>22.0</td>
<td>32.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other income</td>
<td>–</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital income</td>
<td>4.0</td>
<td>8.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>Total expenditure</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Note: Figures are percentages of total expenditure/income. Percentages add up to 100 percent vertically.*

*Source: Departamento Nacional de Planeación (2001)*
productive in terms of human resources than private facilities (Harvard University 1996). Moreover, many of the public hospitals operate with very low utilization rates, which implies a very high cost per hospital activity. Although resources in public hospitals have increased through supply subsidies, efficiency levels as measured by resources assigned to potential patients/users have decreased, since in 2000 there were around 9 million poor individuals affiliated to the subsidized regime, and therefore financed by demand subsidies.

• Public hospitals face a serious situation of accumulated debt from providers—a great amount from the ISS—that is aggravated by their low capacity to recover costs from EPSs, ARSs, and individuals. This, combined with the difficulty of transferring on time the resources to ARSs, puts public hospitals in a delicate position to recover debt. Therefore, to cover their fixed costs, public hospitals are forced to request increasing amounts of government resources through supply subsidies.

Table 8. Real Public Hospital Expenditures as Percentage of GDP

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure as percent GDP</td>
<td>1.76</td>
<td>2.05</td>
<td>2.30</td>
<td>2.16</td>
<td>2.76</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations with data of the Ministry of Health
Box 1. The British Experience

Before April 1991, hospital and community health services in the United Kingdom were financed and managed by regional and district health authorities and received global budgets, determined mainly on a historical basis. The Department of Health made allocations to regional health authorities for the running costs and the capital costs of services, and the regions made allocations to district health authorities. The allocations were based on a formula taking into account the size, demographic composition, and standardized mortality of the population in the different regions. However, the public hospital network was facing a number of problems, including low satisfaction rates among its patients, waiting lists that by 1990 amounted to over 900,000 people for the NHS (National Health System) alone, and large variation in performances among individual hospitals.

In an effort to deal with these issues a reform of the public hospital network was announced in January 1988 within the context of a wider health reform. The 1988/89 Review of the NHS mandated among other things that (a) well-managed NHS hospitals were to be given the opportunity to volunteer to become self-governing trusts within the NHS, (b) district health authorities were to be expected to operate as active purchasers of hospital services, and (c) hospitals were to be encouraged to compete for the contracts with districts. Since “money would follow the patient,” hospitals would be given new incentives to satisfy patients and to minimize costs.

Implementation of the reform went ahead as planned, and by April 1999, 57 NHS hospitals and units became self-governing trusts. A second wave of 99 trusts joined the initial group in April 1992. One result of the reform was that the new “self-governing” trusts started using their greater managerial freedom to improve quality and efficiency of services. Several announced reductions in in-patient length of stay, increases in activity, and reductions in waiting times. Finally, a survey carried out soon after the reform revealed that three out of 10 patients had noticed an improvement in the service they received.


Without restructuring of public hospitals, the system will not be able to continue successfully implementing the health sector reform, and the accomplishments on increased coverage, access, equity, and satisfaction will be lost. If public hospitals do not change their cost structure, introduce new processes to become more efficient, and continue to be financed through supply subsidies at the same pace as in the last six years, their operating cost is expected to reach US$30 billion (in 2000 dollars) in 10 years. This represents 37 percent of the 2000 GDP.
Based on the present reform efforts in 27 public hospitals, it can be inferred that the introduction of aggressive structural changes would lead to important savings stemming from efficiency gains. In particular, a reform of public hospitals that would reduce hospital costs by 10 percent would lead to a net present value of costs equal to US$27.5 billion (in 2000 dollars) in 10 years (34 percent of the 2000 GDP). Therefore, in 10 years, public hospital reform will accumulate a net savings of US$2 billion (in 2000 dollars), equivalent to 3 percent of the 2000 GDP (see also section on Public Hospitals).

c) Financing

i. Evasion in the Contributory Regime

Evasion in the contributory regime constitutes one of the most important problems of the health system since it affects the operation of both the contributory and the subsidized regimes. As far as the contributory regime is concerned, evasion results in lower resources entering the FOSYGA Compensation Account, while in terms of the subsidized regime evasion leads to lower resources transferred to the Solidarity Account through the mechanism of the solidarity point.

One of the main reasons for evasion lies with the EPSs, the entities responsible under Law 100 for the collection of health contributions. The EPSs have weak incentives to affiliate individuals under their actual income since they have to remit contributions that exceed the sum of the UPCs of their pool of affiliates to the FOSYGA Compensation Account. In addition, they compete with each other for affiliates and thus, in some cases, in order to attract more individuals, they allow their enrollees to declare lower income, since this does not at all affect their net revenue defined by the UPC.

A study carried out by the Ministry of Health (2000) shows that in 2000 the contributory regime experienced an evasion level of COP2,052,000 million (US$836 million), which represents 2.75 percent of the 2000 GDP. Seventy-two percent of the amount of evaded contributions were attributed to underreporting (elusion), while the remainder was attributable to nonpayment (see Table 9). According to the same study, between 1997 and 2000 evasion decreased. However, the percentage attributed to nonpayment increased from 47 percent to 72 percent. Nonpayment is possibly the outcome of the severe economic crisis, which started in 1998, and had as a result a rapid increase in unemployment rates.

If evasion were eradicated the amount of additional resources entering the FOSYGA Solidarity Account would allow the affiliation of 1.2 million more people in the subsidized regime. This represents around 12 percent of the already affiliated population to the subsidized regime. However, given that elimination of evasion is not easily achieved, a more probable scenario of some level of evasion would lead to

9 The UPC for the subsidized regime in 2000 was equal to COP141,383 (US$57)
Table 9. Evasion in the Contributory Regime (millions of 2000 pesos)

<table>
<thead>
<tr>
<th></th>
<th>Contributions 2000</th>
<th>2000 (Percent)¹</th>
<th>1997 (Percent)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential contributions</td>
<td>5,663,504</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Actual contributions</td>
<td>3,611,460</td>
<td>63.8</td>
<td>54.2</td>
</tr>
<tr>
<td>Evasion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Underreporting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Affiliates noncontributors³</td>
<td>564,578</td>
<td>10.0</td>
<td>24.5</td>
</tr>
<tr>
<td>* Affiliates to the subsidized regime</td>
<td>421,511</td>
<td>7.4</td>
<td>6.1</td>
</tr>
<tr>
<td>* Pensioner noncontributors</td>
<td>170,223</td>
<td>3.0</td>
<td>1.4</td>
</tr>
<tr>
<td>* Nonaffiliates</td>
<td>5,288</td>
<td>0.1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>890,444</td>
<td>15.7</td>
<td>13.3</td>
</tr>
</tbody>
</table>

1. Percentages are calculated as the ratio of the amount that is evade to the total amount of potential contributions.
2. This is the case of couples where both work but only one contributes—usually the one with lower income—while the other enjoys coverage as a beneficiary.


A smaller number of affiliated poor individuals. The increased number of individuals in the subsidized regime due to the decrease of evasion would further trigger a transformation of supply into demand subsidies, since the amount of vinculados would be lower, thus creating even more resources for affiliating additional individuals to the subsidized regime.

Evasion appears mainly in the informal sector. In the formal sector (companies with more than 10 employees) most individuals are affiliated. However, self-employed individuals even within the formal sector tend to underreport their income base (elusion) (Plata and others 1999). According to the researchers, underreporting is due to the fact that contributions are not automatically deducted at the source of income (autorretención en la fuente del aporte). In addition, EPSs appear less eager to affiliate self-employed individuals, possibly because they consider them to have a higher probability of defaulting on their contribution payments compared to public and private employees.

ii. FOSYGA Accounts

Health sector resources have increased significantly since the 1993 reform. Although there are multiple sources of funding, the health sector relies heavily on FOSYGA's accounts. These represent the most important financing source for public health care in Colombia, comprising 46, 51, and 38 percent of total resources in the system in 1997, 1998, and 1999, respectively. As an example of the volume of transactions, in 1999, the Compensation Account received COP661,000 million (US$297 million) and paid COP397,500 million (US$178 million) in compensation.

However, two of the four accounts (Solidarity and ECAT) are part of the national budget and thus are subject to its rules and ceilings. This limits the amount of
resources that could be used to increase affiliation in the subsidized regime every fiscal year. As can be seen in Table 10, the amount of resources that were part of the national budget in 2000 equaled half (49.9 percent) of the total available FOSYGA resources. This situation has created a problem of accumulated resources from one fiscal year to the next.

Furthermore, the use of these resources for purposes other than originally intended has frequently been allowed through legislation. That is, in any given fiscal year exercise, direct transfers are made to public hospitals through supply subsidies instead of increasing health insurance affiliation. In the case of ECAT, such an action could be justified by the fact that the resources in this account can be used for the financing of emergency services for catastrophic events. However, it cannot be easily established that the ECAT resources are used exclusively for financing such events and not for other hospital operations. From 1996 to 1999, a total of COP646,500 million (in 2000 pesos) (US$263 million), or 51.4 percent of the total available FOSYGA resources for 2000, were transferred to public hospitals through supply subsidies after passing laws changing the destination of those accumulated surpluses.

At present, there is an accumulated reserve of COP192,500 million (in year 2000 pesos) (US$78 million) in the investment portfolio, which had not been allowed to be transferred to public hospitals before 2000. These resources should be channeled to increase affiliation to the subsidized regime. If that happened, 1.5 million new affiliates would enter the subsidized regime.

iii. Delays in Transfers from National Territories to ARSs and Ultimately to Health Care Providers

Figure 9 describes the allocation of resources between the subsidized regime and hospitals as defined by Law 60 and Law 100. Four general types of resources are distinguished: the Situado Fiscal, the Rentas Cedidas, Participations, and FOSYGA. The first three preexisted Law 100, while FOSYGA was created by it. As seen in Figure 9, the combination of the two laws has resulted in a very complicated system of resource allocation both for increasing coverage in the subsidized regime and hospital financing.

With respect to increasing insurance coverage in the subsidized regime, resources are transferred to the national territories (departments and municipalities), which in

<table>
<thead>
<tr>
<th>Account</th>
<th>Final Budget Approval (pesos)</th>
<th>(Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>69,799,127,640</td>
<td>5.5</td>
</tr>
<tr>
<td>Compensation</td>
<td>567,145,845,586</td>
<td>45.0</td>
</tr>
<tr>
<td>Solidarity</td>
<td>502,182,426,000</td>
<td>39.9</td>
</tr>
<tr>
<td>ECAT</td>
<td>119,264,211,000</td>
<td>9.5</td>
</tr>
<tr>
<td>Total</td>
<td>1,258,391,610,226</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Acuerdo 160 de 2000 of Consejo Nacional de Seguridad Social en Salud
Figure 9. Allocation of Resources—Law 60

These resources are used by the ARSs to pay for the services delivered by public and private hospitals to their affiliates. However, given the complicated nature of the system, transfer delays from the national territories to the ARSs have been observed. These delays have resulted in an accumulated debt from the national territories to the ARSs and, in turn, from the ARSs to the health care providers. The situation has been further aggravated by the fact that there was a period during which ARSs were subject to minimum controls, which allowed incidences of corruption to be observed. From April 1999 to September 2000, national territories owed COP57,000 million (US$23 million) to the ARSs, while ARSs’ debt toward public and private providers was estimated to be COP57,000 million (US$15 million).

To solve this problem, Decree 46/2000 was issued allowing deduction of territorial debt directly from the resources to be transferred to national territories; that way all arrears will be paid before those resources reach the territorial entities. However, given that there was no agreement among national territories, ARSs, and health care providers on the level of the debt, neither the Ministry of Health nor the Health Superintendency has been successful in implementing this decree.

In addition, as Figure 9 shows, there is no clear distinction with respect to which territorial entity (department or municipality) is responsible for financing the subsidized regime (demand subsidies) and which the hospital network (supply subsi-
Table 11. Situado Fiscal Transformed into Demand Subsidies
(millions of 1999 pesos)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total SF for health</td>
<td>686,618</td>
<td>794,585</td>
<td>855,463</td>
<td>998,550</td>
<td>1,060,628</td>
<td>1,084,110</td>
<td>1,218,764</td>
</tr>
<tr>
<td>SF allocated to hospitals</td>
<td>521,453</td>
<td>723,076</td>
<td>742,548</td>
<td>960,679</td>
<td>1,063,777</td>
<td>1,015,605</td>
<td>1,003,721</td>
</tr>
<tr>
<td>SF available for transformation(^1)</td>
<td>165,165</td>
<td>316,844</td>
<td>379,872</td>
<td>502,726</td>
<td>550,078</td>
<td>582,574</td>
<td>723,049</td>
</tr>
<tr>
<td>SF actually transformed</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>100,573</td>
<td>130,168</td>
<td>195,716</td>
</tr>
</tbody>
</table>

\(^1\) This is the amount of Situado Fiscal available for transformation according to Law 100 of 1992 and Law 344 of 1996.

Source: Departamento Nacional de Planeación.

dies) Thus, in many cases territorial entities would take “arbitrary” decisions to assign resources to one cause but not the other. This has contributed to the incomplete transformation from supply subsidies to demand subsidies, and therefore the slowdown of insurance affiliation in the subsidized regime. Table 11 shows that territorial entities transformed a smaller amount of the Situado Fiscal to demand subsidies than the one available for transformation. On the contrary, they used most of their resources for payments to hospitals. In 1999 only 27 percent of the Situado Fiscal available for transformation was actually transformed. If the total amount available for transformation in 1999 were used for increasing insurance coverage, the number of individuals entering the subsidized regime would be equal to 5.1 million.\(^10\) This is around 3.7 million individuals more than the number that entered with the Situado Fiscal actually transformed.

The central government, recognizing the complexity of the financing of the subsidized regime, recently approved Law 715, which reforms Law 60 and changes the allocation of territorial transfers (for more details see Section IV. Government Response and Current Reforms).

iv. Definition of the Health Benefit Package of the Contributory Regime

Originally, the health insurance and health care system was designed for a limited health benefit package that could be expanded through time according to resources available and increases in coverage. However, the regulation introducing the health benefit package of the contributory regime Plan Obligatorio de Salud (POS) at the beginning of the implementation of the reform, defined it as a very comprehensive health care package, excluding only a limited number of activities, interventions,

\(^{10}\) The UPC for the subsidized regime in 1999 was equal to COP128,530 (US$57). However, for comparability reasons, for this calculation we use the UPC for the subsidized regime for 2000, equal to COP141,383 (US$57)
and procedures. This situation has been maintained until the present and has been worsened by legal pressure exercised by affiliates. The ample range of interventions covered in the POS has created an imbalance between what is legally covered by it and therefore expected by the affiliates, and what can be financed by the UPC.

This situation is further worsened by decisions of the Constitutional Court in favor of individuals that demand the provision of health care services that are excluded by the POS. The Constitutional Court bases these decisions on the Constitutional "right to life." Individuals who require health care services not covered by the POS are entitled to file a tutela (lawsuit) before the Constitutional Court demanding the provision of the service to be covered by the insurer or eventually by the health system. In turn, judges on the Constitutional Court have taken decisions that demand the allocation of national resources in order to finance health services not covered by the POS and, in some cases, those need to be provided abroad.

Reliable data with respect to the cost of the lawsuits for the Colombian health care system are not available. According to a study carried out by the Departamento Nacional de Planeación (National Department of Planning, 2001) a great number of lawsuits have been filed in order to acquire health care services, with the ISS affiliates filing the greatest number. For example, in 1999, the number of lawsuits against the ISS was 389 for April in Bogotá, and 377 in Cali and 1,706 in Medellín for February.

\[d)\] Health Insurance Coverage and Targeting

i. The Confusion Between a SISBEN Classification Document and Affiliation

According to data of the National Health Superintendency, one in three individuals who is an eligible member of the subsidized regime does not have insurance coverage. A reason frequently cited in the political arena for not achieving universal cov-

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11 These activities, interventions, and procedures are defined in Accrod 1938 of 1994 and include (a) cosmetic surgery, (b) nutritional and varicose vein treatment for cosmetic reasons, (c) infertility treatment; (d) treatment for fatigue and insomnia; (e) specific organ transplants; (f) psychotherapy and psychoanalysis at an individual level or for a prolonged period; (g) orthodontic and prosthetic treatment for dental care, (h) elastic means of support, corsets, girdles, wheelchairs, insoles, and orthopedic shoes, (i) treatments that are not recognized by the international medical community or that are experimental, (j) treatments that use experimental medicines or substances, or medicines or substances that are not included in the Manual de Medicamentos, Esenciales y Terapéuticos; (k) curative treatments for chronic and degenerative diseases; (l) cancer and traumas that are in a terminal stage, (m) educational and vocational activities that take place during the rehabilitation phase and are not strictly necessary in medical terms, and (n) activities that are not included in the Manual de Actividades, Intervenciones y Procedimientos.
verage for the poor is lack of resources. As a result, municipalities do not have sufficient funds to carry out interviews with households to determine their SISBEN level and/or to cover their UWC.

However, as already seen in earlier parts of this Chapter, and as summarized in Table 12, the transformation of the full amount of available resources of the *Situado Fiscal* and the use of the accumulated FOSYGA reserves for increasing coverage can expand the subsidized regime by 5 million individuals. This number exceeds the total of nonaffiliated poor individuals (around 4.4 million). Furthermore, if we add to these actions the elimination of evasion, the number of new affiliates in the subsidized regime increases to 6.2 million. Needless to say, very specific efforts need to be carried out to "recover" financial resources in the system to successfully increase affiliation of the poor. Developing and implementing such strategies are not impossible tasks. Having said this, it should be acknowledged that increasing health insurance affiliation should be addressed not only by ensuring the availability of resources, but also on the demand side, by treating actual affiliation separately from SISBEN characterization. Currently, individuals eligible for affiliation to the subsidized regime appear to lack basic information with respect to the affiliation process. One aspect causing persistent confusion appears to concern SISBEN and affiliation to an ARS.

The majority of the Colombian population believes that being classified as SISBEN 1 or 2 is synonymous with affiliation to the subsidized regime. However, this is not correct since, after acquiring documentation that proves the SISBEN level of the individual (henceforth SISBEN Classification Document, SCD), he or she has to subscribe to an ARS. In turn, the ARS signs a contract with the rele-

**Table 12. Number of New Affiliates in the Subsidized Regime by Type of Action**

<table>
<thead>
<tr>
<th>Action</th>
<th>No. of New Affiliates in the Subsidized Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situado Fiscal</td>
<td>3.7 million</td>
</tr>
<tr>
<td>FOSYGA</td>
<td>1.3 million</td>
</tr>
<tr>
<td>Evasion</td>
<td>1.2 million</td>
</tr>
<tr>
<td>Situado Fiscal + FOSYGA</td>
<td>5.0 million</td>
</tr>
<tr>
<td>Situado Fiscal + FOSYGA + Evasion</td>
<td>6.2 million</td>
</tr>
</tbody>
</table>

*Source: Authors' calculations*

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12 The number of individuals that are not affiliated to the subsidized regime as a percentage of the NBI population (NBI stands for *Índice de Necesidades Básicas Insatisfechas*, Index of Unsatisfied Basic Needs) appears to be higher than 32 percent. According to estimates of researchers at the University of Antioquia, this percentage is equal to 38 percent, or 5.8 million people. However, this number is still lower than the 6.2 million individuals who could have entered in the subsidized regime provided the actions mentioned in this section had been taken.
vant departmental health authority for each of its affiliates. After this contract is
signed, the individual is considered to be an official member of the subsidized
regime. Part of this confusion can be attributed to the complicated nature of the
affiliation procedure.

An additional reason is that for members of SISBEN levels 1 and 2 households,
the important factor for being charged lower health care prices is not affiliation, but
possession of an SCD. This is because public hospitals charge the same copayment
to individuals with an SCD of SISBEN levels 1 or 2, irrespective of whether they
are affiliated. The only people paying the full price of the service are individuals who
do not have an SCD (see Figure 10).

The fact that the majority of the population cannot distinguish between an
SCD and affiliation results in eligible individuals being unable to exercise pres-
sure, especially on municipal mayors, for their inclusion in the subsidized regime.
Individuals also face difficulties in understanding the content of the health care
benefit package and are not aware of the fact that they can choose their insurance

Figure 10. SISBEN Classification Document Affiliation and Health Care
Copayments in the Subsidized Regime

<table>
<thead>
<tr>
<th>Affiliated (Group 1)</th>
<th>Copayments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SISBEN 1 – 5%</td>
<td></td>
</tr>
<tr>
<td>SISBEN 2 – 10%</td>
<td></td>
</tr>
<tr>
<td>SISBEN 3 – 30%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonaffiliated (Group 2)</th>
<th>Cuotas de recuperación</th>
</tr>
</thead>
<tbody>
<tr>
<td>SISBEN 1 – 5%</td>
<td></td>
</tr>
<tr>
<td>SISBEN 2 – 10%</td>
<td></td>
</tr>
</tbody>
</table>

| Without an SCD (Group 3)  | Full price            |

Note: Households having the characteristics of SISBEN level 1 or 2 may or may not have an SCD. By
SCD, we refer to any item that proves the SISBEN level of the household, such as a card, an official
document, or a carnet that ARSs provide to affiliates. The group can be further classified into households
that have subscribed to an ARS (affiliated—Group 1) and households that have not (nonaffiliated—
Group 2). The group of households without an SCD is clearly nonaffiliated (Group 3). According to the
law, the main difference between affiliated and nonaffiliated individuals with respect to health care
charges is that the former pay a copayment, while the latter pay the full cost of the service. Nevertheless,
hospitals have used the SCD as proof of socioeconomic status on which to base copayments not only for
affiliated individuals, but also for nonaffiliated individuals who have a classification document (Group
2). The copayments charged to the nonaffiliated who have an SCD are called cuotas de recuperación and
are calculated on the same basis as the copayments charged to the affiliated. That is, SISBEN level 1
individuals pay up to 5 percent of the price of the health care service, while SISBEN level 2 individuals
pay up to 10 percent. Therefore, for members of SISBEN levels 1 and 2 households, the important factor
for being charged lower health care prices is not affiliation, but possession of an SCD.
entity and health care provider. Information campaigns carried out by the Ministry of Health are rather limited in number and unfocused. Empowering the poor through targeted communication campaigns is crucial for reaching higher affiliation rates in the subsidized regime and for increasing utilization rates among those insured.

ii. The Problem of Identifying the Poor

The conditions for eligibility in the subsidized and contributory regimes are not mutually exclusive. According to Law 100 and the legislation amending it, eligible affiliates to the subsidized regime are members of households of SISBEN levels 1 and 2. After complete coverage of the population at SISBEN levels 1 and 2 in a municipality, further beneficiaries can come from the SISBEN level 3 population, starting with households of lower to higher SISBEN scores. On the other hand, an individual should be a member of the contributory regime if he or she is a public employee, has a labor contract, is a pensioner, or is self-employed and receives more than twice the monthly statutory minimum salary. This means that if there is a household of SISBEN level 1 or 2 in which either parent fulfills the conditions of the contributory regime, then the members of the household are obliged to join this regime regardless of the SISBEN level of the household.

However, evidence shows that individuals who fulfill the conditions of the contributory regime and/or belong to SISBEN levels that are not eligible for subsidies—that is SISBEN levels 4 to 6—are members of the subsidized regime (Ministerio de Salud 2000; World Bank 2001; Panopoulou 2002). The reasons explaining this phenomenon are:

- There are individuals who manipulate their entrance in the system through connections with municipal authorities. In most cases, the mayor of the municipality has full responsibility for applying, implementing, and administering the SISBEN program. In addition, he or she is the one who contracts the ARSs responsible for affiliation in the municipality, and in cases of decentralized municipalities with primary health care facilities, he or she is also accountable for their operation. This concentration of power, especially in rural areas, allows the mayor, under specific circumstances, to act unilaterally.
- There are individuals who are untruthful during the interviews defining the household’s SISBEN level. This is enabled by the fact that, at present, the variables of the SISBEN index and the weights assigned to each of them are publicly known. In addition, there are a number of variables that are very difficult for the interviewer to verify (for example, income level).
- Due to its complex nature, the SISBEN index cannot be easily updated by the authorities. Hence, when the socioeconomic situation of a household

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13. See Acuerdo 77 of 1997
14. See also footnote 6
improves, there is no incentive among its members to reveal this improvement and lose the subsidy.

- The weights of the SISBEN index were calculated using 1992 data that no longer reflect the socioeconomic situation of the individuals.

In addition, the fact that there are serious limitations in the beneficiary databases for both the subsidized and the contributory regime increases the problem of identifying the poor.

e) Public Health: The Issue of Vaccination

One of the most important public health issues in Colombia is the weakening of the country's system of protection against communicable diseases. In the past, Colombia was a leader in prevention activities, and the Ministry of Health established the Programa Ampliado de Inmunizaciones (Expanded Program of Immunization, PAI) as a national priority. During the 1980s and early 1990s impressive gains in vaccination coverage levels and disease prevention were achieved. In 1995, Colombia achieved what few countries in the Americas have accomplished: coverage levels for all routine vaccines reached or surpassed 90 percent.

However, since 1997, coverage levels for all vaccines have declined to below 80 percent. Coverage against measles declined from 95 percent in 1996 to 78 percent in 2000. In 1996, the coverage for three doses of diphtheria–tetanus–pertussis vaccine (DTP3), often considered the key indicator of PAI performance, was the highest in the Andean Region, at 94 percent. However, in 2000, levels fell to 77 percent, the lowest in the Andean Region (Figure 11). The trend in coverage levels is indicative of a general decline in the PAI. The program experienced decreases in staff, training, and supervision. The consequence is not only a decline in immunization efforts, but also reduced surveillance, which currently may not be sufficiently sensitive to detect, in a timely manner, the reemergence of viral circulation.

The underlying causes of the decline in the performance of the vaccination program are complex and probably due to many factors, one of which is inadequate funding. The impact of inadequate funding on the vaccination effort has been reflected in shortages in personnel and supplies. The combination of staff turnover and the lack of funds for supervision and training has resulted in a situation where inadequately trained and inexperienced staff fail to follow current vaccination guidelines and practices. Equally important are institutional factors. Weaknesses in the design of the decentralization and health care reforms share part of the blame for the weak performance in vaccination activities over the last few years. It is not clear which entity at what level (national or territorial) is responsible for the implementation of the vaccination program. At the same time, it is possible that the health sector reform may have placed more emphasis on curative services and the provision of healthcare for the poor than on preventive services.
IV. Government Response and Current Reforms

In an effort to address these health issues, the government of Colombia has recently taken a number of important steps. First, it has introduced reforms of the system of allocation of resources between the financing of the subsidized regime and hospitals, and of the system of targeting individuals in need of public subsidies. Second, it has initiated restructuring plans for the ISS–Health and the network of public hospitals, and has started to take measures to tackle the immunization problem.

i. Sectoral Allocation of Territorial Transfers

One result of passage of the Acto Legislativo of 2001 is the disappearance of the Situado Fiscal and Participaciones in the current national budget. Under the new act, all transfers form part of a unified system entitled Sistema General de Participaciones (General System of Participations). Going a step further, Law 715 of December 2001, which reforms decentralization Law 60 of 1993, distributes the resources of the General System of Participations among education, health, and other social sectors. About 24.5 percent of total resources are used to finance the health sector, 58.5 percent are used to finance the educational sector, and 17 percent are used to finance other social sectors. Within the health sector, resources are further distributed among the financing of increasing insurance coverage in the subsidized regime (demand subsidies), public hospitals (supply subsidies), and public health. Health sector resources have increased from COP2,514,0000 million (US$1 billion) in
2001 under the old system to COP2,855,000 million (US$1.1 billion) for 2002 under the new system—that is, a 13.5 percent increase (Gaceta del Congreso 2001).

Law 715 is expected to promote transparency and accountability in the system, and increase the flow of transfers from departments to hospitals and from municipalities to ARSs. As Figure 12 shows, SGP resources are destined to both departments and municipalities in the form of, respectively, supply and demand subsidies. However, the main difference with Law 60 is that now each authority is responsible for a single goal. Departments are responsible for financing the hospitals, while municipalities are responsible for increasing health coverage in the subsidized regime. This will allow greater accountability in the system if these goals are not met. The Rentas Cedidas are still received by the department, as they were under the old system of transfers, but they are now used exclusively for financing hospitals. On the other hand, the Solidarity account of FOSYGA remains as it was in terms of recipients and use.

The distribution of resources among the financing of affiliation and public hospitals is based on the number of affiliates and vinculados. Resources destined for the financing of affiliation are expected to cover the UPCs of the already affiliated population and provide for the inclusion of a predetermined number of new affiliates. Similarly, resources destined for the financing of public hospitals are calculated based on the number of vinculados in each department. In the area of public health, criteria such as the vaccination coverage rates are used. The distribution of resources

**Figure 12. Allocation of Resources—Law 715**
between the subsidized regime and public hospitals will remain the same for two years after the law has been approved, and afterward the transformation of supply to demand subsidies is mandated. The transformation will then be based on an adjustment of the distribution formula to the number of individuals who have entered the subsidized regime and the number of vinculados in 2003. Although the new law introduces positive changes in the way resources are distributed, it does not define the number of new affiliates entering the subsidized regime or the way that the transformation of supply to demand subsidies will take place.

ii. Improving the Targeting of the Poor

Furthermore, the government has initiated a reform of the system of targeting individuals in need of public subsidies. The guidelines for the reformed targeting system were approved by the Consejo Nacional de Política Económica y Social (National Council of Economic and Social Policy, CONPES) in November 2001 and include (a) adjustment of the instrument of identification (the SISBEN index) to capture regional differences and dynamic aspects and a strategy for the adoption of the new instrument, (b) a system of quality control and centralized monitoring through regular evaluations of the SISBEN surveys and punitive measures in cases where the municipality appears to have an identification error greater than 15 percent, and (c) strengthening of supervision and administration at the local level. With respect to the first guideline, the CONPES document provides a description of the variables, which form part of the new SISBEN index, although no information is given with respect to the exact subcategories each variable has and the weights assigned to them. This is to avoid manipulation of the surveys that has occurred in the past. The CONPES also recommends that the SISBEN instrument be used by social programs other than the subsidized regime (Red de Apoyo Social, Becas Paces, Instituto Colombiano de Bienestar Familiar [Colombian Family Welfare Institute, ICBF], Instituto Nacional para la Vivienda de Interés Social y la Reforma Urbana [National Institute of Social Interest, Housing, and Urban Reform, INUBRE], and so forth), and should be expanded in terms of individuals and families that have completed the survey, giving priority to poor municipalities.

iii. ISS–Health

In an effort to deal with ISS financial problems, the government has agreed on a restructuring plan for the ISS–Health services. The main objectives of this plan are to improve quality of services to affiliates, eliminate inefficient supply subsidies to ISS–Hospitals (ISS–IPS), and limit fiscal costs to the national government. The ISS–Health is currently facing both “stock” and “flow” problems that need to be addressed. With respect to its existing accumulated deficit, the program includes (a) transferring resources to the ISS only after successful completion of the renegotiation of collective bargaining agreements with its labor union, (b) lifting the sanction applied by the Health Superintendency prohibiting new affiliation to the ISS after the underlying causes of the sanction have been resolved, and (c) withholding com-
pension transfers from the FOSYGA to the ISS until more accurate information on the number of its affiliates has been provided. To resolve the “flow” problem, the government aims to increase revenues and decrease costs. Measures for reducing costs include the restructuring of accumulated debt, rationalizing clinics and ambulatory health services, and improving contracting mechanisms with own and external health care providers. Measures for increasing revenues include better collection of contributions by affiliates through reforms to the current system of self-estimated contributions, increased collections of arrears, and enrolling more affiliates after the sanction imposed by the Health Superintendency is lifted.

To date, the ISS has renegotiated 97.4 percent of its COP453,000 million (US$184 million) debt with IPSs and laboratories. It is worth mentioning that this is the debt of ISS until 30 July 2001. The ISS is expected to pay 5 to 6 percent of its debt at the moment of signing the agreement, 14 percent by December 2001, and then fractions of 20 percent from February to June 2002. As a result of ISS’s debt renegotiation, the Health Superintendency lifted its sanction, and in December 2001 the ISS started the process of affiliating new members. With respect to the quality of service, the ISS was facing waiting lists of 23,000 individuals for elective surgery, 80 percent of whom were with ISS–IPS, and the rest were with external providers. Within its restructuring program the ISS has reduced the number of individuals on waiting lists by 40 percent (around 9,500 cases). In addition, given the completion of the renegotiation of collective bargaining agreements between the ISS and its labor union, which provides annual savings of COP119,300 million (US$49 million), the central government has transferred COP500,000 million (US$203 million) to the institution for 2001. The central government has agreed to transfer the same amount of money to the institution in the second half of 2002, and has also committed itself to pay pension benefits that became effective before the 1993 reform.

iv. Public Hospitals
As a response to the problems faced by the public hospital network, the government is committed to carrying out a reform and restructuring program. The objectives of this program are to guarantee the financial viability of public hospitals and improve the productivity in health service delivery. To achieve the first objective, the program contains actions to reduce costs, which include (a) reforming the personnel structure, (b) resolving accumulated debts, and (c) renegotiating collective bargain agreements with hospital unions. To achieve the second objective, the program includes actions such as (a) reaching agreements between territorial entities and hospital directors to advance long-lasting restructuring and to develop functional health service networks, and (b) identifying and analyzing existing information regarding supply and demand for health services in different regions in order to better define plans for managerial and technological improvements. Preliminary results from a pilot program aiming to restructure 27 hospitals (out of a total of about 170 medium- and high-complexity public facilities) administered by the Ministry of Health
appear to be positive—although timid: in one year hospital costs have been reduced by 5 percent

v. Immunizations

In collaboration with the Pan-American Health Organization (PAHO), national authorities conducted a detailed evaluation of the entire national immunization program. National authorities have now allocated sufficient funds to purchase vaccines and syringes to cover 2002 needs, including a national vaccination campaign planned for May 2002. At the same time, Law 715 clearly states that the central government is responsible for guaranteeing the provision of vaccines and syringes through the PAI. Equally noteworthy, the MOH and the Instituto Nacional de Salud (National Institute of Health, INS), in collaboration with the local PAHO office, is developing a detailed needs analysis for the national cold chain to ensure adequate storage and transport of vaccines. Moreover, the MOH is developing performance indicators for monitoring vaccination coverage levels at the municipal level, and has begun to address the development of a functional information system for the collection, analysis, and dissemination of information on vaccination activities. The above indicators will be used to certify compliance by the private sector with vaccination guidelines, and the information system will monitor the number of vaccine doses given by provider and by geographic location.

V. Policy Alternatives and Recommendations

Colombia’s reform has affected the behavior of all actors in the health sector. It has altered the relationship between the population and insurers, insurers and providers, and providers and patients. Among its achievements can be included increases in insurance coverage, equity, and access to health care. The important results that the reform has demonstrated can be further supported by addressing the challenges and issues mentioned throughout this Chapter. As already demonstrated, actions that will result in the decrease of evasion, the full transformation of supply to demand subsidies, and the use of the resources of the FOSYGA Solidarity Account for exclusively increasing coverage, could generate an increase of the number of poor entering the subsidized regime by around 62 million individuals. Adding to this number those already affiliated to the subsidized regime (9.5 million people) will effectively mean full coverage for the poor. Given that the contributory and subsidized regimes operate like communicable vessels, the same action can have double effects. Resolving the problems of evasion and elusion, apart from increasing the resources of the FOSYGA Solidarity Account, can bring a balance to the Compensation Account, as well. To this end, the restructuring plan for the ISS can also assist. The new system of allocation of sectoral transfers will ease the flow of resources, and health care providers, being at the end of the chain, will not have to face delays that jeopardize their operation. At the same time, the restructuring plan for public hospitals will
ensure that they will be ready to compete with the private sector and offer efficient services of good quality. Finally, addressing issues of public health, such as the immunization program, will restore epidemiological surveillance to a level guaranteeing protection against communicable diseases.

a) The Social Security Institute

Recognizing the very difficult situation facing the Social Security Institute (ISS), the Colombian government has entered into an agreement with the ISS under which it has restructured its debt up to 30 June 2001, reduced its list for elective surgeries by 40 percent, and renegotiated with its labor union on the level of benefits. The savings achieved through the new collective agreement are estimated to be around COP119,300 million (US$49 million). On the other hand, the government has agreed to provide to the ISS COP1,000,000 million for 2001 and 2002.

Given the importance of the ISS to the health sector as a whole and to the implementation of health reform, a strong commitment from the government and from the ISS is necessary to successfully address the ISS situation. Several scenarios seeking solutions for the ISS have been considered. What is important to note is that each solution or action has an up-front cost to the Treasury, and necessarily an opportunity cost that also must be taken into account. Analysis of all options requires consideration of the critical balance among feasibility, timing, and the imposed cost to society. To continue the ISS as it exists, but slowly letting it "die" by prohibiting new affiliation and by allowing or encouraging present affiliates to choose another EPS, although politically very appealing, would have a specific long-term cost larger than the one now faced and that would have to be paid in its entirety when all arrears need to be cancelled in the future. The only way such an option is worth considering is if there are specific measures that prevent the Treasury from being forced to financially "rescue" ISS every step of the way. Otherwise, what this option does not only postpones more radical options, but increases the accumulated cost to Colombian society. Since the ISS situation is so critical, any solution that does not pay all arrears and does not deal with the root of the problems up front would not alleviate the financial problems of the sector. In fact, it might create a higher cost for Colombian society that must be paid by future generations. By not deeply reforming the ISS, the country is paying a high price since the Treasury would continue to be called upon to subsidize ISS debt, and ISS beneficiaries would receive health services from overstuffed and inefficient health providers.

The political and social constraints on implementing a first-best solution to fix ISS problems are acknowledged by the authors, and the actions already taken by the government are by no means underestimated. However, to improve the health sector by reforming the ISS, much more radical solutions need to be proposed and implemented. Two scenarios provide evidence that much more radical action needs to be taken to make the ISS viable and to lessen its burden on fiscal expenditure. A detailed discussion of these options follows.
i. Option 1: Fully Separate Financing from Delivery

This option calls for separating ISS insurance (ISS–EPS) and provision (ISS–IPS) into different entities operating at arms length. For the option to be operational the EPS must be able to purchase health services at competitive market prices. Similarly, the ISS–IPS must become competitive to survive in the marketplace. It is worth pointing out that under the current agreement between the ISS and the central government no such incentives are given since strict priority is given to the ISS–IPS. That is, the ISS–EPS is allowed to purchase services only by the ISS health care facilities, except in cases where the latter do not possess the necessary infrastructure.

To execute this option, a number of actions are required. First, the ISS should be divided into four separate entities according to responsibilities: (a) Health Insurance or EPS, (b) Health Provisioning or IPS, (c) Workers’ Compensation, and (d) Pensions. Second, fully auditable accounts should be produced, and external auditors must be in a position to express an opinion about these accounts. The next step would be the closure of the presently joined ISS–Health Insurance (EPS) and Health Provisioning (IPS), followed by the creation of a fully restructured EPS. Under this option, the central government would need to finance all accrued severance and pension obligations, amounting to US$1.7 billion, and hospitals would be evaluated on the basis of ability to compete. Staff would be rehired only in sufficient numbers to operate competitive hospitals, and for the EPS. Under this reform option, the ISS would also remain as a pension administrator and as a Workers’ Compensation insurance administrator, each of which would be managed separately. This option would (a) allow for better quality of service to affiliates. Affiliates would continue to have a choice of EPS. At the same time, the ISS–EPS would be able to choose the network of providers according to the affiliates’ demand and at competitive market prices. Under no circumstance would the ISS–EPS be forced to purchase services from the ISS–IPS, (b) would eliminate inefficient supply subsidies, and (c) would limit fiscal costs to the government. This option would stop increasing actual and contingent liabilities.

Among the conditions set for the restructured EPS would be (a) operating with minimum required staff; (b) developing operational manuals, standard contract agreements with IPSs, a minimum required database for affiliate information, (including health profiles), internal control manuals and practices, quality control manuals and practices, and a medium-term business strategy; and (c) negotiating new labor contracts, and signing contracts with the provider network. Along the same line, a fully restructured ISS delivery (IPS) would also be created including (a) stopping all supply subsidies; (b) determining competitive hospital and ambulatory services (CAAs); (c) closing and/or transforming noncompetitive hospitals and CAAs; (d) rehiring minimum required staff in hospitals; (e) developing business agreements with private EPSs to sell services; and (f) developing best administrative practices for competitive hospitals and CAAs, including minimum performance indicators.

A fiscal impact estimate for this reform option shows savings equivalent to 2.4 percent of the 2000 GDP (Appendix Table A.1). In the case of no reform, it is
assumed that a total of US$250 million per year would be transferred by the Treasury to ISS to finance operating losses. This is roughly the amount that the ISS and the central government have agreed on for 2001 and 2002. In the case of reform, the following six assumptions are made for the purposes of this analysis:

- There are no additional operating losses, while the return from following this option is the savings of US$250 million per year.
- Severance payments of US$305 million are paid in year 1.
- Additional debts of US$150 million are paid in year 1.
- An additional benefit of US$600 million is paid to workers to accept labor convention renegotiations. This extra benefit may be used as working capital by workers that accept retaining the health assets as severance payments.
- Operational net flows were estimated for EPS and IPS using a model developed by ISS. Revenues for the reform case are the operating surplus (deficit) from consolidating the ISS–IPS and the ISS–EPS plus the elimination of Treasury subsidies of US$250 million per year of the no-reform option.
- It is assumed that new staff enter with only legal pension benefits and are not eligible for benefits under current ISS labor agreements, and that the EPS purchases services at competitive market prices.

ii. Option 2: Keep ISS as Pension and Worker's Compensation Insurance Administrator Only

This option calls for closing all ISS–health services, both ISS insurance (ISS–EPS) and provision (ISS–IPS). The ISS would remain as a pension administrator and as a Worker's Compensation insurance administrator, each of which would be managed separately. The main objectives of this option are to (a) eliminate inefficient supply subsidies, and (b) limit fiscal costs to the central government. This option would limit both actual and contingent liabilities to the central government, which arise mainly from the ISS increasing pension obligations. Similar to the first option, the ISS should be divided into four separate entities according to responsibilities, and auditable accounts would be produced to allow external auditors to express an opinion about these accounts.

The next step will require the closure of ISS–Health Insurance (EPS) and Health Provisioning (IPS), and the financing by the central government of all accrued severance and pension obligations (present value of pension benefits amounts to approximately US$1.7 billion, other obligations amount to about US$305 million in severance payments and US$150 million in debts with providers). As part of severance payments, the central government might also consider giving health assets to workers. A fiscal impact estimation for this reform option shows savings equivalent to 1.2 percent of the 2000 GDP (Appendix, Table A.2). In the case of no reform, it is assumed, as in Option 1, that a total of US$250 million per year would be transferred from the Treasury to the ISS to finance operating losses. It is important to
mention that the net savings of this option are underestimated given that it does not take into account the value of assets that could be sold in the process.

b) Public Hospitals

The restructuring plan for the public hospital network plays a key role not only for the public network itself, but also for the whole of the health sector and the viability of the reform. Reforming public hospitals would allow them to reduce their cost structure, adapt their network to the demand, and create a network of public and private facilities where the public facilities will effectively complement the private facilities. The fact that public hospitals would be financed through the selling of their services would free resources, which are now used as supply subsidies to cover hospital debts. In turn, these resources would be used to finance increasing coverage in the subsidized regime. Apart from the obvious advantages in terms of limiting fiscal costs for the government and ensuring health insurance for the poor, the restructuring of public hospitals would allow for best-quality services provided to the Colombian population. The Ministry of Health has started a program of restructuring 27 hospitals, which within the first year reduced costs by 5 percent. Although the central government appears committed to carrying out this restructuring plan, the level of cost reduction is crucial for its outcome, as demonstrated below.

i. Option 1: Timid Restructuring

If the restructuring program is extended to all public facilities (levels I, II, and III), it is estimated that an injection of US$500 million would be needed to finance it (this estimate is provided by the DNP as a result of the technical study it developed and shared with the World Bank team). However, if the restructuring effort is timid, as observed in the 27 hospitals, and the reduction of costs is still 5 percent, it is expected that the net savings of the reform will be negative in the first two years and the government will recuperate its investment in real terms in seven-and-a-half years (see Appendix, Table A.3). Furthermore, hospital costs will continue to be high and their net present value over 10 years brought to the present at a 4 percent interest rate will be US$30 billion, or 37 percent of the 2000 GDP.

ii. Option 2: Bold Restructuring

On the other hand, if the restructuring effort is bold and reduces costs by 10 percent a year, it is expected that the net savings from the reform will be negative during the first year—due to the initial investment of US$500 million in two years—but then the central government can recuperate its investment in four years (see Appendix, Table A.4). The net present value of hospital costs under this restructuring program will be lower and equal to US$27.5 billion, or 34 percent of the 2000 GDP. Following the second scenario, in 10 years the economy will accumulate a net savings of US$2 billion, equivalent to 3.3 percent of the GDP of 2000. These efforts
should be reflected in a national policy or strategy for public hospitals, which has not existed until now.

Again, as in the case of the ISS, the political difficulties faced when reforming public hospitals are understood. However, the public hospital situation is not only a financial problem, but is one of immense financial consequences, as described above. Without a strong effort in favor of deep hospital reform, it is not possible for Colombia to consolidate the gains from health reform. Most probably, if deep hospital reform does not happen in Colombia in the next five years, the country will lose ground when compared with its neighbor countries, and will no longer be the country that rates first in financial fairness.

\textit{d) Financing}

\textbf{i. Evasion in the Contributory Regime}

Evasion in the contributory regime is an issue where no major steps have been taken at a national level. In an attempt to contribute to the discussion about this problem, two groups of actions are presented: (a) short-term actions that aim to reinforce and improve the current system of affiliation and collection of contributions, and (b) medium- and long-term actions that propose changes in the current system of affiliation and collection of contributions.

With respect to the first group the following actions are proposed:

- Developing a common information system. An information system characterized by simplicity and uniformity is essential for combating evasion and elusion. At present, administrators of different types of social security contributions and taxes such as the Health Superintendency, the Ministry of Finance, the FOSYGA, the Dirección Nacional de Impuestos y Aduanas (National Directorate of Taxes and Customs, DIAN), the Administradoras de Riesgos Profesionales (Administrators of Professional Risks, ARP), and the Administradoras de Fondos de Pensiones (Administrators of Pension Funds, AFP) have separate information systems, which do not allow them to share information and carry out efficient controls.

- Developing a unique database. The National Health Superintendency monitors health insurance coverage in the contributory regime through an Internet database (Comprobación de Derecho), which will be completed by July 2002. Following its completion, a crosscheck between this database and the databases of the FOSYGA, the DIAN, ARPs, and AFPs should be carried out, and a common database should be designed. Designing a common database will also require the development of a common identification system for employees, employers, and independent workers.

- Linking the \textit{carnet} of affiliation given by EPSs to their members to other official documents. For example, individuals should be requested to show their
carnet of affiliation in order to obtain a passport or a visa to visit a foreign country, or to use banking services

- Implementing a reputable system of vigilance and control with a high capacity to detect and punish evasion and elusion. Given that the Health Superintendency does not have the right to exercise legal actions against criminal offenders (actión penal), a close collaboration would be needed between the Health
- Superintendency, the Procuraduría, and the Fiscalía. The latter two institutions should have specific groups working on the health system.
- Learning from the experience of other entities that have successfully combated problems of elusion and evasion. In this aspect both the Bank Superintendency (Superintendencia Bancaria) and the DIAN can offer valuable feedback to the Health Superintendency.
- Carrying out information and communication campaigns that will stimulate affiliation and payment of contributions. The three main elements of such campaigns would be (a) motivation—why individuals should pay contributions, (b) information—where and how they can pay contributions, and (c) consequences—which are the personal implications if they do not pay contributions.

The following medium- and long-term actions have been discussed with respect to the health arena:

- Deducting health insurance contributions at the source of income (autorentención en la fuente del aporte)
- Creating a unified system of collecting contributions (sistema único de recaudo).

Both measures imply the modification of Article 205 of Law 100, which currently states that EPSs are the entities responsible for collecting contributions. In the case of the first action, health insurance contributions would be collected by the employer. The contributions would be channeled to FOSYGA, which in turn would remit to the EPSs the sum of the UPCs corresponding to their affiliates. Such a measure would additionally require the development of a new form of deduction at the source of income, a copy of which would be provided to the individual in order to verify to his or her EPS the payment of the contribution. Following this measure, the responsibility for collecting contributions would be taken away from the EPSs and the whole process would be simplified. Such an action could be implemented directly by the FOSYGA with the support of the DIAN, which would carry out the controls.

The second option suggests that contributions would be collected by a central entity other than the EPSs. Among the proposed entities has been the DIAN. This measure would imply that the DIAN would have to expand its tax controls to small and medium-size enterprises; currently it is concentrating on large contributors. However, there is criticism with respect to the fact that assigning the collection of
health insurance contributions to the DIAN may weaken its ability to accomplish its present job. Furthermore, it adds one more entity in the chain, where payments would be transferred from the DIAN, to the FOSYGA and then to the EPSs.

ii. FOSYGA Accounts

The inclusion of the FOSYGA Solidarity and ECAT Accounts in the national budget can be justified as a way of enabling the central government to keep control of aggregate spending by imposing expenditure ceilings. However, as a result, resources in FOSYGA exceeding the budgetary ceiling have been spent on the financing of activities different from those directed to increase health insurance coverage for the poor (see supply subsidies).

The ideal solution to this problem would be to remove the FOSYGA accounts from the national budget to enable resources to be used for what they are intended. This would require a change in Article 123 of Decree 111/96 of the *Estatuto Orgánico de Presupuesto*. However, the central government has been reluctant to do that for the reasons mentioned above. The central government recognizes the problem, and therefore as a second-best solution has agreed to use the resources of the FOSYGA Solidarity Account exclusively for increasing coverage in the subsidized regime. This commitment is soon to be materialized through a Ministry of Finance regulation. The main disadvantage of this arrangement is that such a decision could easily be reversed by future administrations.

iii. Delays in Transfers from National Territories to ARSs and Ultimately to Health Care Providers

From April 1999 to September 2000, national territories owed COP57,000 million (US$23 million) to the ARSs. According to Decree 46/2000, these resources should automatically be deducted from transfers to national territories to pay the debt. Although Law 715 simplifies the system of allocation of resources among territorial entities, it does not address the issue of already existing debts. It is imperative that this debt be paid in order for territorial authorities to extend coverage and for ARSs to be able to pay their accumulated debt with both public and private providers (estimated to be COP37,000 million, or US$15 million). Payment of arrears will translate into better quality of services for affiliates of the subsidized regime. Beneficiaries of the system have presented an *Acción de Cumplimiento* requesting enforcement of Decree 46/2000 by the MOH and the Health Superintendency.

Furthermore, it is crucial to materialize the transformation of supply to demand subsidies as mandated by Law 715. This means that in 2003–04 the formula for the distribution of resources between the financing of the subsidized regime and public hospitals should be changed and adjusted to the new number of affiliates and *vinculados*. Given that during the first two years since the approval of the law the number of affiliates will increase, the number of *vinculados* will decrease. As a result, by 2003–04 it is expected that more resources should be devoted to the financing of the subsidized regime compared to public hospitals.
iv. Definition of Health Benefit Package of the Contributory Regime

The issues of the content of the POS and the *tutelas* (lawsuits) are intrinsically linked. As far as the health benefit package is concerned, further exploration is needed of the fact that the POS offers comprehensive coverage without necessarily having the means to finance it through the UPC. For that reason, it is proposed that the DNP, in collaboration with the MOH, should launch a study to redefine the content of the health benefit package, and consequently adjust the risk-adjusted premium. The new content of the health benefit package and the level of the new risk-adjusted premium would then be legally defined by an accord of the *Consejo Nacional de Seguridad Social en Salud* (National Council of Social Security in Health, CNSSS).

With respect to the lawsuits, a first attempt to deal with the issue appears in the *Plan de Desarrollo, Cambio para Construir la Paz, 1998–2002*, which proposes the approval of a *Ley Estatutaria* for the health sector, aiming to define more precisely the rights of the citizens and the obligations of the State. Preliminary versions of such a proposed law exist, although its content is still not widely known. The purpose of the *Ley Estatutaria* is to protect, through legislation, the further expansion of the content of the POS. The proposal recognizes the right to health as a fundamental right, given its connection with the right to life. However, at the same time, it points out that the Colombian Constitution mandates the maximization of the well-being of the total population; that is, the interest of a group exceeds that of the individual. Hence, in the presence of a lawsuit that demands health services of high cost for a particular person, justice needs to consider first the rights of the group of individuals who, because of limited resources, may not be able to receive other health services in the future (opportunity cost). Recognizing this conflict, the *Ley Estatutaria* aims to provide a legal framework to assist in making decisions within this ‘grey’ area.

In addition, it is worth mentioning that the issue of reinsurance for high cost–low incidence events recently has been addressed through an accord of the CNSSS, in which a new mechanism is defined for redistributing fractions of the UPC for the contributory regime among EPSs as a function of the relative weight of high-cost services.

The lack of definition regarding the content of the POS poses serious problems for the viability of the health system, and a legal framework with respect to the issue is greatly needed. This legal void can be filled by the approval of a *ley estatutaria* for the health sector.

v. Health Insurance Coverage and Targeting

To address the issue of the confusion between an SCD and affiliation, the communications plan for the subsidized regime supported by the central government should be designed and financed. Emphasis should be on the difference between the

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15 This project was developed by the *Consejería Presidencial* during the Pastrana Administration.
application of the survey of SISBEN and affiliation to an ARS. In addition, the campaign should concentrate on issues such as the free election of insurance entity and the content of the health care package of the subsidized regime.

As explained in the section on The Confusion between an SCD and Affiliation, the lack of incentives in the subsidized regime is due to the fact that affiliates and vinculados end up paying the same copayment. To resolve this issue the CNSS should issue an accord increasing the copayments for the group of those who possess an SCD but are still not affiliated to the system. Under the current legislation individuals of SISBEN level 1 who are affiliated pay a copayment of 5 percent of the price of the service. The same copayment is paid by individuals of SISBEN level 1 who have an SCD but are not affiliated. An increase of the copayment paid by individuals of SISBEN level 1 who have an SCD but are not affiliated to the system to, for example, 7 percent, could provide an incentive for these individuals to become affiliated. These types of incentives appear to have worked when the SISBEN system was first implemented and individuals were urged to acquire an SCD in order to pay part of the price of the health care service they received. In the case of individuals of SISBEN level 2 who are affiliated, the copayment is 10 percent of the price of the service. The same copayment is also paid by individuals of SISBEN level 2 who have an SCD document but are not affiliated. If the copayment for the SISBEN level 2 individuals who have an SCD and are not affiliated increases to, for example, 12 percent, these individuals will have a greater incentive to get affiliated and therefore to pay less.

The increase of the copayments of the vinculados does not imply a modification of Law 100, and in legal terms is fairly straightforward to implement. Nevertheless, it could create a situation where it could be claimed that the government, instead of helping the poorest, forces them to pay more. But in reality, if affiliated, individuals would pay lower copayments as defined for those in the subsidized regime. The possibility of a strong information campaign to help people understand the changes and the reasons for implementing them.

The SISBEN index variables and weights assigned were recently updated. The next step is the reapplication of the survey to classify households according to their SISBEN level, a process that is estimated will be completed by 2005. At the same time, emphasis should be on the other components recommended by the CONPES, including (a) monitoring and evaluating the quality of the information collected by consolidating databases, carrying out field-based spot reviews, and evaluating the efficiency and effectiveness of the instrument; (b) applying a system of sanctions and incentives aimed at minimizing the manipulation of SISBEN and rewarding its frequent updating; and (c) establishing clear norms and procedures between local and central levels for reporting and resolving problems that occur during implementation of the program. Nevertheless, one should take into account the difficulties of updating an index like SISBEN in a country were approximately 500,000 people are displaced annually because of violence.
vi. Public Health: The Issue of Vaccination

The final report on the evaluation of the national vaccination program signed by representatives of PAHO, the MOH, and the INS summarized the problems and achievements of the program and presented a series of recommendations. The recommendations for the improvement of the PAI program encompass all aspects of the immunization program and were consolidated into a draft five-year Plan of Action. Crucial to the successful implementation of these recommendations will be the identification of needed funds.

Implementation of the national Plan of Action as intended by the MOH and the INS is expected to result in impressive gains in vaccination coverage, with levels reaching national goals of 95 percent. According to PAHO estimates, without implementation of the national Plan of Action, and assuming a best-case scenario where coverage levels are maintained at current levels (82 percent) or slightly improve, measles coverage levels will not reach even 90 percent by 2005. However, with implementation of the Plan of Action, coverage should reach 97 percent. Similar improvements in coverage levels for three doses of DTP are also expected. Implementation of the Action Plan would translate into the protection of an additional 100,000 1-year-old children each year against vaccine-preventive diseases.

IV. Conclusion

During the 1990s Colombia took important steps with respect to its health care system. These steps have generated a number of positive effects on insurance coverage, access to health care, quality of services, and equity. Furthermore, the central government recently addressed a number of issues through reform programs and restructuring plans. Nevertheless, further actions need to be taken if the positive outcomes following the introduction of Law 100 are to be completed, consolidated, and sustained. Considerable and clear policy efforts in the next four years are necessary for Colombia to continue to deserve a rating as the country with the best health system in terms of financial justice among the world's 191 countries.

The Colombian health care system does not appear to suffer from lack of funds. The resources available are sufficient to achieve full coverage for the poor in the subsidized regime provided they are distributed appropriately. Such a redistribution can be achieved through the exclusive use of the funds of the FOSYGA Solidarity Account for the financing of the subsidized regime, and the transformation of supply to demand subsidies as defined by Law 715. The transformation of the full amount of available resources of the Situado Fiscal and the use of the accumulated FOSYGA reserves for increasing coverage would mean the expansion of the subsidized regime by 5 million individuals (or 52 percent of the population already affiliated to the subsidized regime). Also, a sustained combination of actions, such as
reducing evasion while investing a portion of FOSYGA reserves, and even partially transforming the *Situado Fiscal*, would translate into the desired increase in affiliation of the poor to the subsidized regime.

A redistribution of resources in the system favoring demand subsidies would also provide strong incentives for hospitals and the ISS–Health to achieve greater efficiency and to be able to compete. The restructuring of public hospitals, which are currently financed by government subsidies and not by providing (selling) their services will, in 10 years, accumulate a net savings of US$2 billion (in 2000 dollars), equivalent to 3 percent of the 2000 GDP. This restructuring is necessary to consolidate the gains already made by the reformed health system in Colombia and to increase financial fairness in the system. Without it, not only will the reform stall, but the system as a whole will continue suffering the high cost of inefficiency in the public provision of services. By the same token, the reform of the ISS can, in 10 years, provide a fiscal savings of between 1.2 and 2.4 percent of the 2000 GDP, depending on the type of reform. Not advancing in this area has a high cost for both the Treasury and the Colombian society as a whole.

On the demand side, the provision of information to and education of the population are crucial for increasing insurance coverage and access to health care. The legislation on Colombia's health care system is complex, which makes the workings of the system even more difficult for the average citizen to understand. As a result, there is a lack of knowledge about issues such as the affiliation process, the content of the health care benefit package, and the free choice of insurer and health care provider. Implementing communication and information campaigns will be important to guarantee the reform's success as a means for individuals to understand both their rights and their obligations. Furthermore, the definition of rights and obligations for both affiliates and the State will be further assisted by the approval of a *Ley Estructural* for the health sector.

A key factor in completing the reform will be cracking down on evasion, which would have a positive effect for both the contributory and subsidized regimes. Developing strategies of vigilance and control with a high capacity to detect and punish evasion and elusion will provide additional resources in the system and support the solidarity principle mandated by the reform. Elimination of evasion would increase the resources entering the Compensation Account by COP1,881,000 million (US$767 million), equivalent to 56 percent of the Compensation Account in 2000, and would expand affiliation to the subsidized regime by 1.2 million individuals.

All these measures need the strong and unconditional support of the central government. In the future, the government, by focusing on ensuring that actions mandated or followed by the 1993 reform are properly implemented, and correcting for those that still need further tuning, can only harvest gains. The health reform process is ambitious and change has already been implanted in health sector actors and institutions. To radically change direction at this stage could have enormously costly consequences that might translate into reduced access and lower satisfaction.
among the poorest. The new system is designed to operate as a whole. Selective implementation of the reform will inevitably lead to problems, while full and committed execution of the reform's mandates would help Colombia continue to be in the forefront of the health arena not only among the developing world, but among the developed world, as well.
Appendix

Table A.1. Option 1: ISS Health, Millions of US$ (in year 2000 dollars)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
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<tbody>
<tr>
<td><strong>(A) Critical Base Scenario</strong></td>
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<tr>
<td>Operating losses¹</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
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<td>(B) With Reform</td>
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<tr>
<td>Net investment²</td>
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<td>48</td>
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<td>165</td>
<td>174</td>
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<tr>
<td>Net operating loss or surplus⁴</td>
<td>(600)</td>
<td>48</td>
<td>138</td>
<td>165</td>
<td>174</td>
<td>179</td>
<td>183</td>
<td>188</td>
<td>192</td>
<td>196</td>
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<tr>
<td>(C) Net Savings from Reform⁵</td>
<td>(159)</td>
<td>(964)</td>
<td>298</td>
<td>388</td>
<td>415</td>
<td>424</td>
<td>429</td>
<td>433</td>
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<td>Net Present Value Option 2⁶</td>
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<td>80,000</td>
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<td>2.2%</td>
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</table>

1 Reflects the financing request from ISS to the Ministry of Finance.
2 For 2001 US$305 million of severance payments + US$150 million to pay for short-term liabilities with providers.
3 Additional incentives given to workers to accept conversion renegotiation.
4 Projections by ISS of a model with the following major assumptions
   Affiliates: Constant at 5.2 million.
   Service: At competitive market prices with no supply subsidies.
   Workers under private sector labor conditions
   Pension obligations under Law 100 conditions
5 = – (A) + (B).
6 Net Present Value at 4 percent real interest rate.

Note Exchange rate constant at COP2,229.18 pesos per US$1.
Table A.2. Option 2: ISS Health, Millions of US$ (in year 2000 dollars, without including values of assets that could be sold)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<tbody>
<tr>
<td><strong>(A) Critical Base Scenario</strong></td>
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<tr>
<td>Operating losses(^1)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
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<tr>
<td><strong>(B) With Reform</strong></td>
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<tr>
<td>Net investment(^2)</td>
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<tr>
<td>Additional incentives to labor(^3)</td>
<td>(455)</td>
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<tr>
<td>Net operating loss or surplus(^4)</td>
<td>(600)</td>
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<tr>
<td>Net Present Value Option 1(^6)</td>
<td>(805)</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
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<tr>
<td>GDP end 2000</td>
<td>1,013</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
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</tr>
<tr>
<td>NPV /GDP</td>
<td>80,000</td>
<td></td>
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</tbody>
</table>

1. Reflects the financing request from ISS to the Ministry of Finance
2. For 2001 US$305 million of severance payments + US$150 million to pay for short-term liabilities with providers
3. Additional incentives given to workers to accept convention renegotiation
4. ISS closes EPS and IPS
5. *= (A) + (B)
6. Net Present Value at 4 percent real interest rate

Note: Exchange rate constant at COP2,229 18 pesos per US$1
### Table A.3. Option 1: Timid Restructuring of Public Hospitals, Millions of US$ (in year 2000 dollars)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
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<td><strong>Critical Base Scenario</strong></td>
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<tr>
<td>(A) Hospital operating costs&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2,212</td>
<td>2,411</td>
<td>2,628</td>
<td>2,865</td>
<td>3,122</td>
<td>3,403</td>
<td>3,710</td>
<td>4,044</td>
<td>4,408</td>
<td>4,804</td>
<td>5,237</td>
</tr>
<tr>
<td><strong>Timid Restructuring Scenario (5%)</strong></td>
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</tr>
<tr>
<td>(B) With Reform Net investment&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2,541</td>
<td>2,747</td>
<td>2,982</td>
<td>3,233</td>
<td>3,524</td>
<td>3,841</td>
<td>4,187</td>
<td>4,564</td>
<td>4,975</td>
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<tr>
<td>Hospital operating costs&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2,291</td>
<td>2,497</td>
<td>2,721</td>
<td>2,966</td>
<td>3,233</td>
<td>3,524</td>
<td>3,841</td>
<td>4,187</td>
<td>4,564</td>
<td>4,975</td>
<td></td>
</tr>
<tr>
<td><strong>(C) Net Savings from Reform&lt;sup&gt;4&lt;/sup&gt;</strong></td>
<td>(129)</td>
<td>(119)</td>
<td>143</td>
<td>156</td>
<td>170</td>
<td>185</td>
<td>202</td>
<td>220</td>
<td>240</td>
<td>262</td>
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</tr>
</tbody>
</table>

NPV of (A)<sup>5</sup> 30,000
NPV/GDP 37%
NPV of (B)<sup>5</sup> 29,000
NPV/GDP 36%
NPV of (C)<sup>5</sup> 936
NPV/GDP 1%
GDP end 2000 80,000

NPV = Net Present Value
1. The average increase of hospital operating costs is 8 percent
2. Total cost of restructuring for all public hospitals is US$500 million dollars, divided between two years of restructuring
3. This scenario assumes that total hospital costs will decrease by 5 percent every year.
4. \( \pi = (A) + (B) \)
5. NPV at 4 percent real interest rate

*Note* Exchange rate constant at COP2,229 18 pesos per US$1
### Table A.4. Option 2: Bold Restructuring of Public Hospitals, Millions of US$ (in year 2000 dollars)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
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</tr>
<tr>
<td>(A) Hospital operating costs¹</td>
<td>2,212</td>
<td>2,411</td>
<td>2,628</td>
<td>2,865</td>
<td>3,122</td>
<td>3,403</td>
<td>3,710</td>
<td>4,044</td>
<td>4,408</td>
<td>4,804</td>
<td>5,237</td>
</tr>
<tr>
<td><strong>Bold Restructuring Scenario (10%)</strong></td>
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</tr>
<tr>
<td>(B) With Reform</td>
<td>2,212</td>
<td>2,420</td>
<td>2,615</td>
<td>2,578</td>
<td>2,810</td>
<td>3,063</td>
<td>3,339</td>
<td>3,639</td>
<td>3,967</td>
<td>4,324</td>
<td>4,713</td>
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<tr>
<td>Net investment²</td>
<td>250</td>
<td>250</td>
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</tr>
<tr>
<td>Hospital operating costs³</td>
<td>2,170</td>
<td>2,365</td>
<td>2,578</td>
<td>2,810</td>
<td>3,063</td>
<td>3,339</td>
<td>3,639</td>
<td>3,967</td>
<td>4,324</td>
<td>4,713</td>
<td>4,713</td>
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<tr>
<td><strong>(C) Net Savings from Reform⁴</strong></td>
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<td>340</td>
<td>371</td>
<td>404</td>
<td>441</td>
<td>480</td>
<td>524</td>
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<tr>
<td>NPV of (A)⁵</td>
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<tr>
<td>NPV/GDP</td>
<td>37%</td>
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<tr>
<td>NPV of (B)⁵</td>
<td>27,500</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>NPV/GDP</td>
<td>34%</td>
<td></td>
<td></td>
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<tr>
<td>NPV of (C)⁵</td>
<td>2,325</td>
<td></td>
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<tr>
<td>NPV/GDP</td>
<td>3%</td>
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<tr>
<td>GDP end 2000</td>
<td>80,000</td>
<td></td>
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</tbody>
</table>

NPV = Net Present Value

(1) The average increase of hospital operating costs is 8 percent
(2) Total cost of restructuring for all public hospitals is US$500 million, divided between two years of restructuring
(3) This scenario assumes that total hospital costs will decrease by 10 percent every year
(4) = − (A) + (B)
(5) NPV at 4 percent real interest rate

Note: Exchange rate constant at COP2,229 18 pesos per US$1
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The Social Safety Net

This Chapter was written by Laura B. Rawlings.

I. The Social Safety Net in Colombia

Colombia has historically relied on economic growth and the parallel expansion of basic social services as a substitute for implementing a social safety net (Perotti 2000). Social assistance was not included in the dramatic social sector reforms of the 1990s that resulted in increased spending and decentralization for health and education. As a consequence, social assistance programs remain not only ill-suited to respond to large covariate shocks (shocks that affect many people simultaneously), but also underfunded, centralized, and lacking a strategic focus. The social sector policy reforms introduced in the 1990s by the 1991 Constitution, Law 60, and Law 100 did not include social assistance. The exclusion of social assistance from these reforms had three consequences.

First, social assistance was left out of the large increase in social sector spending fueled by Colombia’s solid economic growth. Whereas funding for health and education rose from approximately 4 percent of GDP in the early 1990s to over 8 percent of GDP by 1996, central government budgeted expenditures on social assistance fluctuated around 1 percent of GDP during the first part of the 1990s, and fell to less than 0.7 percent by 2000. This is a very low level of social assistance spending com-

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2 Social assistance is defined as spending on the four main social assistance programs reported in aggregated budgetary data—the Colombian Institute for Family Welfare (ICBF), the Social Solidarity Network (RSS), the National Institute of Social Interest, Housing, and Urban Reform (INURBE), and utilities subsidies. This figure does not include spending on the new temporary Red de Apoyo Social (RAS) conditional cash transfer, workfare, and youth training programs.
pared to countries at a similar stage of development, and compared to the needs of specific vulnerable groups that lack access to key social assistance programs.

Second, since the decentralization reforms that guided social sector policy did not include social assistance, the main social assistance programs remain highly centralized. The fiscal transfers to local governments that absorb 14 percent of GDP include no funding for social assistance. Local governments have almost no discretion over how social assistance and National Training Service (Servicio Nacional de Aprendizaje, SENA) funds are allocated.

Finally, the strategic focus and policy directives established for most social sector programs as part of the reforms were not applied to social assistance. Social assistance programs remain fragmented, unfocused, and largely outside of the reach of those in the informal sector.

When Colombia experienced its biggest recession in 70 years in 1999, the deficiencies in the social safety net were clearly revealed. The crisis introduced new vulnerabilities and exacerbated structural problems, with the combined impact still apparent in the high rates of unemployment, the protracted increase in poverty, the erosion of the social fabric, and the rise in vulnerability. Urban areas were hit particularly hard by the crisis. Urban poverty reached 55 percent by 1999 (11 percentage points higher than in 1995), reversing a decade of progress. The historical rate of unemployment doubled during the late 1990s, reaching 17 percent in 2000, with the highest rates concentrated in urban areas (24 percent), among youth (37 percent for those age 15 to 19), women (23 percent), and the middle class (25 percent for those with secondary education). The crisis also led to a large increase in the informal sector, which, combined with the high unemployment rates, underscores the rigidities in the Colombian labor market. The economic crisis was accompanied by an intensification of Colombia’s internal conflict, the displacement of hundreds of thousands of people, and a general increase in violence and insecurity.

As outlined below, the social assistance programs that could have been mobilized to provide a safety net during the crisis were hampered by structural constraints, including a historic lack of financing (particularly during times of crises), institutional inflexibility, unfocused mandates, and poor targeting. As a response to the crisis, a new set of safety net programs was introduced as the Social Support Network (Red de Apoyo Social, RAS) to provide short-term emergency assistance until 2004, but without engaging in a broader strategic reform of the safety net. The next administration will need to evaluate the new RAS programs’ performance and decide on its future role. This should be done as part of an overall safety net reform resulting in the establishment of an agile, efficient, and effective social risk management system.

3. Each of the nine Latin America and Caribbean region countries included in a recent social protection expenditure review devotes a higher share of GDP to social assistance, including Argentina (0.9 percent), Mexico (1.1 percent), Peru (1.4 percent), Uruguay (3.4 percent) and Venezuela (1 percent) (Dulitsky, Gragnolati, and Lindert 2001).
II. Role of Social Safety Nets and Recent Policy Initiatives

A comprehensive social safety net serves two functions, one structural and one countercyclical. The first function addresses structural, chronic poverty or vulnerability and aims to protect a person or household against the adverse outcomes of a lasting incapacity to work or subsist (the "net" function). The second addresses transient poverty or vulnerability and aims to protect people against a temporary decline in their capacity to work or subsist (the countercyclical "trampoline" function; that is, the ability of people to bounce back to their preshock state). This latter category is the primary focus of this Chapter, particularly with respect to the role of safety nets during periods of economic crisis. A good countercyclical safety net addresses not only the immediate consequences of an economic crisis (for example, a fall in consumption), but also contributes to breaking the cycle of poverty and structural vulnerability through investments in human capital during crisis and noncrisis periods (World Bank 2001a; De Ferranti and others 2000).

The state has a particular role to play in helping the poor address risks through social insurance and social assistance programs. The definition of a social safety net is evolving, but generally it is thought of as including social assistance programs and often at least elements of social insurance programs (World Bank 2001b). Social assistance programs are those of a redistributive nature that transfer resources to particular at-risk groups, while social insurance mechanisms—such as public pensions and health insurance—pool risks across population groups. Social assistance may take the form of (a) cash or income transfers, such as child allowances; (b) transfers in kind, such as food subsidies, housing subsidies, energy subsidies, and feeding programs; or (c) income support to the vulnerable by providing jobs in an emergency situation, through a public works program.4

\[ \text{a) Colombia's Social Assistance Programs} \]

Beyond the national programs and nationally mandated policies summarized in Table 1, an important element of the social safety net is provided not by the national government but by local governments, nongovernmental organizations (NGOs), the private sector, and individuals themselves through informal arrangements. In addition, the subsidized health regime and pension solidarity fund are redistributive social insurance programs that play a key role in the social safety net.5

Social assistance programs and the SENA program in Colombia are primarily financed by payroll taxes and—with the notable exception of Colombian Institute for Family Welfare (Instituto Colombiano de Bienestar Familiar, ICBF) programs—remain available primarily to formal sector employees (Table 1). The tax burden increased

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5 See Chapters on Pension and Health Insurance Programs for further discussions
### Table 1. Colombia’s Main Social Assistance Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Type of Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instituto Colombiano de Bienestar Familiar (Colombian Institute for Family Welfare, ICBF).</td>
<td>Directly administers three main in-kind transfer programs: formal daycare/early childhood development (ECD), informal home-based daycare/ECD, school feeding</td>
</tr>
<tr>
<td></td>
<td>Also responsible for regulating child welfare.</td>
</tr>
<tr>
<td>Red de Solidaridad Social (Social Solidarity Network, RSS).</td>
<td>A social fund that finances a wide range of programs, including income support employment program, in-kind transfers for housing, and cash transfers to the elderly.</td>
</tr>
<tr>
<td>Instituto Nacional de Vivienda de Interés Social y Reforma Urbana (National Institute of Social Interest Housing and Urban Reform, INURBE).</td>
<td>Provides in-kind transfers in the form of subsidies for the construction and purchase of housing.</td>
</tr>
<tr>
<td>Subsidio Familiar and Cajas de Compensación (Family Subsidy, SF and Compensation Associations, CC).</td>
<td>Cajas de Compensación administers the family subsidy income support scheme and a variety of in-kind transfers.</td>
</tr>
<tr>
<td>Program para la Ampliación de la Educación Secundaria (Private School Vouchers, PACES)</td>
<td>In-kind transfer program that provides vouchers for students to attend private secondary schools.</td>
</tr>
<tr>
<td>Subsidios de Servicios Básicos (Basic Service Subsidies—Water, Sewerage, Electricity, and Gas)</td>
<td>An in-kind transfer system of subsidies that makes the consumption of these basic services more affordable to residents of poor neighborhoods</td>
</tr>
</tbody>
</table>

Source: World Bank 2002

Substantially from 1990 to 1996 (total labor costs as a percentage of wages rose from 53 to 66 percent) and remains high, decreasing the competitiveness of Colombian firms and contributing to the protection of formal sector workers who are entitled to high severance payments, vacations, a 13th month salary, and other benefits. Several analysts have pointed to the pernicious effects of these and other labor regulations on labor market outcomes (Heckman and Pagés 2000; Kugler and Kugler 2001; Lopez 2001). When considering the reform of the social safety net in Colombia, this high tax burden should be kept in mind, particularly since the poor bear a disproportional burden of unemployment and informality (see Annex Table A). A case could be made to
<table>
<thead>
<tr>
<th>Risks Addressed</th>
<th>Administration</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic malnutrition</td>
<td>Central government agency</td>
<td>3 percent payroll tax on all formal sector employees</td>
</tr>
<tr>
<td>ECD coverage</td>
<td>Central government agency</td>
<td></td>
</tr>
<tr>
<td>Preschool attendance</td>
<td>Central government agency</td>
<td></td>
</tr>
<tr>
<td>Elder poverty</td>
<td>Central government agency</td>
<td>General public revenues</td>
</tr>
<tr>
<td>Internal displacement</td>
<td>Central government agency</td>
<td></td>
</tr>
<tr>
<td>Housing for the poor</td>
<td>Central government agency</td>
<td>General public revenues</td>
</tr>
<tr>
<td>Low income of formal sector workers</td>
<td>Self-financed autonomous organizations</td>
<td>4 percent payroll tax paid by the employers based on the salaries of workers earning over four times the minimum wage</td>
</tr>
<tr>
<td>Secondary school dropout</td>
<td>Ministry of Education program administered through a subcontract by ICETEX (The National Scholarship Institute)</td>
<td>General public revenues</td>
</tr>
<tr>
<td>Public sector supply constraints</td>
<td>Not a formal program, but a legal mandate implemented by municipalities and departments responsible for basic service provision</td>
<td>Cross-subsidization from richer to poorer neighborhoods through the application of progressive tariffs</td>
</tr>
</tbody>
</table>

engage in labor market reform by lowering the tax burden through the elimination of taxes on social programs that are not targeted to the poor, and securing alternative sources of revenue to finance a progressive, strengthened social safety net.  

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6 This reform would need to be carried out carefully and perhaps include guidelines for protecting social sector expenditures in crisis periods (as is done in Peru) because social expenditure data from the recent recession indicates that budgets for earmarked social programs were reduced less severely than those for programs financed through general revenues (World Bank 2002)
b) Responding to the Recent Economic Crisis: The Social Support Network

Colombia’s main social assistance programs were ill equipped to offer adequate countercyclical protection to those most affected by the recent crisis. These deficiencies led to the introduction of a new short-term program, the Social Support Network (Red de Apoyo Social, RAS), to mitigate the worst effects of the crisis. Implementation of the RAS programs began in 2001, and the programs were expected to have reached full capacity by early 2002.

The RAS safety net is composed of three principal programs promoting human development, employment, and job training. The Empleo en Acción community works program (formerly known as Manos a la Obra) aims to provide temporary employment to poor, unemployed, low-skilled workers by employing them in labor-intensive social and economic investment projects such as school expansion and road repair. A conditional cash subsidy program for poor families, Familias en Acción, aims to protect investments in children’s health, education, and nutrition by providing cash to families conditional on keeping children in school and providing them with basic preventive health care. Jóvenes en Acción is a training–apprenticeship program for young adults based on competitive bidding among private firms and public entities. Colombia has committed itself to administering these programs for four years (2001–04) and to reviewing the results of the impact evaluations at the projects’ conclusion to assess the desirability of their continuation as part of a broader safety net strategy.

These programs provided an important step forward in establishing a countercyclical strategy that is appropriately targeted to key vulnerable groups affected by the crisis—notably the unemployed and the young—with income support and cash transfers appropriate to their needs. However, it took almost two years to develop the programs, secure financing, and implement a response, and the countercyclical approach has yet to be institutionalized. The next step is to evaluate the new RAS programs and integrate them into a coherent, reformed social safety net that includes a countercyclical component designed to address future crises with required agility and effectiveness. If the RAS programs are not assessed as part of a broader social safety net reform, they risk becoming another institutional layer within the diffuse collection of social assistance programs.

III. Main Sectoral Issues

A recent review of Colombia’s social safety net was conducted by the World Bank and the government of Colombia in collaboration with key consultants based on an analysis of vulnerability and household use of social risk management, coupled with

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an assessment of the efficiency and effectiveness of Colombia's national public safety net programs. This review was prompted by the need to address the social consequences of the economic crisis of the late 1990s and examine the broader role of the social safety net in Colombia, and includes the following findings:

a) Issue 1: Sources of Vulnerability

Vulnerability is based on the expected outcomes of risks and responses to those risks, with the degree of vulnerability determined by the probability that a shock will result in individuals, households, or communities falling below a predefined welfare threshold, such as poverty (Herzman, Canagarajah, and Siegel 2002). In Colombia, an assessment of vulnerability using household survey data from the 1999 Encuesta Social and a series of Encuesta de Hogares was combined with a qualitative study on “Social Dimensions of the Crisis” (González 2001), and provided insights into the multidimensional aspects of vulnerability, the identification of at-risk groups, and the key role of the labor market in determining household poverty status.

i. Multidimensional Sources of Vulnerability

In a recent qualitative study conducted to examine vulnerability and social risk management, focus groups uniformly assessed the recent crisis as multidimensional, involving political, economic, and social factors, and affecting a broad cross section of Colombian society (see Table 2). Highlighted are the lack of a social safety net or exclusion from its benefits, especially affecting children and adolescents, and the migration typically from rural to urban areas increasing competition for fewer jobs and overburdening social services in receptor municipalities. The general perception of economic insecurity is further intensified because the crisis is perceived as having an earlier origin than the 1999 recession, and longer-term consequences.

Independent of their poverty status, all the focus groups agree that there is a strong correlation between the economic and political dimensions of the crisis, particularly regarding the effects of violence and the absence of the state in key areas of public life. A common perception among those interviewed has to do with not only a lack of good governance, but with a perceived lack of state presence. The absence of the state is seen as particularly acute with respect to its failure to protect citizens against violence and the armed conflict.

Results of both the quantitative and qualitative work also highlight the role of accumulated vulnerabilities, underscoring the tendency for shocks to manifest themselves disproportionately among the poor (Gaviria 2000) and those with pre-existing vulnerabilities (González 2001).

ii. At-Risk Groups: A Focus on Children, Youth, and the Internally Displaced Population

Children and adolescents are the main age-specific vulnerable groups in Colombia today requiring attention from a reformed safety net. Annex Table A presents an
Table 2. Perceptions of Vulnerabilities by Socioeconomic Level

<table>
<thead>
<tr>
<th>Extremely Poor</th>
<th>Poor</th>
<th>Middle class</th>
<th>Upper class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All informants (urban and rural)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less financing available from formal public social insurance programs (pensions, health)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Informal workers (urban and rural):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease in labor demand.</td>
<td></td>
<td></td>
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<tr>
<td>Wage decrease.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction in or total loss of access to public services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in social insecurity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Marginalized and unemployed people (urban):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusion from social benefits.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Participation by other groups in the informal labor market, legally or illegally. Immigra- 
  tion by groups from the rural areas increases labor supply and, thus, competition. This in- 
  creased labor supply has the tendency to drive down salaries | | | |
| **Day laborers (rural):** | | | |
| Unemployment | | | |
| Reduction of agricultural prices. | | | |
| Problems with ensuring food provision. | | | |
| Ecological and environmental problems. | | | |
| High transaction costs. | | | |
| Inflation. | | | |
| **Informal workers (urban):** | | | |
| Rural to urban migration increases labor supply, reduces salaries, and reduces labor demand. | | | |
| Regulation and prohibition of informal work like street vending (for example, the plans related to public or recreational spaces in the cities). | | | |
| **Functionaries (urban and rural):** | | | |
| Dismissals at private companies and public institutions. | | | |
| **Workers (urban and rural):** | | | |
| Unemployment. | | | |
| Reduction or loss of public social services. | | | |
| Reduction in human capital accumulation as a result of the loss of or more limited access to social services and benefits. | | | |
| Increase in social insecurity, including that of children, youth, and the elderly. | | | |
| **Landowners (rural):** | | | |
| Reduced international competitiveness (commercial opening). | | | |
| Reductions in international prices for key exports. | | | |
| High transaction costs. | | | |
| Insecurity as a result of boleto (Colombian expression to indicate bribery, blackmail, and economic threats or death threats), and as a result of the guerrillas, narcotrafficking, and the armed conflict. | | | |
| **Business owners (urban):** | | | |
| Market fluctuations. | | | |
| Price drops at international level. Low competitiveness. | | | |
| Increase in the price of imported production input materials | | | |
| Increase in transaction costs. Insecurity caused by robberies and boleto. | | | |

*Source* González 2001
overview of key risks groups by age, and social protection programs designed to address those risks. Preschool- and primary-school-age children are facing important poverty, health, and nutrition risks, including a sharp decline in vaccination rates and an increase in the percentage of some diseases left untreated (like diarrhea). Roughly half of all children in Colombia have not been vaccinated against basic communicable diseases, a decrease in coverage of 10 percentage points in only 5 years (Profamilia 1995, 2000). Poverty is more prevalent among the very young than among any other groups analyzed in the 2001 “Colombia Poverty Report”: close to 70 percent of children under age 7 in urban areas, and almost 90 percent of children in rural areas, are poor (see Table 3).

Youth aged 12 to 17 have been identified as exceptionally vulnerable due to their exposure to multiple aspects of violence and crime. Colombia already has the dubious distinction of having the highest kidnapping and homicide rates in the world, and a large share of both the perpetrators and victims of urban economic and social crimes are minors. Focus groups reported that juvenile delinquency and street robbery have increased dramatically in the last few years, and that teenagers are being recruited by force to participate in the armed conflict. Teenage pregnancy and exposure to sexually transmitted diseases also represent a major risk. According to Demographic and Health Surveys (Profamilia 1995, 2000), teenage pregnancy is on the rise. About 19 percent of female teenagers aged 15 to 19 were pregnant or had had a child by the time of the survey, compared to 17 percent in 1995. The rate is much higher in rural areas (26 percent) and is inversely related to education. These phenomena are undoubtedly exacerbated by the high and growing rates of inactivity and unemployment among youth (see Annex Table A).

Internally displaced people, a result of Colombia’s internal conflict, constitute another critically vulnerable group. The drug-related economic and military strength of the guerrillas and paramilitaries has led to a dramatic increase in violence, deaths, and displacement, especially among the rural civilian population. There is considerable debate regarding the size and characteristics of the internally displaced population (IDP). The government of Colombia estimates that there are currently 400,000 displaced people, while other estimates put the number at close to 2 million (CODHES–UNICEF 1999). This population has been evicted from areas where they have been engaged in productive economic activities, and relocated in urban slums where employment prospects are limited, access to social services constrained, and violence and crime rampant.

In contrast to earlier years, recent migration to urban areas is now a good predictor of poverty—64 percent are poor versus 55 percent of the general population.

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8 A life-cycle approach to assessing risks and vulnerabilities was first introduced in Argentina (Arrigada, Castañeda, and Hall 2000) and provides a straightforward technique for identifying key risks and gaps in the coverage of existing programs, which can be useful in prioritizing attention to specific populations.
9 Please see the Chapter on Internally Displaced Population for additional information.
Table 3. Poverty Count for Different Subgroups of the Population, 1978–99

<table>
<thead>
<tr>
<th></th>
<th>1978 (Percent)</th>
<th>1988 (Percent)</th>
<th>1995 (Percent)</th>
<th>1999 (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>URBAN Colombia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children under 2 years</td>
<td>70</td>
<td>55</td>
<td>48</td>
<td>55</td>
</tr>
<tr>
<td>From 2 to 6 years</td>
<td>80</td>
<td>71</td>
<td>63</td>
<td>62</td>
</tr>
<tr>
<td>From 7 to 13 years</td>
<td>80</td>
<td>70</td>
<td>62</td>
<td>69</td>
</tr>
<tr>
<td>From 14 to 17 years</td>
<td>73</td>
<td>61</td>
<td>55</td>
<td>64</td>
</tr>
<tr>
<td>Over 65 years old</td>
<td>52</td>
<td>42</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>Migrants/just moved&lt;sup&gt;1&lt;/sup&gt;</td>
<td>NA</td>
<td>50</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td>Migrants &lt; 5%&lt;sup&gt;2&lt;/sup&gt;</td>
<td>NA</td>
<td>51</td>
<td>46</td>
<td>60</td>
</tr>
<tr>
<td>Migrants &lt; 10%&lt;sup&gt;3&lt;/sup&gt;</td>
<td>NA</td>
<td>49</td>
<td>43</td>
<td>54</td>
</tr>
<tr>
<td>Migrants &lt; 25%&lt;sup&gt;4&lt;/sup&gt;</td>
<td>NA</td>
<td>50</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-home owners</td>
<td>69</td>
<td>55</td>
<td>48</td>
<td>55</td>
</tr>
<tr>
<td>Home owners</td>
<td>77</td>
<td>64</td>
<td>57</td>
<td>63</td>
</tr>
<tr>
<td>Disabled</td>
<td>62</td>
<td>46</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Pensioners</td>
<td>37</td>
<td>32</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td><strong>RURAL Colombia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children under 2 years</td>
<td>94</td>
<td>80</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>From 2 to 6 years</td>
<td>97</td>
<td>86</td>
<td>88</td>
<td>86</td>
</tr>
<tr>
<td>From 7 to 13 years</td>
<td>98</td>
<td>88</td>
<td>87</td>
<td>87</td>
</tr>
<tr>
<td>From 14 to 17 years</td>
<td>97</td>
<td>88</td>
<td>87</td>
<td>87</td>
</tr>
<tr>
<td>Migrants/just moved&lt;sup&gt;1&lt;/sup&gt;</td>
<td>NA</td>
<td>79</td>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td>Migrants &lt; 5%&lt;sup&gt;2&lt;/sup&gt;</td>
<td>69</td>
<td>80</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>Migrants &lt; 10%&lt;sup&gt;3&lt;/sup&gt;</td>
<td>76</td>
<td>74</td>
<td>73</td>
<td>75</td>
</tr>
<tr>
<td>Migrants &lt; 25%&lt;sup&gt;4&lt;/sup&gt;</td>
<td>59</td>
<td>78</td>
<td>69</td>
<td>73</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-home owners</td>
<td>94</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Home owners</td>
<td>93</td>
<td>81</td>
<td>82</td>
<td>79</td>
</tr>
<tr>
<td>Disabled</td>
<td>94</td>
<td>79</td>
<td>77</td>
<td>79</td>
</tr>
<tr>
<td>Pensioners</td>
<td>NA</td>
<td>NA</td>
<td>84</td>
<td>78</td>
</tr>
</tbody>
</table>

1. Refers to people who lived less than 1 percent of their lives in the current city
2. Refers to people who lived less than 5 percent of their lives in the current city
3. Refers to people who lived less than 10 percent of their lives in the current city
4. Refers to people who lived less than 25 percent of their lives in the current city
NA = Not available
Source: Velez and others (2001)

(Table 3). Available data suggest that the majority of the displaced are women (56 percent) and children (55 percent are under age 18), with limited skills and education. In their migration from rural to urban areas, they have abandoned their main asset—their land—and face barriers to accessing jobs and social services. Their concentration in a few cities in Colombia has placed an added strain on limited munic-
ional budgets, a situation compounded by the ongoing severe lack of financing for Colombia's main national strategy for the internally displaced people.

iii. Labor Market Dynamics

Looking beyond the vulnerabilities of specific groups to focus on households underscores the critical role of the labor market in determining changes in poverty status. Those households experiencing the largest increase in poverty during the recent recession were those with only self-employed workers or only nonlabor income, whereas households composed entirely of wage earners saw the smallest increase in poverty. Of particular note, unemployment of the household head is catastrophic for poverty risks; in urban areas poverty is 25 percentage points higher if the head used to work and is presently unemployed (Vélez and others 2001). Paralleling the findings from the survey data, focus group participants in both rural and urban areas ranked economic insecurity as their principal source of risk, followed closely by violence (González 2001).

In sum, these results point to the pernicious effects of labor market rigidities in Colombia and the high vulnerability of children and youth, who constitute a disproportionate share of the population of internally displaced people. Labor market reforms facilitating greater access to employment, particularly in the formal sector, are critical to addressing vulnerability in Colombia. Improvements in the coverage and quality of safety net programs are also required for children, youth, and the internally displaced population.

The internal conflict requires creativity in addressing the needs of populations in conflict areas as well. Since the government of Colombia has a limited presence in the areas where the guerrillas and paramilitaries are strongest, the resident civilian populations are basically cut off from any substantial government social assistance. Addressing the needs of the populations in these areas calls for creativity, perhaps through building on successful partnerships with NGOs, to find approaches allowing the state to function effectively in the provision of social services.

b) Issue 2: Social Risk Management

The concept of managing social risk comes from the notion that certain groups in society are vulnerable to unexpected shocks that periodically threaten their livelihood or survival. Others live in a chronic state of impoverishment that places their livelihood in a constant state of risk. Effective risk management consists of choosing the appropriate risk prevention, mitigation, and coping strategies to minimize the adverse impact of social risks. In general, it is less costly to society to prevent risk than to cope with it afterward. First-best solutions enable individuals and households to self-protect, rather than turn to the government for assistance (World Bank 2001a). Incorporating an insurance approach based on risk pooling can also facilitate effective social risk management (Ehrlich and Becker 1972; De Ferranti and others 2000).

In Colombia, households used three clearly identifiable strategies to manage income risks presented by the recent economic crisis: mobilizing available labor
(including child labor), reducing and diversifying consumption, and using available physical assets, particularly housing.

The use of household labor is a common strategy for achieving income diversification. The *Encuesta Social* reveals that households that have experienced an income shock are more likely to incorporate other members of the family into the labor force or increase the number of hours worked by the household head than those that have not experienced a shock (Table 4). The "Colombia Poverty Assessment" (Vélez and others 2001) shows that a higher employment rate within the household (beyond just the household head) remains the most effective insurance against poverty, with poverty risks decreasing by 13 percent for each additional household member employed. The illegal use of available labor to augment household income was also widely reported in the qualitative work, including collaboration with armed groups, selling drugs, and prostitution. These opportunities are frequently pursued in the absence of legal, formal sector options, which are often conditioned by geographic location (González 2001).

Colombians resorted to pulling children out of school as a strategy for increasing income and decreasing consumption in the face of an economic shock. In 1999, when the recession was at its peak, the probability of a member of a household dropping out of school was 8 percentage points higher in those households that reported a negative income shock than in those that did not, controlling for economic status (Gaviria 2000).10 In addition, wealthier and poorer families alike shifted children from private to public schools as a strategy for reducing consumption in the face of the recent crisis. Between 1996 and 2000, private secondary school enrollment as a

<table>
<thead>
<tr>
<th>Increasing Labor Market Participation (Percent)</th>
<th>Increasing Work Hours (Percent)</th>
<th>Selling Assets (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Shock</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>No Income Shock</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Difference</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

*Source: Gaviria (2000)*

10 The *World Development Report* (World Bank 2001b) points to links between macroeconomic downturns and a deterioration in education indicators. For instance, in the Philippines, secondary school enrollments increased only 0.9 percent between the 1997–98 and 1998–99 academic years, after growing at an average annual rate of 2.6 percent in the previous five years before the Asian crisis. In Mexico, the proportion of each graduating class that enrolled in the next education level declined during the 1980s debt crisis, particularly among high school and university students. In Argentina and Mexico growth in gross primary enrollment slowed after the 1995 crises in these two countries. Finally, a study in South India found that children are often taken out of school in response to adverse shocks.
percentage of total enrollment fell by close to 20 percent in all except the richest quintile (World Bank 2002). These coping strategies can have lasting negative effects on human capital accumulation.

Consumption smoothing was also widely reported as a risk-coping strategy in both the qualitative study and the Encuesta Social survey. Poorer households reported reducing the number of meals and ingredients, while middle-income households reported substituting less expensive ingredients for more expensive ones in the household diet. Households also reported increasing the illegal use of basic services such as water and electricity as savings mechanisms.

Housing ownership in Colombia is a self-insurance device used widely by the poor in addressing the uncertainty of labor income and unemployment in the recent crisis. In focus groups, individuals reported using their homes to set up small businesses, provide shelter to extended family members, and to rent out floors and rooms to supplement income. The “Colombia Poverty Report” (Velez and others 2001) reveals that in urban areas people who do not own their own homes are more vulnerable to poverty (63 percent are poor compared to 47 percent of home owners, see Table 3).

Wealthier households are in a better position to manage risk because of greater access to savings and credit that translates into a lower loss of well-being in the face of an income shock. An analysis of the Encuesta Social reveals that whereas 40 percent of the families in the poorest quintile experienced income shocks that they were unable to manage through savings or credit, less than 10 percent of families in the wealthiest quintile were in this situation. In addition, although the probability of an income loss is the same for households in quintiles three and four, the capacity of households in the fourth quintile to manage that income loss is greater because of their greater access to assets (Gaviria 2000).

In sum, these results point to the key role of mobilizing available labor, including child labor, as a risk-coping strategy, and the role of housing, credit, and savings as risk-mitigation tools during the recent crisis. These dynamics point to the important role of access to assets and childcare. There seems to be additional scope for insurance mechanisms using risk-pooling mechanisms targeted to the poor—indeed coverage rates for subsidized health insurance and the pension solidarity fund remain low, and several analysts have suggested a need for unemployment insurance (Ayala and others 2000, 2001). These results also support the view that the RAS program design is properly calibrated to observed risks and patterns of social risk management, given the RAS program’s emphasis on providing income support to the unemployed and protecting education and consumption among the extreme poor during an economic downturn.

c) Issue 3. Problems with Colombia’s Social Safety Net

As described above, Colombia has historically relied on economic growth to provide a safety net, and has yet to implement a comprehensive safety net policy. One of the
main challenges facing the new administration that will take office in 2002 will be to overhaul the social safety net to make it an agile agent of social risk management in crisis and noncrisis periods. In carrying out this reform, the following characteristics of the present system should be considered:

i. Procyclical Financing and Underfinancing

As outlined above, at 0.7 percent of GDP, Colombia's financing for social assistance programs remains critically low, even during normal times. Compounding this problem, spending on social assistance has historically been procyclical. A retrospective public social expenditure review reveals that for each peso of reduced GDP, social assistance spending fell by nine pesos, making social assistance the most procyclical component of social sector spending (CRECE 2001). This pattern is evident in the recession of the late 1990s, which resulted in reduced spending on social assistance programs, with programs earmarked from payroll taxes such as ICBF suffering less dramatic budget cuts than those financed through general revenues, including the Social Solidarity Network programs for the indigent elderly and internally displaced people, whose programmed budgets were halved during the recession.

The introduction of the RAS programs financed by international borrowing equivalent to 0.3 percent of GDP through 2004 is an important first step in establishing a countercyclical safety net in Colombia. However, it took nearly two years for the RAS programs to be designed and launched, the programs remain temporary in nature, and a sustainable source of financing should be secured if they are maintained past 2004.

ii. Institutional Archipelago—Lack of Strategic Focus

Colombia's safety net is an institutional archipelago—one composed of many institutions but not connected to each other and characterized by a lack of strategic focus, the fragmentation of programs within institutions, and overlapping program objectives across institutions. This is a legacy of the use of these institutions by successive governments to achieve a wide variety of policy goals, many of which remain unrelated to safety net objectives. Two agencies in particular, the Colombian Institute for Family Welfare (Instituto Colombiano de Bienestar Familiar, ICBF) and the Social Solidarity Network (Red de Solidaridad Social, RSS), seem to suffer from fragmentation of programs. Notably, the RSS has too many programs, many of which overlap with those implemented by other agencies, combined with too few resources to be able to fill in key gaps in the safety net for the elderly and the displaced. A comprehensive review of existing programs is needed as part of a new social-risk-management system for Colombia.

11. This study defined social assistance as RAS programs, ICBF family welfare programs, and other programs for the elderly, children, and handicapped.
iii. Poor Poverty Targeting

Existing social programs are primarily designed for formal sector workers (SENA and Cajas de Compensación) and not for the poorest, who lack formal affiliation in the labor market. Redistributive social assistance programs are limited in the face of a wide array of social programs, many of which are financed by the formal sector and for the formal sector through earmarked “benefit taxes” (see Table 1). The programs that require formal sector affiliation are taking up some of the resources that could be targeted to the poor. Furthermore, the use of available targeting mechanisms such as System of Beneficiary Selection (Sistema de Selección de Beneficiarios, SISBEN), Colombia’s proxy means test, has not been adopted by the main social assistance programs as a way to reach the chronic poor.

iv. Limited Information—Lack of Good Monitoring, Evaluation, and Budget Data

There is very little information available on the coverage, efficiency, and effectiveness of Colombia’s social assistance programs. Basic monitoring data on the numbers of program beneficiaries and budgets are often either lacking or unreliable, complicating simple estimates of unit costs and reviews of program efficiency. Impact evaluation results are almost nonexistent.

The management of social public expenditures is complicated by partial and inconsistent social sector budgetary data. There is no accepted definition for social spending or social assistance in the national income accounts or in the budget. Budgetary data are partial, and different data sources show markedly different levels of spending on specific social assistance programs. Finally, most aggregated data are available only on an institutional basis without programs disaggregated (Alesina 2000). This lack of transparency has complicated the effective management of social sector spending, particularly for social assistance programs.

IV. Options and Recommendations for Reforming Colombia’s Safety Net

Colombia’s social safety net is in need of fundamental reforms that will require political will, consensus, and new policies. This section sets out an agenda for reform that can serve as the basis for a debate and development of a strategy for establishing a social-risk-management system.

The main message of this Chapter is that the new administration taking office in 2002 should establish a reformed Social Risk Management System. The government of Colombia should engage key stakeholders in a strategic planning exercise to define the appropriate composition, management, and administrative structure of a new social-risk-management system. A logical time frame for this structural reform would be 2004, when evaluation results are available from RAS and the main ICBF child welfare and SENA training programs, using the opportunity to establish a
strategic social-risk-management system. Engaging in a comprehensive safety net reform would reverse the traditional oversight of this important, underfunded sector and allow Colombia to better address present vulnerabilities and the negative social consequences of future shocks. As laid out below, the reform of the social safety net should focus both on establishing a countercyclical element to address transient vulnerabilities in times of crisis, and on improving the efficiency and effectiveness of the structural element of the safety net that addresses chronic vulnerabilities. The recommendations presented below can be used to help shape this strategic planning process.

Three principles guide the proposed recommendations in this section. The first is that current fiscal constraints make it unrealistic to think of fresh, sustainable sources of funding for social assistance. Therefore, the proposed reforms are focused on reallocation and cost recovery. Second, with the inclusion of the new RAS programs, Colombia has programs for addressing the principal risks faced by each of the main age groups, and programs for key special circumstances groups (see Annex Table A). Therefore, we do not argue for creating new social assistance programs, but present options for how to better structure the system of existing programs, including the RAS. Third, we argue that the social safety net has a role to play in both crisis and noncrisis times to meet the needs of the chronic vulnerable, the transient vulnerable, and special circumstances groups.

a) Recommendation 1: Increase Resources for Social Assistance

Colombia’s social assistance budget is inadequate to meet the needs of vulnerable populations even during normal times. Two strategies are recommended for increasing the budget for social assistance under present fiscal constraints.

First, Colombia should consider redirecting funds to well-targeted social assistance programs. For example, a full redirection of funds from the National Training Service (Servicio Nacional de Aprendizaje, SENA) to social assistance would bring budgeted expenditures for social assistance from 0.7 percent of GDP to 1 percent of GDP—a bare minimum for a country at Colombia’s stage of development, particularly given the vulnerabilities present in Colombia today and the shocks likely to manifest themselves in the near future. This will be particularly critical when financing for the new Social Support Network (Red de Apoyo Social, RAS) programs runs out in 2004. Other less-well-targeted programs such as the Cajas de Compensación, and programs outside of the social sectors, should be examined with an eye toward potential reallocation.

Second, poverty targeting should be used to generate cost recovery from less-poor groups being served by social assistance programs. The government of Colombia can no longer afford to subsidize social welfare programs for the nonpoor. For programs serving the structural—chronic poor, efficiencies could be gained through applying an improved SISBEN proxy means test. For example, the ICBF family welfare agency could explore using SISBEN to establish poverty rankings for beneficiaries.
of its daycare programs and apply a sliding-scale fee to generate cost recovery from
the less-poor users, particularly of the CAIPS formal daycare centers, which are not
as well targeted. This would allow the services to remain viable within low-income
communities, where several studies point to high demand for daycare. The savings
could be used to increase the quality of the services provided and to expand cover-
age. However, this should be introduced on a pilot basis to ensure that its adminis-
tration is not overly complex and that there are no negative social repercussions to
variable rates for childcare in low-income communities. In addition, cost recovery
and variable subsidies could be introduced in other programs.

b) Recommendation 2: Focus on Streamlining the Existing System, not
Creating Additional Programs

The present system of social assistance programs needs reform. As argued earlier,
Colombia's safety net lacks strategic focus and is composed of too many programs
with too few resources. At the very least, reforms should focus on working within
the existing system to improve poverty targeting, eliminate excessive program over-
lap and fragmentation, and restructure existing programs to improve coverage and
quality. A more radical approach would develop a wholesale alternative to the exist-
ing system by replacing existing programs with a new system drawing on principals
of social insurance, as was done in the health system. What should clearly be avoided
is the creation of new programs as add-ons to the existing system.

Following are several basic issues that need to be addressed regardless of the par-
ticular reform selected:

- **Elimination of Program Overlap and Fragmentation.** The RSS social
  fund has too many underfunded small programs to sufficiently focus on its
  core objectives of reducing elderly poverty and assisting the internally dis-
  placed population. An obvious solution would be to eliminate or transfer
  other RSS programs that do not address these needs. ICBF should also
  undergo a review of the multiplicity of programs under its jurisdiction in
  order to improve quality and efficiency.

- **Improving the Quality of Daycare and Nutrition Programs for the
  Poor.** A first priority would be to evaluate the ICBF family welfare agency's
  CAIPs (the formal daycare centers) and HCBs (the community daycare cen-
  ters) to clarify anecdotal evidence that quality of CAIPs was "enormously
  higher" than quality provided by HCBs (Perotti 2000). It should not be for-
gotten, however, that the unit cost of the CAIPs is on average over twice that
of the HCBs, and that HCBs are well targeted to the poor. It is also possible
that—even with a lower quality than the CAIPs—HCBs still provide a suffi-
cient level of service to attain a minimum standard. It may also be feasible to
improve the level of care provided in HCBs with low-cost alternatives, such as
upgrading the skills of HCB community mothers. ICBF's extensive food pro-
duction, purchase, and distribution system should also be reviewed with an eye to increasing efficiency.

- **Explicitly considering the long-term role of the new RAS programs.** In determining the programmatic composition of a reformed safety net, the long-term role of the RAS programs needs to be explicitly considered. Several of the main gaps in Colombia's public risk-management interventions are being filled by the three new RAS programs. Without income support and cash transfer programs such as those established by RAS, Colombia's safety net would be unbalanced (see Annex Table A). There is therefore a need to assess which RAS programs should remain as part of the permanent safety net, either as programs to address structural vulnerabilities or as cyclical programs implemented during times of crisis. The characteristics of the recent crisis suggest that the workfare and youth training program may be best suited to countercyclical functions. Impact evaluations of both RAS and other social programs with similar objectives (including SENA short courses and ICBF nutrition programs) should guide the composition of the social safety net, lest the RAS create another overlapping institutional layer within the network of existing programs.12

- **Might be a role for increased decentralization** The management of several of the main social programs—including ICBF and SENA—is strongly centralized and funding of programs narrowly earmarked within these institutions. Reforms promoting decentralization and allowing greater autonomy and flexibility to tailor programs and overall safety net responses to the particular needs of local areas should be carefully considered, piloted, and evaluated. Options involving the private sector and NGOs should be explored and evaluated as a way to improve efficiency, effectiveness, and coverage.

c) **Recommendation 3: Establish a Countercyclical Element of the Safety Net**

There is a need to establish a countercyclical safety net strategy that would enable the government of Colombia to respond quickly to the next economic crisis. A priority area for action is to determine the specific norms and procedures under which the countercyclical safety net would operate to meet the needs of affected vulnerable groups during times of crisis. This should include establishing triggers for the immediate expansion of selected, pre-identified programs, when the country is hit by a crisis. Another key step in setting up a countercyclical strategy is to determine the institutional and management structure of the strategy. The temptation to establish a separate institution to manage the countercyclical element should probably be avoided, given the multitude of existing programs and the existence of organizations

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12 See Secretaría de Desarrollo Social, 1999 and 2000, for a review of Mexico’s experience in introducing the Programa de Educación, Salud y Alimentación (PROGRESA) program as part of a larger reform of the social safety net.
responsible for policymaking and analysis in Colombia. Instead, the management structure proposed above should be adapted to address countercyclical issues. A third element is the determination of which programs would compose the “basket” from which the countercyclical element would draw for expansion during times of crisis. Finally, financing for countercyclical responses needs to be addressed.

d) Recommendation 4: Addressing the Needs of the Internally Displaced Population

The internally displaced population (IDP), over half of whom are estimated to be children, should receive priority attention from a reformed safety net. This focus is warranted by the size of this vulnerable group, the concentration of risks within its population, the probable lack of access to programs to address their needs, and the possibility of increased displacement given the state of conflict in Colombia. The international community and government of Colombia should move beyond humanitarian assistance to address the education, health, and training needs of the IDP. These efforts could be concentrated in the regions receiving the bulk of the displaced, under joint action plans developed with those departments and municipalities. Although the needs of the IDP warrant special attention, care should be taken not to establish a parallel system for the IDP, and attention should be directed toward ensuring that there are no barriers to access preventing the IDP from benefiting from critical social assistance, health, and education programs. Several types of actions could be considered, including directly supporting the government of Colombia’s action plan, implementing the Social Solidarity Network (Red de Solidaridad Social, RSS) programs for the displaced, ensuring that qualifying IDP have access to the RAS safety net programs, and mobilizing the education sector. Given allegations of their misuse in other countries, the need for individual lists of IDP should be reviewed, and, if their use is deemed necessary, their security should be ensured.

V. Conclusions

The issues outlined in this Chapter should serve as points of departure for a thorough debate on how best to establish a solid social safety net in Colombia. This dialogue has begun, but needs to be broadened and deepened. Several reforms have already been introduced. However, key changes still need to be implemented to ensure the establishment of an effective social safety net in Colombia. Certain reforms could be instituted in the short term, while others would benefit from a thorough evaluation of key programs and an extended national debate. This opportunity for extensive reform will present itself in 2004, when the impact evaluation results of the RAS programs are available. Evaluations of the main social assistance programs and the SENA training program, currently under discussion, should be carried out to facilitate a
comparative review of the main safety net programs. These results should be used to inform a thorough restructuring of the social safety net to ensure needed financing, agility, and effectiveness. Placing a new social risk-management system on solid ground will also require an examination of the role of social insurance and labor regulations, both of which will need to be addressed in the near future.
## Annex

### Table A. Social Risks and Social Protection Programs in Colombia, 2000

<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Risk Indicator</th>
<th>No. Affected</th>
<th>Percentage</th>
<th>Existing Social Assistance</th>
<th>New Social Assistance</th>
<th>Social Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 0–6 (population 4,873,000)&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunted development</td>
<td>Severe chronic malnutrition (age 0–5)&lt;sup&gt;3&lt;/sup&gt;</td>
<td>657,000 total</td>
<td>13.5% total</td>
<td>ICBF school feeding</td>
<td>RAS Familias en Acción</td>
<td>ISS health insurance (contributory and subsidized regimes)</td>
</tr>
<tr>
<td></td>
<td>255,000 Q1</td>
<td>19.7% Q1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>154,000 Q2</td>
<td>12.5% Q2</td>
<td></td>
<td>ICBF CAIP formal day-care/ECD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ICBF HCB informal day-care/ECD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited early childhood development</td>
<td>Preschool or daycare attendance (age 0–7)&lt;sup&gt;4&lt;/sup&gt;</td>
<td>3,562,000 total</td>
<td>54% total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,124,000 Q1</td>
<td>62.9% Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>978,000 Q2</td>
<td>58.7% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 7–11 (population 5,171,000)&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Net primary school enrollment (ages 7–11)</td>
<td>707,000 total</td>
<td>83.6% total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low human capital development</td>
<td></td>
<td>194,000 Q1</td>
<td>84.3% Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>184,000 Q2</td>
<td>83.2% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td>0 20 years total</td>
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<td></td>
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<td>0 44 Q1</td>
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<td>0 24 Q2</td>
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(continues on next page)
<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Risk Indicator</th>
<th>Prevalence(^d)</th>
<th>Social Protection Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 12–18</td>
<td>Secondary enrollment (ages 12–17)(^7)</td>
<td></td>
<td>PACES voucher program, but being phased out</td>
</tr>
<tr>
<td>(population 6,059,000)</td>
<td>Not enrolled.</td>
<td>Enrolled:</td>
<td>RAS Familias en Acción</td>
</tr>
<tr>
<td>Low human capital</td>
<td></td>
<td>62.8% total</td>
<td>Conditional cash transfer (education grant)</td>
</tr>
<tr>
<td>development</td>
<td>Overage (average years behind) 12–17(^8)</td>
<td>47.7% Q1</td>
<td>(contributory and subsidized regimes)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58.3% Q2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.82 years total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.37 Q1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.02 Q2</td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Female teenage pregnancy (15–19 years)(^9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low income</td>
<td>Inactivity(^10) (ages 12–17)</td>
<td>19% total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(26% rural)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployment as percentage of the economically</td>
<td>13.3% total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>active population (ages 12–18)(^11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30.5% total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal sector as percentage of all employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(only 7 major cities, ages 15–19)(^12)</td>
<td>79.0% total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>94.5% Q1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>87.6% Q2</td>
<td></td>
</tr>
<tr>
<td>Age 19–64</td>
<td>Unemployment as percentage of economically active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(population 22,261,000)</td>
<td>population</td>
<td>15.8% total</td>
<td></td>
</tr>
<tr>
<td>Low income</td>
<td></td>
<td>22.0% Q1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19.1% Q2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>57.9% total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>85.7% Q1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>70.4% Q2</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>RAS Jovenes en</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Acción youth</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>training</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>RAS Empleo en</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Acción workforce</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ISS health</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>insurance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(contributory and subsidized regimes)</td>
<td></td>
</tr>
</tbody>
</table>
Annex Table A. (continued)

<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Risk Indicator</th>
<th>No. Affected</th>
<th>Percentage</th>
<th>Existing Social Assistance</th>
<th>New Social Assistance</th>
<th>Social Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 65+ (population 2,452,000)</td>
<td>No pension</td>
<td>2,111,000 total</td>
<td>81.8% total</td>
<td>RSS Revivar</td>
<td>None</td>
<td>Pension system for formal sector employees</td>
</tr>
<tr>
<td>Low income</td>
<td></td>
<td>474,000 Q1</td>
<td>98.0% Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>399,000 Q2</td>
<td>97.5% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal sector as percentage of all employed (7 major cities, age 60+)</td>
<td>No pension</td>
<td>234,000 total</td>
<td>82.7% total</td>
<td>RSS Revivar</td>
<td>None</td>
<td>Pension system for formal sector employees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>38,000 Q1</td>
<td>96.8% Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>39,000 Q2</td>
<td>90.5% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Population</td>
<td>Access to health insurance</td>
<td>19,000,000 uninsured</td>
<td>47% uninsured</td>
<td></td>
<td>Cajas de Compensación</td>
<td>ISS health insurance (contributory and subsidized regimes)</td>
</tr>
<tr>
<td>Poor health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Utilities subides</td>
<td></td>
</tr>
<tr>
<td>Low-quality housing</td>
<td>No piped water</td>
<td>5,836,000 total</td>
<td>14.3% total</td>
<td></td>
<td>INURBE/rural housing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,637,000 Q1</td>
<td>32.3% Q1</td>
<td></td>
<td>programs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,486,000 Q2</td>
<td>18.2% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violence and displacement</td>
<td>No electricity</td>
<td>1,975,000 total</td>
<td>4.84% total</td>
<td></td>
<td>RSS program for displaced</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>939,000 Q1</td>
<td>11.5% Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Displacement</td>
<td>498,000 Q2</td>
<td>6.1% Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Displacement</td>
<td>400,000–1.9 million</td>
<td>1% to 5% total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continues on next page)
Annex Table A. (continued)

Note: This Table covers the principal federal social protection programs. Unless otherwise noted, estimates were carried out by Departamento Nacional de Planeación’s DDS and SES divisions using Encuesta Nacional de Hogares data from September 2000.

1. Per capita income quintiles using DNP estimates
2. Population age 0–5 (DANE)
3. DANE–PROFAMILIA DHS data
4. Survey of Living Conditions (Encuesta de Calidad de Vida, ECV) 1997, DNP Misión Social estimates in "Informe final ICBF," Fedesarrollo. Estimates include HCB, CAIP, and all other preschool/daycare institutions
5. Population age 6–11.
6. Overage is defined as the average number of years children in this age group are behind with respect to their corresponding grade level
7. Net secondary school enrollment is calculated as the number of children age 12–17 who are in secondaryschool divided by the total number of children age 12–17
8. Overage is defined as the average number of years children in this age group are behind with respect to their corresponding grade level
9. Represents women in this age group who are pregnant or have a child
10. Neither study nor work.
11. The economically active population is defined as either having worked a certain number of hours recently, or being without work, but having actively pursued employment.
12. Only data from seven cities (Barranquilla, Bogotá, Bucaramanga, Cali, Manizales, Medellín, and Pasto) are included in this calculation, the total number of people working in the informal sector nationwide is much higher.
13. Only data from seven cities are included in this calculation, and only people age 20–59 are included, whereas the definition of "labor force" typically includes younger and older people. Therefore, the total number of people working in the informal sector nationwide is much higher.
14. Only data from seven cities, the total number of people working in the informal sector nationwide is much higher.
References

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Higher Education

This Chapter was written by Lauritz Holm-Nielsen.

I. Quality Expansion of Higher Education: Governance and Financing

There is increasing pressure in Colombia for reform of the higher education sector. A growing number of secondary-school graduates have had to abandon their desire for higher education, yet employers progressively demand advanced skills, confirming the high and growing value of higher education for both the individual and society. Those pressures stimulated an impressive doubling of enrollment in the mid-1990s, which nevertheless has proved inadequate to accommodate the external needs and, which, furthermore, have brought rising concerns of inferior quality and obsolete study programs. Therefore, considerable attention by both insiders and outsiders has been devoted to reform of the sector. There are signs of consensus on a long-term policy agenda, but short-term actions need to be taken.

II. Emerging Trends in Colombia’s Higher Education

Rapid expansion in enrollment in early 1990s but reversed in late 1990s. Colombian higher education expanded rapidly in the early and mid-1990s. Coverage—enrollment in relation to the size of the cohort aged 18 to 24—rose from 9 percent to 16 percent, and the system currently instructs 900,000 students a year. The expansion was primarily led by the private institutions, which increased their share of enrollment. However, the sharp recession from 1998 until 2000 severely limited the

1 This Chapter builds on “Colombia Tertiary Education, Paving the Way for Reform,” World Bank (2002), and eight commissioned background studies
households' means to investment in higher education. This led to an abrupt reversal of the expanding trend, with the number of entrants into higher education declining by 100,000 students over a three-year period. The public sector was affected by the economic crisis to a lesser extent, but has not been able to absorb the decline. Consequently, the continuation rate from secondary education to tertiary education decreased to a 30-year low of 40 percent. The decline contrasts the development in the labor markets, where workers with higher education were the only education group that experienced a real wage increase during the last decade (by more than 30 percent). On the quality side, the proliferation of private providers led to mounting concerns about the lack of quality in certain segments of the market, including the technical and technological institutions. So far, efforts to promote quality are mostly pursued through accreditation procedures. Nevertheless, less than one in five programs is accredited.

TERTIARY EDUCATION PROVIDERS. Colombia's tertiary education is a segmented market: the public sector tertiary enrollment accounts for about 33 percent, while the private sector accounts for 67 percent. As is the case in many countries, economic constraints have limited the government's ability to fund the expansion of tertiary education. Private institutions in Colombia have traditionally played a greater role in the sector than in most other countries, resulting in a private sector that is well integrated into the overall tertiary system. Until approximately 1950, public universities enrolled over 60 percent of all undergraduate students. After that time, enrollment in private institutions began to rival that in public institutions. Currently, the private sector captures more than two thirds of total tertiary enrollment. In 1999, the public sector enrolled over 294,000 students (about 33 percent of total enrollment, undergraduate and graduate), while the private sector accounted for a little over 67 percent of total enrollment, or just over 583,000 students.

Figure 1 shows that during the 1990s enrollment in the private sector grew at a rate of 25 percent per year, compared to an expansion rate of just 10 percent per year in the public sector. The slower growth in the public sector can be attributed to government policy, which provides priority of funding to basic education.

INCREASING DEMAND FOR WORKERS WITH HIGHER EDUCATION. Colombia is at the juncture of its economic development where its economy is increasingly being influenced by an increase in technology levels brought about by increased exposure to foreign direct investment and international trade. This has unleashed a huge demand for tertiary education. In order to make use of new technologies coming from abroad, countries at Colombia's stage of development need a skilled labor force. This message is important for Colombia since the country relies to a great extent (59 percent) on the export of natural resources and agricultural products, where cutthroat competition and high price volatility reign. Without a high-functioning, flexible tertiary education sector that bestows domestic producers with sufficient, high-quality graduates, the private sector is unlikely to develop new and improved products or production techniques. Today, the annual growth in demand for tertiary workers has been larger.
in Colombia (and other Latin American countries) than in the United States. During 1990–95, for example, annual growth in demand for tertiary workers in Colombia was around 11 percent, and around 7 percent during 1995–99. In that period, demand for tertiary workers in the United States rose by only 2 percent, compared to 4 percent in Argentina and Mexico, and 12 percent in Bolivia.

**RISING PRIVATE RETURNS TO EDUCATION IN COLOMBIA.** The limited supply of highly skilled labor, combined with the increased demand for workers in the expanding technological frontier and the integration of national markets, places the lucky few with tertiary education in a favorable position in the labor market. The typical worker with a tertiary education earns COP886,000 per month, the equivalent of US$392, which is 275 percent more than the average worker, and more than 6.5 times the wage of a worker with no education (Table 1). Returns to tertiary education are high and rising, and were particularly so in the 1990s. The private returns to each year of tertiary education reached 22 percent in 2001, more than double the returns found in developed countries. These data indicate that reversing the decline in entrants into tertiary education could yield substantial benefits to individuals and society.

The productivity of workers with tertiary education has risen considerably over the last decade due to adjustment of the Colombian economy, including deepened integration into the world economy and technological progress. Still, only 11 percent of Colombian workers have attended some form of tertiary education—compared to 24 percent of the labor force in industrialized countries—significantly undermining the country’s competitiveness.
Table 1. Urban Labor Market Indicators, by Level of Education (2000)

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Wage (Monthly) (’000 COP)</th>
<th>Wage (Monthly) (US$)</th>
<th>Wage in Percent of Average (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No schooling</td>
<td>137</td>
<td>62 4</td>
<td>42 6</td>
</tr>
<tr>
<td>Primary</td>
<td>208</td>
<td>94 7</td>
<td>64 6</td>
</tr>
<tr>
<td>Secondary</td>
<td>278</td>
<td>126 2</td>
<td>86 1</td>
</tr>
<tr>
<td>Tertiary</td>
<td>886</td>
<td>402 7</td>
<td>274 5</td>
</tr>
<tr>
<td>Total workforce</td>
<td>323</td>
<td>146 7</td>
<td>100 0</td>
</tr>
</tbody>
</table>

Source: DANE and DNP (2002)

TRENDS IN PUBLIC FINANCING IN TERTIARY EDUCATION. During the 1990s, the government gradually and significantly reprioritized spending on education (Table 2). In accordance with best practices and economic recommendations, budget support to education increased substantially from 2.2 percent of gross domestic product (GDP) to 4.3 percent in 1999. In real terms, the education sector experienced a 150 percent increase in its available budget.

Within the education budget, a shift toward basic education took place. In the beginning of the 1990s, tertiary education received 24 percent of the entire education budget. After a major revising of budget priorities in 1992, the budget share to tertiary education declined to 15 percent, and has since hovered at around 16 percent. Conventional wisdom on education sector priorities says that countries that devote more than 20 percent of their education budget to tertiary education, especially those that have not reached universal primary education, are likely to have a distorted allocation that favors an elitist system at the expense of basic education. However, as Table 2 shows, the adjustment in 1992 brought Colombia in line with current economic thought. Public funding of tertiary education in Colombia has reached its nadir, and economic rationale speaks against further reductions.

Given the current economic and fiscal situation, the prospects for increasing public funding to tertiary education remain bleak. Faced with a surging number of secondary graduates knocking on the doors to state institutions, public institutions in Colombia have responded in the best interests of the country by diversifying their revenue base and thereby accommodating more students. The introduction of and the rise in tuition constitute an important part of new income generation.

III. A Strong But Underperforming Sector

There are several reasons why higher education is an underperforming sector. While it has a vibrant private sector involvement, perhaps one of the highest in all of Latin America, it is also plagued with problems of poor quality, inequity of access, and inefficiency. Despite the system’s expansion during the 1990s, the number of new
Table 2. Public Spending on Education (1990–99)

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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>In Billions of COP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary education</td>
<td>686</td>
<td>632</td>
<td>711</td>
<td>982</td>
<td>1,189</td>
<td>1,201</td>
</tr>
<tr>
<td>Basic education</td>
<td>1,919</td>
<td>2,189</td>
<td>2,921</td>
<td>3,838</td>
<td>3,797</td>
<td>4,281</td>
</tr>
<tr>
<td>Other education expenditures</td>
<td>306</td>
<td>1,413</td>
<td>889</td>
<td>1,304</td>
<td>2,114</td>
<td>1,802</td>
</tr>
<tr>
<td>Total education</td>
<td>2,911</td>
<td>4,233</td>
<td>4,520</td>
<td>6,125</td>
<td>7,100</td>
<td>7,284</td>
</tr>
<tr>
<td><strong>In % of GDP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic education in % of GDP</td>
<td>1.44</td>
<td>1.62</td>
<td>2.03</td>
<td>2.61</td>
<td>2.60</td>
<td>3.08</td>
</tr>
<tr>
<td>Tertiary education in % of GDP</td>
<td>0.72</td>
<td>1.34</td>
<td>0.81</td>
<td>0.97</td>
<td>1.40</td>
<td>1.18</td>
</tr>
<tr>
<td>Total education</td>
<td>2.16</td>
<td>2.96</td>
<td>2.84</td>
<td>3.58</td>
<td>4.00</td>
<td>4.26</td>
</tr>
<tr>
<td><strong>Tertiary education in % of education spending</strong></td>
<td>23.6</td>
<td>14.9</td>
<td>15.7</td>
<td>16.0</td>
<td>16.8</td>
<td>16.5</td>
</tr>
</tbody>
</table>

*Note: Amounts measured in constant 2000 prices*

*Source: Ministry of Education*

entrants to tertiary education began declining in 1998. The number of new entrants decreased from a high of 256,672 in 1997 to 207,246 in 1999, a decline of 19 percent. This amounts to a three-year accumulated decline in enrollments of approximately 100,000 young Colombians. The reduced dependence in the public sector on private payments has allowed the sector not only to maintain, but to increase, enrollments by 5 percent over the same period.

The underperformance of Colombia’s higher education sector can be explained by a number of causes, summarized as follows:

-Lack of financing options to qualified students has led to a 28-percent decline of new entrants into private tertiary education since 1997, resulting in more than 150,000 unfilled seats in private institutions. The recession that struck Colombia in 1998 and that still influences the economy today, produced economic hardship and reduced enrollment by both stifling families’ ability to shoulder fees for tertiary education and by reducing the State’s available resources for the public tertiary education sector. This is a demand-side issue that has weakened the growth of the tertiary education sector. It is estimated that at least 100,000 graduates from the secondary school system chose not to enter tertiary education due to the high cost of schooling. Yet, the Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior (ICETEX) provides less than 5 percent of the student population with student financing.

-Opaque and ambiguous division of responsibilities among regulatory bodies inhibits interagency collaboration in designing new initiatives. For instance, more than six regulatory bodies are involved in quality enhancement. Colombia has a fairly large number of government departments and agencies guiding and regulating the tertiary education system. However, they have not yielded a well-articulated governance system.

This multitude of regulatory bodies created overlapping functions. The Ministry of Education (MEN) is responsible for overall subsector planning, inspection, and supervision; policy design and subsector regulation are carried out by the MEN in concert
with the Consejo Nacional de Educación Superior (CESU) and the Comisión Nacional de Doctorados y Maestrías (CNDM); the development of tertiary education is the responsibility of the Instituto Colombiano para la Fomento de la Educación Superior (ICFES) and the Fondo de Desarrollo de Educación Superior (FODESEP); issues pertaining to quality assurance are the domain of the Consejo Nacional de Acreditación (CNA) and the ICFES for undergraduate programs and institutions, and the CNDM for graduate programs; finally, the provision of student loans is carried out by ICETEX.

The overlap in the functions of the regulatory bodies results in a lack of clarity in the roles of the various agencies, duplication of responsibilities, and some tension between the governing organizations, as well as some confusion on the part of tertiary education institutions. For example, both FODESEP and ICFES are responsible for overall sector development and policy design, and for the support and production of sector studies. There is also overlap between ICFES and the CNA with respect to ensuring the quality of study programs. Similarly, in an effort to expand the student loan program, the government is looking at the creation of new mechanisms rather than at transforming the existing program managed by ICETEX.

**Unequal Access: Tertiary Education Still Favors the Rich.** In Colombia, the wealthiest 20 percent of the students are 10 times more likely to enroll in tertiary education. In 1992, approximately 2 percent of the relevant-age cohort from the poorest quintile was enrolled in a tertiary education institution compared to 20 percent for the best-off quintile. As the education system expanded in the 1990s, the inequality of access to tertiary education grew in absolute terms. The largest gains in coverage occurred in the fifth quintile, where net coverage rose from 23 percent to 40 percent. Today, less than 6 percent of the 18-to-24-year-olds from the poorest quintile attend tertiary education institutions.

The fundamental reasons for inequalities in tertiary education are found outside of the system, particularly in the basic education system, including early childhood education. In summary, there is an increasingly inequitable queue at the entrance to postsecondary education. Students graduating from basic education into secondary and tertiary education are disproportionately coming from the middle-to-higher-income groups. Unless the poorer students make it onto the educational ladder, the queue will remain inequitable.

**Little Incentive for Public Tertiary Institutions to Improve Efficiency.** The government allocates the budget to tertiary institutions based on historical precedence and negotiations. This funding method does not necessarily reward well-performing institutions or foster efficiency. This could explain the fact that seats in public universities cost more than in private universities.

In Colombia, the per-student outlay is estimated at COP3.6 million, corresponding to 105 percent of Colombia's GDP per capita. One year of schooling in public universities costs COP4.2 million compared to the unit costs of COP3.3 million in private universities. Hence, public universities spend 29 percent more on each
student enrolled per year. Remuneration of academic staff weighs more heavily in the costs of public institutions than in private institutions. State-run universities spend 42 percent of their budgets on salaries to academic staff compared to 34 percent in private universities. Hence, the difference in unit costs does, to a certain extent, reflect a difference in spending patterns. For the remaining expenditures, the public sector mimics the private sector. The higher cost related to academic staff in the public sector corresponds with the higher teacher–student ratio existing in this sector. The state sector employs one full-time equivalent faculty member per 17 students, whereas this ratio for private universities is 1 to 27. The higher unit costs in the public sector seems therefore to be related to a higher number of faculty members per student combined with more generous benefits.

In an international comparison, the Colombian university system lies at the high end of the cost scale when comparing per-student expenditure relative to GDP per capita. One year of university education costs 5 percent more than the average income of a Colombian. This exceeds the level prevailing in developed countries, where one year of university education in general requires 48 percent of GDP per capita. For low- and middle-income countries, Colombia still figures among the more expensive systems. Within the countries where there are available data, only Chile and Malaysia spend more resources per school year than Colombia.

Underdeveloped postgraduate programs are the most critical bottleneck in the system. This bottleneck bodes ill for fulfilling the sector’s future needs for qualified lecturers to replace an aging faculty and improve quality. Currently, only 2 percent of lecturers have a doctoral degree, and less than 14 percent have an advanced degree. Clearly, this underinvestment in the technical and postgraduate area will affect Colombia’s competitiveness in the global economy. Colombian companies cite lack of human capital as the most important obstacle to innovation.

Declining Quality The accreditation system in Colombia has stimulated improvements in the programs and in the institutions that have participated. Nevertheless, there is still concern that the quality of education has declined in recent years and has become less relevant in the new knowledge-based, global economy.

IV. Policy Recommendations

These points testify to the need for an enhanced higher education sector in Colombia. To overcome these shortcomings, the incoming government could consider the following policy recommendations.

a) Ensure Clear and Progressive Governance

Create an effective institutional arrangement for designing and implementing higher education policies centered on existing agencies. The Ministry of Education,
the ICFES, ICETEX, COLCIENCIAS, CNA, CNDM, CESU, the Departamento Nacional de Planeación (DNP), and the Consultative Committee should all be involved in higher education policy design and implementation. The specific functions and authority of each agency need to be clearly defined to improve coordination of efforts and to prevent duplication and inconsistencies in policy design and implementation. The government should ensure that the policy framework is coherent and that the appropriate incentives are in place to encourage the various agencies to work together effectively. This is especially the case for the quality-assurance system, where the roles of the agencies could be clarified and differentiated further.

b) Direct Public Resources to Its Core Responsibilities

What are the public sector’s core responsibilities? The public sector should focus on those tasks that benefit society and which the private sector is unwilling to assume. This places a large and multidimensional obligation on the shoulders of state-funded universities. It implies that public institutions should not engage in competition with the private institutions, not because they are unable to compete, but because taxpayer resources come with a cost and should therefore not substitute for private money. Public institutions would best serve their mission, therefore, by redirecting the public resources toward areas where the social value exceeds the private value.

EQUITY. Within Colombian society, there exist large disparities in income and access to public services, including tertiary education. It is often perceived that a fundamental raison d’être of the State is to mitigate unequal conditions by providing equal opportunities. The public sector can address equity by (a) providing seats in public institutions to low-income students, and (b) accommodating students in provincial areas, where private institutions tend not to operate.

Given the necessity of private education to recover costs, the private sector most often proves unwilling to extend education beyond the large metropolitan areas. The public sector assumes the responsibility, and indeed provides more education in low-enrollment regions than its private counterparts. Budget prioritization of regions with low coverage or modest population and little private presence both improves social equity and makes economic sense. In those areas, increased funding does not substitute for private expenditures on tertiary education and, therefore, achieves the full impact of coverage.

Disciplines with a social value exceeding the value paid to the individual could be another core responsibility of public universities. Given the obligation of students enrolled in private institutions and their families to pay high tuition, career choices are typically based on anticipated (high) monetary returns from their investments in tertiary education, and therefore focus on high-yielding social fields, like law, political science, economics, and business. Society, however, depends critically upon other disciplines where the private returns diverge from the social returns. Traditionally, disciplines that serve the public, like health and education, and careers that
promote rural development, like irrigation and agriculture, have been identified as having high social value. Similarly, the natural sciences and technical disciplines have been identified as being of high social value.

Colombian state institutions seem to focus on fields of study with perceived high social value. The public sector accounts for the largest share of enrollments in mathematics and the natural sciences, agricultural sciences, and education, while the private sector accounts for the majority of enrollments in the softer, high-earning disciplines like law, economics, business, and politics.

The main message is that policymakers should assure that public funding does not substitute for private resources, in which case tertiary education coverage would decline. The public sector should be selective and focused in its offering of courses.

**Design a System of Scholarships for the Very Poor.** Experience shows that loans might be insufficient to induce poor families to enroll a daughter or son in tertiary education. To improve equity, partial grants combined with loans could be awarded to students from the lowest two quintiles attending an eligible (accredited) institution. A limited amount—not to exceed US$20 million—could be set aside for this purpose.

Implement performance-based funding of public institutions that would reward high-performing, quality public institutions. Such discussions have taken place among stakeholders for several years, but have so far brought no changes. Clearly there is a need for more efficiency in the state-funded universities through better management, such as increasing teacher–student ratios, and so forth.

c) **Stimulate Demand in Public and Private Tertiary Education Through Student Aid**

**Reform the Current Student Aid Scheme.** Student aid could help families overcome the financial burden and thereby increase enrollment. Initially, loans should be targeted to poor, academically able students. Achieving a financially sustainable student loan scheme could attract private capital, whereby the funds available for the student loan program could grow and ultimately provide loans for all students.

Student aid provides a widely implemented policy instrument allowing youth to invest in themselves despite the high costs of between 200 to 600 percent of GDP per capita for tertiary education. Financial assistance often involves a subsidy to students ranging from pure grants to implicit subsidies in student loans. Given the high and rising returns to tertiary education in Colombia and the rest of the world, student loans could be a revenue-neutral instrument that allows students to defer educational expenditures until the time when the benefits in terms of higher salaries are realized.

The existence of an extensive student loan scheme in Colombia could have shielded long-term profitable investments in human capital from the short-term economic crisis of the last four years. This could potentially have avoided the accu-
mulated decline of approximately 100,000 graduates from secondary school who chose not to enter tertiary education. Moreover, and perhaps more important, a deferred payment scheme could have permitted academically competent graduates from secondary school to continue onto tertiary education regardless of family income.

Student financial aid is currently offered to Colombian students in the forms of government-funded scholarships, discounts from tuition and fees offered by public and private tertiary education institutions, and student loans from public and commercial banks.

Government-funded scholarships are administered on a decentralized basis. According to the latest data, the funding represents less than 1 percent of total government funding for tertiary education and assists only marginally poor students. Discounts accorded by public and private tertiary education institutions seem, according to anecdotal evidence, to play a larger role. The use of need-based tuition distinguishes Colombia from most other countries where tuition levels are the same regardless of student circumstances.

d) Promote Strategic Levels of Education

**Expand Enrollment in Technical and Technological Courses.** This less resource-demanding kind of tertiary education could be promoted by tying a portion of financial aid to students attending these institutions. However, for this to be effective, the quality and relevance of these institutions must be improved, which could be achieved through (a) creating accreditation procedures tailored for this type of education, and (b) developing closer ties with the productive sector.

Increase the funding to—and quality of—postgraduate training, especially at the doctoral level, that provides both faculty upgrading and training for higher-level human resources in fields of national priority. Even modest resources—US$15 million—could, via research and teaching scholarships to young doctoral students, have a significant impact.

e) Induce and Assure Quality

**Legalize the Creation of Private Accrediting Bodies in Addition to the Existing Public Agencies.** The private accrediting organizations could be supervised by CNA or other national agencies to assure consistency. In this way, the task of accreditation would be spread among several organizations, shortening the time it takes to accredit programs and allowing accrediting agencies to keep up with the demands of the cyclical nature of the accreditation process.

**Establish a New Framework for Accreditation that Relies Less on Input-Based Criteria.** The use of an input-based accreditation model is effective in ascertaining that minimum standards are met, and may be useful in recognizing new pro-
grams. Once a program has successfully met these requirements, it is important to go beyond these criteria and examine whether the program is effective at teaching students, and that the desired learning outcomes are achieved.

Keep, but clarify and revise, the "High Quality Accreditation." The existence of high quality accreditation is an important development that should be protected from becoming a label for regular accreditation available to most programs.
Science and Technology

This Chapter was written by Lauritz Holm-Nielsen.

The ability of a society to understand, produce, adapt, diffuse, and commercialize scientific and technological knowledge is critical for sustained economic growth and improved quality of life. Countries that adopted science-and-technology-led industrialization early—and where other conditions such as market incentives and strong institutions were present—now have economies that are deeply permeated by science, technology, and innovation. These are also the countries that have grown steadily and become increasingly wealthy.

Adequate national investments in science and technology (S&T) and in research, development, and innovation is indispensable for improved competitiveness and continued economic growth, and is therefore a prerequisite for improved quality of life and poverty reduction. Government intervention in the S&T sector is justified by the assumption that research and development (R&D) activities are hampered by market failure. This follows from the assumption of nonexcludability of ideas, which implies that private actors face weak incentives to engage in R&D. In all countries, investment in advanced human capital, especially in science and engineering, is left to the public sector, because individuals simply cannot

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afford the costs, and private sector entities do not have the patience to wait for a returns that may accrue over decades rather than months or years. This is the main reason why national science councils, which operate transparent competitive funding mechanisms under which all sectors meet on a level playing field, is best practice in advanced economies. Colombia has such a council, the Fundación Colombiana Francisco José de Caldas para el Fomento de las Ciencias (COLCIENCIAS), but this council does not play an adequate role for an increasingly knowledge-based society, and it does not possess the means to stimulate the formation of a critical mass of advanced human capital and basic research. Further, the Colombian innovation system is suboptimal because of a lack of venture capital. It is an increasingly important role of governments to promote S&T development and stimulate the national innovation system by creating an investment-friendly environment and incentivizing the attraction of venture capital. Hence, Colombia is at a disadvantage and not ready to compete in the new economy. This is the primary reason why Colombia should revitalize its S&T sector. Colombia’s increased exposure to fierce global competition, rapid technological progress, and continued dependence on natural resources underscores the urgency of strengthening the Colombian National Innovation System.

I. Background on Science and Technology

Funding for science and technology in Colombia averaged 0.7 percent of GDP during the last decade, a level similar to its regional competitors, but below the 2.5 percent of GDP found in developed countries. The sector is primarily driven by public resources, which finance up to 90 percent of all recorded research expenditures. The main public providers are COLCIENCIAS, the Ministry of Agriculture, and the Universidad Nacional de Colombia, which mostly fund basic research. In Colombia, the higher education sector plays a significant role in terms of funds allocated for R&D. The lack of private initiatives in research is in contrast to the situation prevailing in the knowledge-driven economies, where more than half of all research is undertaken privately. However, there exist strongholds of knowledge-intensive production in Colombia. In particular, the chemical industry and the transport sector, which together account for more than 80 percent of production by medium- and high-technology industries, could form the basis for sustained technological progress.

In addition to direct funding for S&T, the government has applied fiscal incentives so that private enterprises involved in R&D efforts can deduct their expenses from taxable income, and Colombia has launched tax-relief initiatives for R&D activities. Recent evidence, however, indicates that exemptions in force through the latter part of the 1990s were unsuccessful in promoting private sector participation. One reason is that tax incentives are not large enough in absolute amounts for small emerging enterprises, which rarely have a sizable taxable income.
II. Strengths and Weaknesses in Colombia's Science and Technology Sector

The S&T sector forms the backbone of the National Innovation System (NIS). To embrace the knowledge economy, Colombia needs to create regulations that guide the S&T sector through introducing appropriate incentives and through the development of a long-term, well-coordinated, and prioritized public policy. Figure 1 presents a selection of S&T indicators, comparing the status of Colombia with the rest of Latin America and the Caribbean and the G7 countries.

The S&T sector in Colombia has several strengths.

Presence of centers of excellence. COLCIENCIAS, with assistance from multilateral agencies, has established several centers of excellence. Funding from these agencies, along with allocations from the national budget, have for the most part been distributed in accordance with international best practice through awarding block grants to research through competitive mechanisms. However, it is uncertain at this point whether the centers can support themselves from the sale of services or from international funding.

Growing the information and communications technology sector. The level of investment in information and communication technology (ICT) compared

Figure 1. Strengths and Weaknesses in the Science and Technology Sector: Technology and Innovation Indicators
to regional competitors is impressive in Colombia. The information infrastructure constitutes by far the most developed element of the Colombian NIS, which, according to several indicators, is approaching the G7 level. Telecommunications, liberalized in the 1990s, is one of the most dynamic sectors of the Colombian economy and accounts for around 7 percent of GDP. Turnover for the sector passed US$2 billion in 2000. Compared with other countries in Latin America, the Colombian telecommunication system is well developed, ranking third in terms of telephone coverage in the region, with 16 lines per 100 inhabitants, just behind Argentina and Chile, which have 20 and 17 lines per 100 inhabitants, respectively.

**The Colombian private sector is technologically well developed.** The value added of high and medium-high industries reaches 7 percent of GDP, which almost equals that of the average Organization for Economic Cooperation and Development country, which is 9.8 percent. However, knowledge-based industry declined 20 percent since 1994. The chemical industry dominates the knowledge-based production in the country, with more than six out of 10 knowledge-intensive products a result of work from this industrial branch. Accommodating the demands of this and other important industries in terms of human capital and assuring an open, free flow of knowledge between research centers could be an important step toward fostering a diverse and well-functioning NIS.

The weaknesses of the S&T sector in Colombia include:

**Lack of advanced human capital.** The NIS badly suffers from lack of advanced research skills. In 2001 fewer than three doctoral students per 1 million inhabitants were enrolled. Nine out of 10 companies in the largest knowledge-based industry, the petrochemical industry, cite lack of human capital as the main obstacle to innovation. Furthermore, Colombia—along with the rest of Latin America—has a dearth of technically educated workers, forcing companies to compete for qualified labor. The NIS suffers from the underdevelopment of two important components: human capital and regulations that stimulate innovation. These weaknesses impair technological advancement and hold back the full exploitation of the entrepreneurial, knowledge-based industries that the country possesses.

The scarcity of researchers with advanced knowledge and up-to-date skills prevents industries in Colombia from moving toward the knowledge economy. Nine out of 10 companies in the largest knowledge-based industry, the petrochemical industry, cite lack of human capital as the predominant obstacle to innovation. Furthermore, the gap of technically educated workers in Colombia leads to intense competition between companies for qualified labor.

**Inadequate protection of intellectual property.** Colombia does not provide adequate and effective intellectual property protection, which reduces the incentives for private companies to innovate. As a result, it remains on the special U.S. "Watch List" of countries with inadequate intellectual property rights protection. Without
proper intellectual property protection, companies will not be able to reap the returns of expensive innovation activities, and therefore often opt to buy foreign technology.

**Regional disparities in public research funding.** Until 1996, the district of Bogotá received all the public resources budgeted to S&T. The capital area still receives more than 80 percent of the funding. However, for several years public funding to the sector has built upon international best practice by awarding block grants to research through competitive mechanisms (COLCIENCIAS).

### III. Policy Recommendations

The sector has several strong points and a good foundation upon which to build Yet, long-term, coordinated, and prioritized public policy is needed for Colombia to embrace the knowledge economy. Following is a prioritized list of policy initiatives that the incoming administration could consider in order to strengthen the country’s S&T capacity.

- **Strengthen advanced human capital.** This could eliminate one of the most pressing bottlenecks to innovation in the private, knowledge-based industry. The country should promote domestic Ph.D. programs by providing scholarships to young, excellent doctoral students in exchange for research or teaching obligations. Possibly the grants could be geared toward technical and productive disciplines, which would satisfy some of the private sector's demand for innovative capacity.

- **Strengthen intellectual property rights.** Without a strong property rights system, private companies cannot capture the gains from innovation and, therefore, have little incentive to innovate. The Colombian government could consider fully implementing and enforcing the World Trade Organization agreement on Trade Related Property Rights. Efforts to upgrade Colombia’s intellectual property rights (IPR) should be coupled with efforts to consolidate the rule of law. The rule of law in Colombia is still flawed, which in turn implies that the formally strong IPR-regime will remain weak.

- **Nurture the growing information and communications technologies.** Awareness of the penetration of ICTs is high in Colombia. Its high level of investment in ICTs augurs well for the future development of knowledge-intensive industries. The government should work to promote the ICTs in both public and private educational institutions.

- **Diversify research funding to the entire country.** This initiative could be implemented through promotion of regional research centers under a competitive funding framework and thereby contribute to a more equal industrial development of the country.
- **Direct research toward the needs and interests of the private sector.** A close link between publicly funded research and private sector needs increases the likelihood that basic research will translate into product innovation and thereby increases the value of Colombian products. This could be stimulated through so-called matching funds, where the private sector has to provide a certain share of resources in exchange for shared rights to results.
Enhancing Employment Opportunities
Through the Labor Markets

This Chapter was written by Vicente Fretes Cibils
and Vicente Paqueo.

I. The Context for Reform

A well-functioning labor market can contribute to a dynamic of sustained labor-demanding economic growth by increasing competitiveness, encouraging investment in human capital, and enhancing factor input choices that favor labor demand. An appropriate labor policy framework in Colombia would:

- stimulate employment growth and, hence, reduce unemployment;
- provide a favorable environment for accelerating investments in human capital;
- promote the movement of workers from less to more productive activities, increasing labor productivity across sectors;
- avoid biases that reduce the demand for labor, and
- promote equity

The Colombian formal labor market is excessively rigid and there is strong evidence of real wage rigidities—minimum wages are binding and unions (particularly public sector labor unions, for example, the teachers’ union) are primarily concerned with fixing wages (Maloney and Nunez 2001). As a result, unemployment has remained very high in Colombia; during the last 10 years, the average annual unemployment rate was about 14 percent, and the “natural” rate of unemployment is estimated to have increased from about 7.5 percent in 1994 to about 11 percent in 2001.

More important, during times of economic crises, unemployment rates shot up—for example, after the 1998–99 crisis, the unemployment rate increased to about 20 percent—and it has remained very high—about 17 percent over the last year. This reflects mainly real wages rigidities, and that the adjustment to decreases
in the demand of labor in the labor market takes place primarily through cutting jobs.

Moreover, the informal sector, accounting for close to 60 percent of the workforce, reflects labor market "segmentation." In addition, low opportunity costs of self-employment (due to low formal sector productivity) and the weak linkages between contributions and benefits in social security in the formal sector are also reflected in the expansion of the informal labor market. While there is a (relatively) low degree of turnover, much of it voluntary in the informal market, there is, more importantly, a restricted flow of workers between the formal and informal sectors. Indeed, once adjusted for demographic and other variables, Colombia shows a considerable degree of informality (a measure of segmentation) and low turnover (a common measure of flexibility). In the presence of labor market segmentation and involuntary informality, policymakers should thus focus on reducing real wage rigidities to increase the efficiency and flexibility of labor market functioning.

While there is no substitute for high economic growth creating employment and expanding the demand of labor, Colombia needs to modify its labor legal and institutional framework with four goals in mind:

- bringing explicit and implicit labor costs in line with their value to workers. When workers value a benefit less than they pay for it, they have the incentive to become informal and to remain not covered by the social security system;
- increasing wage flexibility in the short term, and avoiding increases in real minimum wages in the medium and long term. Numerous factors, including a decline in inflation, binding minimum wages, and strong labor unions, lead to frequent labor market adjustments through unemployment;
- minimizing transaction costs and other barriers to more rapid adjustments by firms and good job matches for workers; and
- increasing investments in human capital. Public investments in education and training have positive impacts on equity and poverty; reduce skills bottlenecks and the need for firms to pay efficiency wages.

In many of these areas, there are net gains to be made by both workers and firms in overhauling an inefficient system—for example, both would benefit from restructuring the parafiscales (that is, the Servicio Nacional de Aprendizaje [SENA], Caja de Compensación Familiar, and the Instituto Colombiano de Bienestar Familiar [ICBF]) and the severance pay system; and from improving and expanding worker training.

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1. GDP growth alone is predicted to account for about 84 percent of employment growth during the 2001–05 projection period—under estimated elasticities of (a) employment – GDP = 0.8; and (b) employment – labor cost = −0.5 (see López-Castaño 2001).

2. For example, if in 1999, real minimum wages had remained constant, between 90,000 and 150,000 jobs could have been saved—given estimated elasticity of total urban employment to real minimum wage ranging from −0.15 to −0.25.
Reform of the industrial relations and collective bargaining framework involves altering legal structures and practices that have been in place for some time now. But if placed in the context of modernizing the workplace, enhancing the technical proficiency and productivity of the worker, and thus, in the medium term, his or her compensation, common ground is more likely to be found and support generated for a coherent package of far-reaching reforms.

II. Issues and Policy Options

a) The System of Social Security

The present system of social security benefits through mandated non-wage payments has several deficiencies that (i) distort labor supply decisions; and (ii) reduce labor demand in the formal market. Moreover, in light of the large transaction costs involved in the monitoring of contributions and the delivery of services, the system produces large inefficiency losses.

With respect to distorted labor supply decisions, high mandated benefits and contributions introduce a large "wedge" between the cost of labor to the employer and the compensation received by the employee. Table 1 lists the components of nonwage labor costs in Colombia, all of which represent a tax on payroll. This total "wedge" of about 50 percent is very high, even by developed country standards. The comparable "wedge" in the United States is 19 percent, in Canada 12 percent, and

<table>
<thead>
<tr>
<th>Component</th>
<th>1990</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation Payments</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Retroactive Separation Payments</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Pensions (worker)</td>
<td>2.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Pensions (employer)</td>
<td>4.3</td>
<td>10.1</td>
</tr>
<tr>
<td>Health (worker)</td>
<td>2.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Health (employer)</td>
<td>4.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Training (SENA)</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Family Welfare (ICBF)</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Compensation Funds</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Pension Solidarity Fund (FSP)</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Professional Risk Insurance</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37.0</strong></td>
<td><strong>50.0</strong></td>
</tr>
</tbody>
</table>

Source: "Chapter on Pension Reform" prepared for the Structural Fiscal Adjustment Loan (World Bank 2001)

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This does not include other bonuses, such as paid vacations and 13th month’s salary (which represents 6.7 percent and 8.9 percent of wages, respectively).
in the United Kingdom 14.5 percent. Even in European countries such as Spain (33.2 percent), France (38.9 percent), and Italy (37.8 percent), the “wedge” is still smaller than in Colombia. In Latin America, Chile has a “wedge” of 21 percent and Mexico has a “wedge” of 31 percent. In Argentina, the “wedge” is close to 60 percent, with an unemployment rate of more than 22 percent.

In an environment with more flexible wages, much of the incidence of these taxes could be passed down to workers as lower wages. However, in Colombia there is only a partial shifting of payroll taxes to workers in the form of lower wages (due to “downward” real wage rigidities); for example a 10 percent increase in payroll taxes results only in a 2 percent decrease in wages. Moreover, many of these payments are perceived by workers as a pure tax since the link between contributions and benefits is weak, and the quality of services delivered is poor (and is cited by informal sector workers and entrepreneurs as a reason to avoid becoming formal) (Kugler and Kugler 2001).

With regard to reduced labor demand in the formal sector, in the presence of wage rigidities, high payroll taxes increase the cost of labor and reduce competitiveness and formal employment below its optimal level. At present, there is strong evidence of wage rigidities—minimum wages are binding. In this context, the partial shifting of the payroll taxes from employers to workers implies that employment is affected. In fact, simulations of the impact of an increase of 10 percent in payroll taxes lowers formal employment by about 4 percent.

i. Policy Options

The Colombian government has, over the last 10 years, made some progress, particularly in the area of social security reform. Nonetheless, it is necessary to deepen reforms of the structure of mandated Social Security contributions. This would include:

- eliminating (partial or total) parafiscales. For example, if the Compensation Fund were eliminated and all other factors remain the same, employment could increase by at least 72,000 jobs in the medium term—this estimate is on the conservative-side, as there are estimates that this increase in employment could be achieved by reducing just 50 percent of parafiscales financing the Fund;
- shifting the funding base for certain components that may be justifiably mandatory from highly distortionary payroll taxes (for example, SENA) to less-distortionary direct taxes (that is, fund certain components from general tax revenues);
- where possible, substituting mandated proportional contributions with fixed-quota contributions that would entitle the employee to minimum benefits while allowing additional voluntary contributions and encouraging the development of private schemes (for example, old-age retirement and medical benefits);
- reducing the “wedge” between workers’ health insurance contributions and the value of actual benefits received. Colombia has introduced an important innovation through the separation of provision and finance of health services.
and the introduction of managed health care competition. However, implementa-
tion of this innovative health reform needs to be strengthened to
improve workers' benefits from their health insurance contributions. One
important step is for the Instituto de Seguros Sociales (ISS) to separate its health
finance operations from its health service provision operations. The govern-
ment should also (a) establish an effective system of supervision (at present,
the Health Superintendency is unable to carry out its function effectively);
and (b) facilitate consumer access to information about the performance, cost,
and quality of services provided by individual Empresas Promotoras de Salud
(EPSs) and Instituciones Prestadoras de Salud (IPSs) (reducing information
costs for consumers to make "informed" choices). With those measures, there
would be greater transparency, less corruption, improved consumer choices,
and strong competition among service providers and insurers (see Health
Chapter for more details).

b) Labor Unions, Wages and Industrial Relations

In general, the relative importance of unions in Colombia (as in other Latin Amer-
ican and Caribbean countries) has remained stagnant over time—the percentage of
unionized workers with respect to the economically active population remained at
about 10 percent during the 1990s. Nevertheless, unions remain primarily concerned
with negotiating wages, pushing up minimum wages, creating binding constraints in
the labor market and restricting the possibility of adjustment through wages in the
event of economic slowdown. Moreover, the fall in inflation has made it more diffi-
cult to respond to aggregate shocks by reducing real wages (because nominal wages,
particularly in the public sector, have been negotiated and adjusted weighted heavily
with past inflation, and minimum wages have remained binding). Indeed, standardiz-
ing the minimum wage by the mean wage, Colombia (0.25) is far below the average
for Europe (0.45) and Chile (0.34), but is above Bolivia (0.22), Brazil (0.24), and
Uruguay (0.19), and at about the same level as Argentina (0.26), countries with sig-
nificant restricted labor mobility, and very high unemployment. Moreover, the sys-
tem of industrial relations and collective bargaining (particularly in the public sector)
is not well suited to the more efficient and competitive global environment, and they
are not conducive to more cooperative relations between management and labor that
are essential for greater productivity, efficiency, and job satisfaction.

The Colombian government should revise the system of collective bargaining for
setting up wages (including minimum wages) and the overall industrial relations
(particularly in the public sector) to increase labor market flexibility. More specifi-
cally, this would entail

**Revising the Minimum Wage System.** A minimum wage reform package that
would ensure simplicity, flexibility, and compliance, and minimize potential anti-
employment effects must include:
• reducing the number of parameters for establishing the minimum wage and moving toward a nonbinding minimum wage policy;
• avoiding the implementation of differential minimum wages (for example, urban versus rural);
• reducing or eliminating the role of the minimum wage as a reference index for other economic variables such as social security and income brackets; and
• introducing negotiation of wages every two years instead of every year—annual negotiations are prompted by the erosion in real wages in high-inflation periods, and this is less of a problem today with inflation in single digits.

As the minimum wage becomes less relevant and nonbinding, the role of the Permanent Commission for Concerted Labor and Wage Policies should also evolve from focusing primarily on defining minimum wage policies toward focusing on other broader strategic policy areas for labor and industrial relations;

REVISIGN THE WAGE SURCHARGE RATES FOR NIGHTSHIFTS, OVERTIME, AND HOLIDAYS. To promote the expansion of labor demand and the formal market (and reduce unemployment), Colombia must revise downward the surcharge rates for working outside the “normal” hours established by the law. For example, if 50 percent across the board on surcharge rates for nightshifts, Sundays, holidays, and overtime were adopted, the average costs of labor per hour would be reduced by about 2.5 percent. This would imply an increase in total employment of between 70,000 and 170,000 jobs—depending on the range of employment—labor costs elasticities;

DEEPPING THE SYSTEM THAT COMBINES FIRM-LEVEL, DECENTRALIZED BARGAINING WITH NATIONWIDE COORDINATION. The challenges of competing in an increasingly open economy require a more flexible, decentralized system of bargaining in which bargaining occurs primarily at the level of the firm. Such a system allows firms the maximum flexibility to adapt contract negotiations to their financial situations and avoids situations in which firms in economic difficulty are forced to pay wages negotiated at the national, sectoral, or state level. It also allows greater flexibility in the development of firm-specific measures to elicit effort and encourage productivity;

SIMPLIFYING THE SYSTEM OF ARBITRATION TO RESOLVE COLLECTIVE AGREEMENTS CONFLICTS. This should be achieved through expanding the faculty of “arbiters” to tackle issues emerging from the lack of compliance or violations of collective agreements between employers and employees. This is particularly important during periods when economic and legal conditions have changed, and they affect original collective agreements—for example, the ISS with Law 100 of 1993;

4. Similar to, for example, the Japanese model, which combines firm-level unions and bargaining with highly coordinated and synchronized collective bargaining processes.
ELIMINATING THE PROVISION TO EXTEND SOCIAL AND LABOR BENEFITS TO ALL THE FIRMS COMPRISING THE "INTEGRATED ECONOMIC ENTITY/GROUP." The law establishes that an "economic entity" is integrated by the principal, subsidiary, and affiliate firms as long as they perform similar or complementary activities, and extralegal labor and social benefits for the staff cannot be different among firms. Collective agreements can determine the equalization of staff benefits. Moreover, if additional benefits for the staff of one of the firms were won, then the same benefits should be extended to all the staff of the "economic entity." These provisions increase labor costs, even for those unintended firms that are part of the so-called "economic entity;"

MOVING TOWARD MORE COOPERATIVE WORK RELATIONS BETWEEN EMPLOYERS AND EMPLOYEES (INCLUDING THE PUBLIC SECTOR) WHILE ENSURING FLEXIBLE BUSINESS DECISIONS. At present, union influence (particularly in the public sector—teacher and health service providers) over matters such as training, promotions, and decisions to introduce new technologies that reduce the ability of managers to restructure jobs, change production patterns, and adapt to shifting market conditions. To increase flexibility in business decisions, legal and regulatory provisions on seniority-based promotion, compensation, and training should be eliminated, and provisions that include more flexible job ladders and assignments should be introduced—rigid seniority-based schemes impede the reward of individual performance and investment in training since neither employer nor worker can fully recover its benefits; and

REQUIREING AN ECONOMIC IMPACT ANALYSIS OF LABOR-COST-INCREASING REGULATIONS BEFORE THEIR APPROVAL. Before approving new regulations that could significantly increase labor costs, an economic analysis of their impact on wages and employment, including "winners and losers," should have been undertaken and widely disseminated. This could improve social choices through transparency of the social cost of labor regulations and recognition of their "victims," along with the benefits of those measures.

c) The Labor Market, Informal Sector, and Small Firms

In the Colombian economy a modern sector coexists with the urban informal and more rural traditional sectors. The urban informal sector employs about 60 percent of the workforce, produces about 40 percent of GDP, and accounts for about 70 percent of the total underemployment and about 75 percent of poor underemployment. The rural informal sector accounts for about 90 percent of the rural workforce, and behaves similarly to the urban informal labor market (particularly the

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5 The definition of informality includes different groups such as independent workers, domestic maids and servants, and salaried workers (employed by microenterprises). They operate in a more flexible labor market than the formal market.
agricultural labor market). In both the urban and rural informal labor markets, wages are more flexible than in the formal labor market, and thus adjustments to shocks take place more through real wage adjustments than employment. Roughly 50 percent of informal workers are informal by choice and cite greater flexibility and higher returns as the reason for entering the sector. Average compensation is slightly higher among the informal self-employed and lower among the informal salaried. However, by definition, they are not covered by basic social benefits such as pension funds, which may lead to both private hardship and public burdens late in the life cycle. Even if the labor force were to expand at a low rate of 2 percent per year, the informal will not be absorbed through growth alone.\footnote{Consider that capital and labor shares in production are roughly equal, and that output and capital grow at 4 percent a year over the next six years. With total factor productivity growth of 2 percent a year, there would be no net growth of employment. If output were to grow more rapidly, at 6 percent a year, net employment would increase by 2 percent a year—barely enough to absorb the flow of new entrants, much less to allow those already in the informal sector to move into the formal sector.}

Moreover, the current system of severance payments (and a system prone to involved litigation) distorts the functioning of the labor market and has, \emph{inter alia}, the following adverse effects:

\begin{itemize}
  \item increases labor costs (through high costs of litigation and increased uncertainty). In contracting labor, firms must incorporate the likely labor costs and legal fees in the case of a dismissal. The accompanying uncertainty and managerial distraction can lead to substantially lower labor demand and reduced employment levels.\footnote{The rise in the number of wrongful dismissal cases that have challenged the “fire at will system” in the US has led to a 2 to 5 percent decrease in employment despite payments that amount to only US$10 per employee. The subsidiary effects on costs thus appear to be very large—about 10 percent of labor costs at a labor demand elasticity of .3 (Derouzos and Karoly 1993).} The indefinite rolling-over of fixed contracts (and the interpretation of the Constitutional Court), introducing the figure of “employment stability” has added uncertainty in the labor market, reversing the reforms of the last decade to increase labor market flexibility; and

  \item introduces barriers to growth and expansion of small firms (in the formal market). High transaction costs of dismissals put a greater burden of severance payments on small- and medium-sized firms (in the formal market). This discourages smaller firms from hiring new workers in good times, or contracting only temporary workers. The higher implied turnover leads to less investment in training and human capital, resulting in low productivity and loss of competitiveness. Dismissal costs also discourage small informal firms from growing and becoming “formal.”
\end{itemize}
The government must therefore adopt policies that seek to expand employment and increase productivity in the informal sector, and facilitate small-firm growth. Both labor and firms have a common interest in continuing the restructuring of the severance pay system and the unemployment support system, and in expanding the portable individualized savings and pension systems. Thus, in addition to reducing the “wedge” between the implicit cost of formal sector labor and the market-clearing wage (see section a), the new policies should include:

Reducing the Legal Costs of Dismissals: Specifically, the indefinite rolling-over of fixed contracts must be revised, redefined, and reinstated in such a form that would overcome the figure of “employment stability,” as interpreted by the Constitutional Court. In addition, the system of indemnization for unjust dismissals (under indefinite contracts) must also be standardized to reduce uncertainties for both employees and employers;

Deepening Reforms in Job Security Regulations, and Exploring Alternatives for Unemployment Support Systems. This would entail deepening and expanding the system of individualized accounts and developing an insurance scheme that would pool workers to finance it. However, the experience of the Organization for Economic Cooperation and Development countries clearly demonstrates the need to design unemployment insurance schemes very carefully (analyzing experiences elsewhere and the needs and characteristics of the Colombian situation) to minimize problems of perverse incentives, and to ensure its efficient and sound financial management. Fundamentally there is a tradeoff: the more risks are pooled across the population, the more workers face a disincentive to prevent being laid off or to find work;

Rethinking Systems of Income Support to Informal Workers. The system described previously serves mainly workers in the formal sector who contribute to individual accounts. However, the informal sector may also require some income protection mechanisms, and the current workfare program should be revisited to maximize the transfer to households. More specifically, Colombia at present is not able to fully benefit from the advantages of a self-targeting workfare program because, unlike in Mexico and Argentina, employment in temporary public employment programs is not exempted from the application of labor regulations regarding the minimum wage and mandatory prestaciones (fringe benefits). If Colombia wanted to make its workfare program more efficient in reaching the unemployed poor, employment in public workfare programs should be allowed to pay below the minimum wage and to offer reduced fringe benefits; and

Reducing the High Costs, Financial and Otherwise, of “Being” Formal. This would entail the revisions, simplifications of the operations and reductions of transaction costs for registrations of informal firms. The process and costs are above
average for Latin America, and could takes two to four months compared to one to three months in Brazil, Chile, and Uruguay. In general, small firms comply with some regulations and not others, but labor obligations are those most often evaded, partly because, when fully complied with, they account for more than 50 percent of annual profits (as opposed to 17 to 30 percent in Chile).

d) Insufficient Human Capital Accumulation

Survey and statistical evidence suggest that there is a growing demand for skilled labor that is not being met by supply. The combination of rising relative wages and shifting labor force composition suggests that, as in other middle-income countries such as Chile and Mexico, the relative demand for skilled versus unskilled workers has shifted to favor skilled workers. Table 2 suggests that investments in education, and particularly in higher education, have remained profitable. And, in general, over the late 1980s and early 1990s, the rates of return on education (specially returns on higher education) have been above the average of selected Latin American countries. Country evidence suggests that a mix of trade and technological factors is driving the increase in demand for skilled workers.

When rising demand for skills is not met by supply, the result is a persistent shortage of skilled labor and constrained growth. It also forces firms to pay above-market-clearing wages in order to retain the workers they train, and causes segmentation in the workforce. On the supply side, the problems can be traced to:

- poor quality of educational attainment;
- an antiquated and unresponsive training system; the training system is not providing new entrants with appropriate skills;
- insufficient investment in post-school and on-the-job training. In addition to inadequate technical educational attainment, there is insufficient on-the-job training on the part of firms and workers—minimum wages reduce demand for less-productive but trainable young workers. On-the-job training is often

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<th>Table 2. Marginal Rates of Return on an Additional Year of Education</th>
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<td>(percent for urban males age 25 to 60)</td>
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<th>Years of Schooling</th>
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<td></td>
<td>Colombia</td>
<td>Average*</td>
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<td>6</td>
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<td>15</td>
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* Average for Argentina, Bolivia, Colombia, Honduras, Paraguay, and Venezuela
associated with a propensity to introduce innovation and, thus, with productivity growth; and

- inadequate information flows; there is little sharing of information on job opportunities and skill requirements among regions and sectors.

Programs designed to encourage training (and retraining) of unskilled workers have been implemented in the past few years. Preliminary evaluations suggest that these programs, to date of limited coverage, have enjoyed some success. But as demand has now shifted toward short-term postsecondary careers, the following policies are proposed to augment efforts to train or retrain unskilled workers:

**Extending and Deepening Emphasis on Technical Postsecondary Education.** Technical education substantially augments the hourly earnings of workers with primary and secondary education. Public-sector-financed technical training programs must be flexible and extended to all sectors and firms participating in such programs, closely linking participating trainees and firms through apprenticeship contracts;

**Promoting Private Sector Training.** Colombia should also expand more demand-driven, private-sector-provided training programs (such as in Chile), including providing support and promoting training programs developed “in-house”—that is, in the firms. This may also include extending the use of vouchers to allow potential trainees the choice among privately provided training modalities. Emphasis should be placed on flexible programs that can be broken down into modules, and which permit training while working;

**Reforming the System of Vocational Training to Ease the Transition from School to Work.** Youth unemployment remains very high in Colombia and may be partly due to a mismatch of skills provided by the public education system and those demanded by industry. While Colombia is already piloting under the Red de Apoyo Social (RAS) the program Joven en Acción for youth (a program that is based on ChileJOVEN in Chile), and if the results of this pilot are positive, the government should expand its coverage through the allocation of new public resources and/or the reallocation of existing public resources (for example, SENA’s), and

**Promoting Temporary Internships and the Use of Apprenticeship Contracts (as a Way to Facilitate Market Entry for Those Who Leave School).** Ideally such contracts would be designed to contain a minimum training component and would optimally allow for apprenticeship wages to be set below occupational levels. Moreover, the government could consider to modify existing provisions of apprenticeship contracts, including the elimination of “in kind” transfers and the inclusion of monetary transfers for apprenticeship with neutral effects on labor costs.
III. Key Policy Conclusions

To stimulate employment growth and increase labor productivity, Colombia must pursue an integrated reform strategy that addresses, in a programmatic fashion (if not simultaneously), the constraints emerging from the legal and institutional labor framework. The reform program, therefore, must include:

- Rationalization of "payroll taxes" and the reduction of transaction costs for "being" formal
- Elimination of the rigidities imposed by the minimum wage and reduction of surcharge rates for working "outside" normal working hours (as defined by the law)
- Development of an unemployment protection scheme to replace costly job security regulations
- Acceleration of investment in human capital (including training in short-term postsecondary careers).

If these policies were implemented within the first year of the new administration, (together with sound macroeconomic management underpinning an average GDP growth of about 4 percent), the estimated rate of unemployment would be cut by one half (from about 20 percent in 2001 to about 10 percent in 2005).

References


Gender

This Chapter was written by Maria Correia.

I. Introduction

Gender continues to be an important dimension of Colombia’s social and economic development today. Specifically, gender roles—the socially ascribed roles and expectations imposed on men and women simply because of their sex—affect socioeconomic outcomes. For example, crime and violence, which are concentrated among young men, have been linked to prevailing rigid codes of male behavior that call for men to be tough, aggressive, competitive, unemotional, and dominant. A large gap in life expectancy is related to male behavior—that is, violence, alcoholism, and risky behavior—which, in turn, is linked to male gender roles and socialization patterns. Similarly, educational attainment is linked to gender roles in that poor boys are more likely to drop out of school to provide financial support to their families in contrast to girls who are more likely to be out of school because of early pregnancy or to perform domestic duties and childcare. Finally, poverty and inequality are related to gender roles in that women’s lower labor market participation and earnings and higher unemployment are due in large part to societal and family expectations that women perform housework and childcare roles.

This Chapter examines the status of gender issues in Colombia today. It comprises three sections. The first provides a synthesis of advances related to gender in the areas of demographics and general health, reproductive health, education and literacy, labor force participation and wages, and rural development. The second section discusses existing gender issues as they relate to social and economic development in Colombia. The third section discusses policy directions. The Chapter takes a comprehensive approach to gender by discussing both male and female gender issues. While the effects of gender on females have been extensively researched and are generally well known, male issues have received less attention in the field of
gender analysis. Thus information related to male gender issues tends to be more limited.

The Chapter has three main messages.

• First, Colombia has made significant progress in reducing gender inequalities—and in particular in improving the well-being of women. Girls have higher school enrollment levels than boys, women’s fertility and maternal mortality have decreased, women’s labor market participation rates have increased, and gender gaps in wages have narrowed. Women have also benefited from affirmative action rural policies, including agrarian reform programs.

• Second, while the status of females has improved, male human capital has eroded on the health and education fronts. Boys have worse completion, attainment, dropout, and repetition rates than girls—and these have been exacerbated by the crisis. Males are also more affected by HIV/AIDS, alcohol and drug-consumption-related diseases, and violence—and both armed-conflict and crime-related deaths. Moreover, male earnings decreased between 1978 and 1988 and between 1995 and 1999, compared to the earnings of females, which have increased steadily since 1978.

• Third, important interlinkages exist between gender, poverty, and inequality in Colombia. Female-headed households are more likely to be poor and vulnerable than those headed by males. Moreover, poverty is negatively correlated with years of education, with female-headed households reporting lower education levels than male-headed households. Poverty analysis also demonstrates that mobilizing female labor during periods of recession is an important poverty-reduction strategy for Colombian households—female labor has been one of the most important household strategies for combating the effects of the recession and reducing the degree of inequality. Finally, there is compelling evidence relating family size to poverty in Colombia, suggesting that investments to increase the coverage of family planning programs would have high payoffs.

II. Advances Related to Gender

a) Demographics and General Health

Both men’s and women’s health indicators have improved over recent decades, reflecting the demographic transition in process throughout the Andean region.¹

¹ The Colombian population doubled between the census of 1973 and 1993; after Brazil and Mexico, Colombia has the third-largest population in Latin America. The national averages obscure significant rural/urban and regional differences but, in general, the demographic profile of Colombia compares well with those of other countries in the Andean subregion.
Since the 1960s, fertility and mortality have steadily declined for both sexes. Life expectancy at birth increased from 58.5 years for men in 1973, to 67.3 years in 1999 (UNSO 1975, 1999). Women’s life expectancy has increased from 61.2 years in 1973, to 72.5 years in 1999 (UNSO 1975, 1999). As a result of these changes, the population has aged somewhat, although it still remains relatively young. The Colombian population under age 14 declined from 40 percent in 1980, to 32 percent in 2000. The percent of the population aged 60 or older increased from 5 to 7 percent between 1980 and 2000 (U.S. Census Bureau 2002).

Over the last three decades, health indicators have also generally improved for children of both sexes. Between 1950 and 1992, infant mortality declined from approximately 105 deaths per 1,000 live births to 37 deaths per 1,000 births (FNUAP 1995). Overall, malnutrition fell from 21 percent of children under age 5 in 1965, to just 8 percent in 1995 (PROFAMILIA 1995). Among children under age 5, diseases preventable by immunization declined from 1990 to 1994 (PAHO 1999a).

b) Reproductive Health

In recent decades, Colombia has made significant improvements in health care provided to pregnant women. Overall, between 75 and 80 percent of women who gave birth during 1990–95 saw a physician and received some form of prenatal care and at least one dose of antitetanus vaccination.

Improved health care for women is reflected in declining maternal mortality rates. While data on maternal mortality for Colombia are generally considered to be unreliable, and figures vary widely by source, it appears that Colombian maternal mortality rates have improved substantially in recent decades. According to the Departamento Nacional de Planeación (Department of National Planning, DNP), the national rate declined by over 50 percent between 1983 and 1995, from 170.5 to 81.1 per 100,000 live births.

Contraceptive use is relatively high in Colombia, particularly in urban areas and among better-educated women. According the 1995 Demographic Health Survey (DHS), 36 percent of women in union used a modern form of contraceptive. Sterilization was the most popular method, and its use has increased. Twenty-six percent of women in union have been sterilized (up from 21 percent of women in 1990, and 19 percent of women in 1986). Use of both the pill and intrauterine devices (IUDs) has remained stable in recent years, reported by 13 percent and 11 percent of women, respectively. About 11 percent of women report using traditional methods (for example, rhythm and withdrawal). As to be expected, urban women are more likely than rural women to use contraceptives and to rely on modern methods. Contraceptive use has driven the declining Colombian fertility rates—from 7.0 children

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2 Antitetanus vaccinations during pregnancy are considered essential to prevent tetanus in newborns.
per woman during 1960–64, to 2.8 children per woman in 1997 (UNSO 1999). This represents a fertility decrease of over 50 percent in less than 40 years.

c) **Education and Literacy**

Literacy and school enrollment rates have increased substantially for both sexes, but particularly for women.\(^3\) Household survey data report rising enrollment rates in both primary and secondary school for both boys and girls (World Bank, forthcoming). During 1978–99, net enrollment rates increased for all age groups in both urban and rural areas (with the exception of urban boys aged 12 to 14, who saw a very slight decline in school enrollment). Urban female enrollment rates increased from 55 percent in 1978 to 70 percent in 1998. Rural female enrollment rates increased from 37 percent in 1978 to 51 percent in 1998. In Colombia, as in much of Latin America, no pronounced gender bias exists in favor of boys' education. Over the last three decades, girls aged 5 to 11 have had consistently higher school enrollment rates than boys in both urban and rural areas.

d) **Labor Force Participation**

Over the last few decades, Colombia’s economically active population (EAP) increased considerably, due primarily to female entry into urban labor markets.\(^4\) From 1978 to 1998, the urban EAP increased from 58 to 67 percent, with male rates remaining fairly constant until 1995 and decreasing slightly thereafter, especially for people aged 15 to 24. Meanwhile, urban female participation rates for all age groups increased from 40 to 56 percent from 1978 to 1998. The rural EAP increased only slightly (58 to 60 percent) from 1988 to 1998, with male rates decreasing from 85 to 81 percent and female rates increasing from 31 to 38 percent.\(^5\) While Colombia's overall labor activity rates are similar to those for Latin America and the Caribbean (LAC), female activity rates are higher than average. In 1995, 31 percent of all working-age women in Colombia were in the labor force, compared to an average of 28 percent for the rest of Latin America and the Caribbean (WDI 1999). At 52 percent, urban female labor force participation rates for 1998 were higher only in Paraguay (56 percent) (CEPAL 2000a).

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\(^3\) The provision of basic education in Colombia has expanded significantly in the last three decades. Illiteracy rates in 1999 fell to below 3 percent in urban areas and to less than 15 percent in rural areas (from 5 percent and 29 percent, respectively, in 1978).

\(^4\) The economically active population (EAP) is defined as the proportion of people currently working or looking for work to the working-age population (WAP). In urban areas, the WAP is defined as the population aged 15 to 70, but in rural areas it is defined as the population aged 12 to 70.

\(^5\) For males, the most important decrease was for males aged 15 to 19.
Part of the increase in women's participation rates is attributable to declining total fertility rates, particularly in urban areas. In 1978, poor households had an average of 2.1 children, and nonpoor households had an average of 0.9 children. By 1999, the number had fallen to an average of 1.4 children for poor households, and 0.6 children for nonpoor households (Vélez and others 2001). Therefore, despite the gradually aging Colombian population, the number of dependents who require care in each household is declining. This shift is likely to provide women—who traditionally carry out these tasks—with more free time to engage in remunerated activities and to encourage their increased labor force participation. Women's rising educational levels is another factor contributing to increased labor force participation, because there is a strong, positive relationship between women's educational attainment and their participation in the labor force.6

e) Wage Gaps

Gender wage gaps in Colombia have decreased significantly in recent decades. During the 1990s, Colombia made the greatest progress in reducing the gender wage gap among LAC countries (CEPAL 1999). With the exception of Uruguay, the urban gender wage gap in Colombia is lower than that of other LAC countries. The gender wage gap in both self-employment and wage earning declined consistently between 1978 and 1995. In urban areas in 1978, the median income of females was about 80 percent that of males. By 1998, it had risen to 94 percent of the median income of males.

The gender wage gap also narrowed over the recession period, especially for less-skilled wage earners. Male earnings decreased almost monotonically between both 1978 and 1988, and 1995 and 1999. Female earnings, on the other hand, have increased steadily since 1978, and this increment was sustained over the recession. Wage gains were greatest for low-skilled females with educational levels of primary school or less. These females experienced a real wage gain of 25 percent, while males in the same category saw a real wage decline of 9 percent.

Some of this increase in women's real wages may be in response to minimum wage increases in feminized work sectors. For example, over the recession, self-employed women saw an increase in their real wages of 12 percent. Self-employed men, on the other hand, fared much worse and experienced real wage declines of 30 percent. Women's real wage increments have supported household incomes over the recession and have been invaluable in mitigating poverty for households that have more than one wage earner.

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6 The Inter-American Development Bank (IDB) recently studied women's labor force participation in 14 countries, including Colombia. Education was found to be the most salient factor explaining women's decisions to participate in the labor force (IDB 1999). Higher educational levels increase the economic value of women's time, and thus the marginal benefit of entering the labor market relative to the marginal costs of labor market entry. As women acquire more human capital, they are also able to command higher wages.
f) Rural Development

Colombia stands out among Latin American countries in its efforts to redress gender inequities in rural areas. The country has a relatively long history of considering gender issues in its rural development policies and programs, with a particular emphasis on "affirmative action." For example, in 1984, the Consejo Nacional de Política Económica y Social (National Council for Economic and Social Policy, CONPES) approved an official Policy for Peasant and Indigenous Women, the first of its kind in Latin America. This policy attempted to improve rural women's access to productive resources, expand employment and income-generating projects, overcome barriers to political participation and literacy, and improve domestic labor conditions and nutritional status (Ospina 1998). A 1994 updated and enhanced policy added minimum targets for the number of female beneficiaries of loan and land titling programs. All else being equal, female household heads and displaced women are now given priority in land allocation, and alternative programs address the needs of those who do not qualify for land. The government also now helps organizations that represent rural women enhance their participation in decision-making bodies (Jaramillo 1998).

The 1988 Agrarian Law 30 and the 1994 Agrarian Law 160 instituted mandatory joint titling for all agrarian reform programs. Special provisions are also in place to ensure the inclusion of female household heads in agrarian reform enterprises and cooperatives. Over half of the beneficiaries are couples who received joint titles to newly acquired land, and 13 percent were women receiving individual titles. Research indicates that individual female beneficiaries now receive as much, or more, land than do individual males and couples. Finally, in 1995, the government launched a new land titling program, commonly known as Titular, to formalize squatters' rights, giving priority to "unprotected" women displaced by the violence (Deere and León 2000). The program has given 30 percent of titles to individual women.

III. Gender Issues as They Relate to Colombia's Economic and Social Development

a) Conflict and Violence

Violence accounts for one quarter of all male deaths in Colombia and a staggering 60 percent of deaths for males aged 15 to 44. Males of all ages are four times more

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7 Adjudications and titles are required to be jointly titled where couples are either legally married or living together in consensual unions.

8. The official name is the Programa Presidencial para la Formalización de la Propiedad y Modernización de la Titulación Predial.
likely than females to die as a result of homicide, are more likely to be forcibly recruited into guerilla or paramilitary groups, are more likely to become involved with increasingly violent drug cartels in an effort to earn a living (although there are some indications that involvement of females with these groups is increasing), and are more likely to be the victims of armed robbery and extortion.

Although overall mortality rates have decreased by almost 50 percent in recent decades, mortality rates for young males remain very high. They are particularly high in comparison with rates for females in the same age groups, and for young males in neighboring countries (CEDAW 1997). In 1994, the mortality rate for Colombians aged 20 to 24 was 0.8 and 4.8 deaths per 1,000 females and males, respectively, in that age group. By contrast, 1996 mortality rates for the same age group in Ecuador show a much narrower gender gap (0.9 deaths per 1,000 females and 2.1 deaths per 1,000 males). This unusually large gender disparity in mortality rates exists for all ages between 15 and 49, and reflects the disproportionate risk of young Colombian males dying as a result of violence.

An in-depth analysis of the causes of violence in Colombia is beyond the scope of this review. However, a World Bank overview of the primary causes of political violence in Colombia emphasizes the importance of the legacy of political conflict; unequal access to social and political power; and the role of drug-related, paramilitary, and guerilla violence (World Bank 1999a). The principal determinants of economic and social violence are attributed to poverty, inequality, and rapid growth; high levels of impunity within the justice system; a lack of educational and employment opportunities; the role of the household and family in perpetuating violence; and situational precipitators such as alcohol, drugs, and firearms. Richani (1997) argues that the Colombian pattern of violence evolved during the 1980s and 1990s into a distinct, self-perpetuating system as its socioeconomic base (the drug trade, armed robberies, and so forth) expanded.

Violence has been linked to gender, that is, to the prevailing codes of conduct and rules governing men’s roles. According to these codes and norms of behavior, to be a man is associated with aggression, competitiveness, achievement, sexual and physical prowess, and risk taking (Pollack 1998; Barker 1998). (Schools, the popular media, the home, the street, and peer groups, reinforce these behaviors.) Above all, male identity in most societies is to be the provider, to be responsible, and to provide financially for one’s family. When these goals become difficult to achieve—which is more common among low-income men—men regularly assert their masculinity through violence, alcohol use, and other negative behaviors (Barker 1998). Further, research in low-income neigh-

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9 Shrader (2000) notes that political, economic, and social violence are not necessarily exclusive categories. Some sectors of the population, such as younger, lower-income, and less-educated men, are more likely to be both perpetrators and victims of homicide (World Bank 1999a), and adolescent victims of childhood violence have the highest risk of becoming perpetrators.
borhoods of the United States indicates that for low-income men, an exaggerated form of crime and violence (against other men and against women) is used as a way to affirm identity (ibid.). This would seem reasonable given that these low-income men likely have few ways to exert power and meet societal prevailing standards on what it is to be a man. As for Colombia, the subject of violence as it pertains to gender norms and expectations, and the ongoing political conflict, requires further research.

b) Displacement

Women and men have been differently affected by Colombia’s armed conflict and displacement, which has expanded in Colombia over the last decade and continues to grow (World Bank 1998a). Women head as many as one third of displaced households; many of these are widows fleeing with their children after their husband’s murder. Moreover, women and girls are frequently victimized by sexual aggression during displacement processes. Women are often ill prepared to assume responsibility for maintaining their families in situations of social unrest and economic insecurity. They do, however, appear to be better able than men to develop support and survival networks after displacement, and can rely on existing domestic skills to find work as maids or small traders. In contrast, rural men often face higher unemployment rates after displacement because their agricultural skills are of little use in an urban environment. Moreover, in periods of crisis, men have more difficulties coping psychologically due to gender norms that dictate that men should not show their emotions. As a result, women typically display their anxiety more openly, and men’s psychological stresses tend to exhibit themselves more indirectly through destructive behavior (for example, violence and alcoholism) (Correa 2001).

c) Domestic Violence

As in other LAC countries, sexual and intrafamilial violence in Colombia are widespread and victims are overwhelmingly women (Gaviria 2001). Conservative estimates suggest that 20 percent of women in union have experienced domestic violence (PROFAMILIA 1995). The probability of experiencing domestic violence varies pronouncedly by income and education levels, with poor women most at risk. Education appears to insulate women and their partners from domestic violence, with each year of schooling reducing the probability of domestic violence victimization by up to 1.4 percentage points.

Females who are wage earners are more likely to suffer from domestic violence than females without such jobs, perhaps due to conflicts arising from male displacement as the primary breadwinner. According to a study on crime and violence in Colombia,

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10. One in 60 Colombians has been forced to migrate because of violence (Meertens 1999).
male unemployment (and the loss of status as the family provider), can lead to drug and alcohol abuse, and increased domestic violence (Moser and McIlwaine 1999).  

\[d\] Drugs, Alcohol Abuse, and Violence

In Colombia, as in many countries, alcohol is the most widely consumed drug. According to PAHO, in 1996, 59.8 percent of Colombians over age 12 had consumed alcohol in the past year (CEPAL 2000b). Alcohol consumption is linked to numerous social problems such as domestic, sexual, and intrafamily violence. In most instances, men are the primary perpetrators, with women and children the frequent victims. Alcohol use has also been identified as a precipitating factor in street violence and homicide, where both perpetrators and victims are primarily men (World Bank 1999b).

However, alcohol is perceived to be less of a problem among Colombians than narcotics use, which is concentrated among young men. A study of perceptions of violence in poor urban communities revealed that many communities reported alcohol-related problems to be significant, but problems related to other drugs were of greater concern (Moser and McIlwaine 1999). According to the study, drug consumers tend to be young males. The use and sale of narcotics contributes to the erosion of physical and human capital and has widespread, complex, and negative effects on the lives of users and nonusers of both sexes and all ages.

\[e\] Reproductive and Sexual Health

Even though services have improved, deficiencies in maternal health care continue to exist. Twenty-nine percent of rural women, 22 percent of women aged 35 or older, and 45 percent of women experiencing a sixth (or higher) order birth receive no prenatal care. Educational levels affect women's access to prenatal care: 52 percent of women without education received no prenatal care during their pregnancies, and 25 percent of women with only a primary education received prenatal care. Women are most likely to be attended by a physician if they are between ages 20 and 34, have secondary or higher educational levels, or are having their first baby. Limitations in health care are reflected in widely varying maternal mortality rates, which in the case of the Pacific region, for example, are 50 percent higher than the national rate (125.9 per 100,000 live births). The DNP (2001) estimates that complications from illegal and unsafe abortion are the second-leading cause of maternal mortality, accounting for 17 percent of maternal deaths during 1991–95.

While fertility rates have declined over 50 percent in less than 40 years, decreases have been much smaller for both poorly educated and rural women. During

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11 According to that same study, male consumption of drugs (primarily among young men), is a major concern in poor urban Colombian communities, and is a source of multiple social and economic problems that affect both men and women.
1990–95, for example, the urban total fertility rate was 2.7 children per woman, compared with a rural rate of 4.4. The 1995 total fertility rate was 5.0 children per woman without education; 3.8 for women who completed primary education, 2.6 for women with secondary education, and 1.8 for women with higher education (PROFAMILIA 1995). Fertility also varies by region. It is highest in the Pacific Coastal subregion, which has a total fertility rate of five children per woman and an average of 7.1 children in its rural areas (DNP 2001).

At 92 births per 1,000 adolescent girls aged 15 to 19, adolescent fertility rates for Colombia are high when compared to those of other LAC countries. Approximately 17 percent of 15 to 19 year old females are pregnant or have given birth (DHS 1995). In 1995, the average Colombian woman became sexually active at the age of 19.6 years, but strong differences exist between the urban and rural populations. Urban girls do not become sexually active, on average, until age 20, while rural girls become sexually active around age 18.5. Similarly, urban girls enter their first union at the average age of 21.9 years, compared to 20.0 in rural areas (DNP 2001). As a result, rural girls have higher rates of fertility and lower age at first birth (21 in rural areas, compared to 23 in urban areas) (PROFAMILIA 1995). Girls with lower levels of education also have earlier ages of sexual activity and first union. In 1995, 15 percent of urban women between ages 15 to 19 were parents or experiencing their first pregnancy; the number is much higher (26 percent) for rural women of these ages (DNP 2001).

While global contraceptive use rates in Colombia are relatively high, significant unmet needs exist for more information and services related to reproductive and sexual health. It is estimated that over half of the women using the pill may be doing so incorrectly (CRLP/CASA 1998). Among females, the greatest need for family planning information and services is among young women under age 20, rural women, and women without any formal education. Despite the lack of data, abortion rates appear to be high and closely correlated with the unmet need for contraception. In 1993 approximately 20 percent of Colombian women of childbearing

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12. Compared with fertility rates of 88 births per 1,000 women aged 14 to 19 in Brazil in 1996, and 77 births per 1,000 women aged 14 to 19 in Peru in 1996 (DHS data, accessed 2002)
13. Age of initiating sexual activity and first union help approximate the length of the woman's reproductive life and her exposure to pregnancy. Women with earlier initiation of sexual activity have greater risk of pregnancy
14. Higher levels of education are strongly associated with postponed sexual relations. Nationally, women with no education became sexually active at a median age of 17.5. The figure rises to 18.7 years for those with primary education, 20.9 for women with a secondary level education, and 23.6 for those with higher education (DNP 2001). Similarly, education delays women's age at first birth. Women with no education experience their first birth, on average, at 19.5 years, compared to 20.4 years for those with completed primary education, and 22.9 years for women who have completed secondary education (PROFAMILIA 1995)
age had had at least one abortion. One third of ever-pregnant women reported that they have had an induced abortion, three quarters of which were because of a lack of access to contraceptives (PAHO 1999b). As in most other countries in the region, abortion is illegal in Colombia and the law penalizes both women who seek abortions and those who provide them.

f) Male Dimensions of Reproductive and Sexual Health

Male dimensions of reproductive and sexual health have received increased attention among health policymakers given that male involvement reduces teenage pregnancy, promotes family planning, encourages responsible parenthood, and limits the spread of HIV/STDs. In Colombia most cases of HIV/AIDS and other sexually transmitted diseases (STDs) have been diagnosed in men. UNAIDS data report that 83 percent of all adult Colombian cases of HIV/AIDS are among men (UNAIDS 2002). As of the end of 1996, there was a reported cumulative total of approximately 700,000 cases of AIDS (UNAIDS 2002), and a cumulative mortality of 42 percent (PAHO, 1999a). Eighty-five percent of all diagnosed cases were among men. Colombian incidence of other STDs (such as congenital syphilis and genital herpes) is also rising.

Male knowledge of contraceptive use and reproduction is poor, and their understanding of the transmission of STDs appears to be inadequate (AVSC 1997, 1998). Also, active male participation in family planning appears to be low and male contraceptive use is very limited. While 26 percent of women in union have been sterilized, only 7 percent of male partners have been and, as noted, only 43 percent of couples reported using condoms (PROFAMILIA 1995). This is consistent with findings in other LAC countries.

15 Unsafe and illegal abortion affects women of all ages and classes. Twenty-nine percent of women who have an illegal and unsafe abortion suffer complications. Poor, young, and rural women are the most likely to experience unsafe, self-induced, and/or unhygienic abortions. Women aged 16 to 27 have the highest incidence of illegal abortion; for girls under 15, abortion is the fourth-leading cause of hospitalization. Unlike some other aspects of maternal health in Colombia, no improvement in this situation is apparent. To the contrary, the incidence of illegal and unsafe abortion appears to have risen in recent decades (DPN 2001).

16 Unless otherwise stated, all data reported in this section are from CRLP/CASA (1998).

17 While the majority of HIV/AIDS cases are among men, a number of gender-related factors increase women’s risk of contracting HIV. First, women are biologically more likely to become infected than they are to transmit STDs to their male partners. Second, gender inequalities and rigid sex roles deny women access to condoms and other devices that prevent infection. Third, strict gender roles and norms make it difficult for women to negotiate prophylactic use and to refuse unwanted sexual intercourse.

18 For example, during 1990–95, diagnoses of genital herpes increased 99.3 percent (PAHO 1999a).
Despite their importance, reproductive and sexual health programs targeting males are limited in Colombia. PROFAMILIA, which is the most active, runs three men’s clinics that provide a range of services to their male clients (AVSC 1997).\(^{19}\)

\(g\) **Family Size and Poverty**

Larger households are consistently more likely to be poor and extremely poor in Colombia. A simple univariate analysis of the relative risk of poverty reveals that households in urban areas with more than six members are more than 22 percent more likely to be poor than households with fewer members in 1999 (Vélez, de la Brière, and Millan 2001). Similar households in rural areas face an incremental risk of being poor of more than 10 percent in 1999. Decomposing income dynamics in terms of skill endowments and dependency ratios reveals that households headed by people with low skills benefited most from reductions in fertility during 1978–99. This holds true for both urban and rural households.

Income gains derived from real wage gains and reductions in family size are greatest for households the heads of which are less educated: real household income increased by 14 percent for households in urban areas in response to real wage increments over the period and 12 percent as a result of reductions in demographic dependency. Interestingly, income losses over the recession for households in urban areas with college graduate heads were due almost exclusively to larger family sizes (Vélez and others 2001). Households with college graduate heads lost 3.5 percent of their real household income while experiencing no change in their wage index or employment ratio. These households did experience significant reductions in their adult-to-family-size ratio as the number of dependent children rose. It is possible that these households are selecting to have children in the recession period, although evidence suggests that larger extended households are forming around college graduate heads as part of the coping strategy in response to the recession (ibid).

\(h\) **Educational Attainment**

Boys have higher grade repetition and dropout rates and, in rural areas, have lower school completion rates than girls do. In 1996, boys’ primary school dropout rates were 7.8 percent, compared to 6.6 percent for girls (WDI 2001). In 1993, boys’ sec-

\(^{19}\) Health services include general medical exams, urological services, family planning counseling and contraceptive methods, infertility testing and treatment, STD treatment, HIV testing, sex therapy, and plastic surgery. In addition, PROFAMILIA offers legal services to men for divorce, separation, and child support. The rising demand for services by men and their ability to pay for them, has allowed PROFAMILIA to subsidize other family planning services. For example, in 1986 Bogota’s men’s clinic met 70 percent of its costs from fees charged for services. By 1995, the clinic was self-sufficient and generated a surplus of 21 percent over costs (AVSC 1997)
ondary education repetition rates were 16 percent, compared to 14 percent for girls (United Nations 2000). In urban areas, grade completion rates are similar for both sexes, although in rural areas girls have higher school completion rates than boys.\footnote{Completion rates are calculated for individuals age 15 to 19 at each grade. The rate reports the number in this age group who have ever enrolled in school and those who have left school at each grade.}

Also, in rural areas, completion rates for both boys and girls drop by more than 25 percent between fifth and sixth grades, suggesting the importance of preventing dropout at those specific levels. Patterns, however, vary by income level. When controlling for household income, 1995 data show that boys from the wealthiest 20 percent of households have higher completion rates than girls do, while completion rates for girls from poorer households are higher than those for boys (Filmer 1999).

Gender differences in dropout rates suggest that boys from poor families have a higher opportunity cost of going to school than do girls, due to higher expected wages. Furthermore, boys may face greater pressure and incentives to begin work at earlier ages. Boys and girls give different reasons for dropping out of school: girls report that they drop out to care for children and other family members, to enter the labor market, and to get married. Fewer girls than boys report dropping out of school to enter work, although slightly more girls than boys report that they leave school because the cost is too high.

Although education alone is insufficient to lift individuals and households out of poverty, the educated are consistently less likely to be poor. Over the past three decades, Colombia has observed almost continual improvements in school enrollment, number of average years of education completed, and the quality of education available to both urban and rural households. The 1995–99 economic recession muted these improvements, however, and in some cases there has been a slight decline in school enrollment. As real household income has declined, both poor rural and urban households have responded by pulling older children out of school to increase the household labor supply. The adjustment has not been uniform for girls and boys. Indeed, there is evidence that girls’ enrollment rates have fallen slightly more than those of boys over the recession period in both urban and rural areas, while boys’ school enrollment rates have risen in rural areas. Despite these changes in enrollment rates, girls have maintained a slight advantage over boys with higher net enrollment, and lower dropout and grade repetition rates.

\textit{i) Household Structure}

Single female-headed households are disproportionately more likely to be poor in Colombia. Controlling for a variety of factors that affect poverty, female-headed households appear to face an incremental risk of being poor in both urban and rural areas. This tendency is particularly pronounced when the household is rural and the female head is under age 48. In 1999 alone, the likelihood of these families being
poor rose by almost 20 percentage points compared with male heads of household of the same age. These same households saw an increment of 5.2 percentage points in the marginal probability of being poor over the recession. Although there has been a net increase in the marginal effect on the probability of urban, female-headed households being poor, this tendency appears to be procyclical. Over the recession period, urban female-headed households saw a slight decrease in the marginal probability of being poor.

The finding that female-headed households are more likely to be poor is an important one given that these households manifest characteristics that decrease their likelihood of being poor. Female-headed households are typically smaller, contain older-aged heads, and have fewer children under 18 years of age, lower economic dependency rates, higher household employment rates, and higher average levels of education. Female-headed households do, however, consistently report fewer wage earners and a higher number of self-employed and unemployed members. Despite the decline in gender wage gaps, women's wages are consistently lower than men's in all sectors. It is likely, therefore, that (all other things being equal) a household that depends disproportionately on women's wages will be poorer than those dependant on male earnings, even over the recession period.

IV. Conclusions and Policy Recommendations

Colombia has made significant progress in reducing gender inequalities—and in particular in improving the well-being of women. Girls have higher school enrollment levels than boys, women's fertility and maternal mortality have decreased, women's labor market participation rates have increased, and gender gaps in wages have narrowed. But while the status of women has improved, men's human capital has eroded on the health and education fronts. Boys have worse completion, attainment, dropout, and repetition rates than girls—and these have been exacerbated by the crisis. Males are also more affected by HIV/AIDS-, alcohol-, and drug-consumption-related diseases, and violence, both armed-conflict and crime-related deaths. And men have lost in terms of labor force participation and wages. The Colombia experience also points to the important interlinkages that exist among gender, poverty, and inequality in Colombia. Female-headed households are more likely to be poor and vulnerable than those headed by men. Moreover, mobilizing female labor during periods of recession is an important poverty-reduction strategy, and has cushioned the effects of the crisis. Finally, larger households in Colombia are consistently more likely to be poor and extremely poor.

A number of policy recommendations emerge from this gender analysis. First, gender indicators should continue to be monitored to ensure that gains for women in education, literacy, health, and employment are not eroded by the continuing crisis in Colombia. Girls' enrollment has declined in rural areas (although it continues to be higher than that of boys). And there is evidence to suggest, for example, a new
bias toward vaccinating boys. Second, it is clear from the analysis here that the approach to gender needs to be broadened from a conventional focus on women to address the negative dimensions of gender for men. A more holistic approach on gender would contribute to better understanding and thus better response to critical issues in Colombia, such as male crime and violence, and other issues such as boys' education and men's reproductive and sexual health needs. Third, given the immediate needs resulting from the prolonged crisis, it would be important to consider gender in social safety net programs for the poorest and most vulnerable—in particular single-parent female households. Discussion of specific priorities follows.

a) Crime and Violence

Given its human toll and corollary economic consequences, better understanding of the relationship between gender and violence in Colombia is a first priority. Recent research on this subject in other countries has pointed to the link between violence and men's rigid gender roles in society (Barker 1998). Low-income men, in particular, may seek alternate ways to affirm their identity, such as engaging in violence and substance abuse, when they are unable to fulfill their main role of family provider.

According to Morrison and Loreto Biehl (1999), the education system, community-level programs, and the media are important vehicles for addressing and reducing the incidence of violence. For example, the education system has the potential to modify cultural values that promote violent behavior. Possible actions include (a) retraining teachers to ensure they do not promote violent behavior among boys and submission among girls, (b) eliminating gender stereotypes in textbooks and other pedagogical materials, and (c) developing innovative programs to teach children nonviolent resolution skills and promote civic values.

Schools are also an ideal vehicle for identifying at-risk children and families that need special attention. Community-level programs can be used to provide informal education programs, teach citizens about legal sanctions against violence, establish violence-prevention strategies, and provide social services for victims of violence. Finally, the media can be used to promote nonviolence and counteract their own role in reinforcing violence. Mass media education campaigns represent a potentially effective response by providing nonviolent role models and by promoting nonviolent responses. Educational programs to encourage commercial media can produce and disseminate more positive images of interpersonal interactions (male–female and adult–child) Soap operas (telenovelas) can be a powerful medium for illustrating nonviolent conflict resolution. In terms of sanctioning domestic violence, important measures include ensuring that men and women are aware of laws and that women have access to legal services.

21 A recent report from PROFAMILIA using the National Demographic Survey found that vaccination rates declined between 1995 and 2000, although boys have a higher vaccination rate than girls (55 percent compared to 49 percent)
In 1998, the office of the presidency launched an important community-based program entitled the Convivencia y Seguridad Ciudadana, one of the main objectives of which is to reduce homicides.\textsuperscript{22} As part of this program, resources are being dedicated to institutional strengthening of municipalities to enhance their ability to respond to violence, supporting civil society initiatives to promote conflict resolution, reforming judicial and police procedures, extrajudicial conciliation and mediation, and research to look at the multiple causal factors that precipitate and exacerbate violence. Given the linkages between violence and male gender roles, it would be critical for the Convivencia program to consider the gender dimension.

\textit{b) Reproductive and Sexual Health}

Investments in reproductive and sexual health are justified in Colombia given high fertility levels among the poor, the linkage between poverty and household size, the unmet need for contraceptives, the misinformation that exists about contraceptives and sexually transmitted diseases, the health dangers of abortion, and the high incidence of adolescent pregnancy. In addition to directing services at women in union—who are typically the targets of reproductive health programs—programs need to reach youth and men. International experience with youth and men suggests (a) putting in place integrated programs that address employment, violence, sexuality, and STDs and AIDS; (b) using youth workers to reach other youth, and men to reach men; (c) using participatory learning in the form of role playing and assertiveness exercises rather than traditional didactic training methods; (d) addressing causal factors related to adolescent sexual activity, including self-esteem, decisionmaking, gender roles, and values; and (e) targeting youth and men where they normally congregate (for example, schools, the community, the street, the workplace, and so forth, in the case of youth).

\textit{c) Support to Female Single-Parent Families}

The predominance of families with small children that are below the poverty line and the findings on increased vulnerabilities of female single-parent households imply that targeting these groups would go a long way in reducing poverty, and might be at the center of a poverty-reduction strategy. Specific recommendations include increasing poor women's access to childcare\textsuperscript{23} and family planning, continuing improvements in education, and reducing barriers to poor women's participation in the labor market.

\textsuperscript{22} This initiative receives financing from the Inter-American Development Bank.

\textsuperscript{23} According to the World Bank Poverty Report, childcare programs were one of the areas neglected by public policies during the 1990s. Between 1992 and 1997 the number of available spaces in childcare centers shrank by 4 percent, and coverage fell by as much as 7 percentage points. Childcare services in Colombia have the highest unmet demand for coverage as defined by the relative access gap (Vélez and Foster, forthcoming).
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Indigenous Peoples and Afro-Colombian Communities

This Chapter was written by Shelton Davis and Enrique Sanchez with the assistance of Maria Valdes.

Colombia is a rich and complex country not only in terms of its biological diversity, but also because of its diverse population. This diversity places the country in a privileged position compared to the rest of the world. Colombia covers an extensive territory of 1,141,748 square kilometers and has a population of approximately 43 million. Within this population there are nearly 800,000 indigenous Colombians who belong to 82 different ethnic groups, and just over 1 million Afro-Colombians that live in small traditional communities all along the Pacific and Caribbean coasts. The country’s status as a multiethnic nation is fully recognized in the Constitution, which contains a body of law that supports and promotes the development of the fundamental economic and social rights of these ethnic groups. This Constitution is an example for other multiethnic nations. Colombia’s progress in the area of the recognition of territorial rights of indigenous and Afro-Colombian peoples is practically unparalleled in the Americas (see Annex 1).

Despite these advances, problems persist that affect the lives of the indigenous and Afro-Colombian peoples and their access to development. Institutions should pay special attention to these problems because of the social and cultural specifics of these ethnic groups, and in order to comply with the special rights and laws that guarantee their existence.

This Chapter describes the situation of ethnic groups in Colombia and the main problems they face, and presents recommendations that the new government could implement as possible solutions. The Chapter is divided into three parts: (a) a discussion of Colombia’s status as a multiethnic and multicultural nation; (b) an evaluation of the rights of ethnic groups in the context of the political conflict and economic crisis; and (c) a series of recommendations regarding the role of indigenous communities in the peace process, respect for social and economic rights, the protection of their traditional territories, and conservation of natural resources.
I. Colombia: A Pluriethnic and Multicultural Nation

a) The Indigenous Population

Colombia's indigenous population is estimated at 785,356,\(^1\) representing 1.8 percent of the country's total population. This population is distributed among 82 ethnic groups. The data show that indigenous Colombians have experienced a demographic recovery, although with an unequal regional distribution. The map of indigenous territories presents two different realities: large ethnic territories on one hand, and dispersed communities living on small extensions of land on the other (see Annex II).

In 1998 Piñeros and Ruiz studied the demographic behavior of indigenous communities in four large regions of the country: Amazon, Andean, Caribbean, and Tierradentro. They found the following: (a) 45 percent of the indigenous population in these regions was under age 15; (b) the gross birth rate was 41 births for each 1,000 inhabitants, or above the national birth rate which was 26.97; (c) life expectancy was 57.8 for women and 55.4 for men, lower than the national average life expectancy that same year, which was 73.04 for women and 64.27 for men (see Annex Table III.1).

The indigenous population is of particular importance in the jungle biomes and natural savannahs of the Amazonia and the Orinoquía, and on the Guajira peninsula and in the northeast of the Cauca department. The urbanization processes are under way, and there is a real threat that indigenous peoples from south of the Andes may migrate toward the Amazonian foothills (Putumayo) because of cultural change, the exhaustion of indigenous communal lands (reguadas) in the Andean zone, and the forced displacement of families and communities provoked by the armed internal conflict.

While household surveys do not contain data on salaries and poverty levels of indigenous peoples, the information that does exist on health, education, and other social indicators shows a much lower quality of life than for the general population. One of the main problems in evaluating the social and economic welfare of indigenous communities is their geographic isolation and the fact that they are not included in official statistics on poverty. In addition, many of these indigenous communities rely on their own natural resources for subsistence and development rather than a monetary salary. (See Section II of this Chapter and the Chapters on Health and Education and social indicators of the population in general.)

b) The Afro-Colombian Population

There is little precise information on the size of the Afro-Colombian population, although it is large. The Commission for the formulation of a National Plan for the

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\(^1\) Projection of data from the National Department of Statistics census/1993 (Department of National Planning 2002).
Development of the Afro-Colombian Population estimates this population at 10.5 million. Within the Afro-Colombian population, approximately 1.2 million still live traditionally; the majority of this group belong to communities in the Pacific region and from the Caribbean region in southern Bolivia.

Currently, the Afro-Colombian population is experiencing an acceleration of the migration process to urban centers. This migratory movement can be partly explained by cultural changes and by the high incidence of forced displacement caused by the armed internal conflict (Urabá, low and medium Arrato) and violent processes associated with the expansion of the cultivation of illicit crops (Patía and Naya Rivers). The information within the National Plan for the Development of the Afro-Colombian Population indicates a situation of extreme poverty and lack of access to basic social services (see Box 1).

c) Progress in Recognition of the Rights of Ethnic Groups

There is a strong historic tradition in Colombia of recognizing the rights of indigenous peoples. Through a long, historic process of demanding their rights, indigenous communities have forced the State to accept and protect their territorial rights. The State has also had to recognize the inalienable rights of indigenous peoples to their collective lands and to organize their own forms of government.

The Constitution of 1991 raised these rights to a constitutional level and extended their coverage to other sectors of the population that maintain their own forms of living, and social and cultural institutions that differ from the rest of the national society. The Constitution defined indigenous peoples and communities (Amerindians) as “ethnic groups,” and also gave this status to Afro-Colombian communities (black communities) and the inhabitants of the islands of San Andrés and Providencia, traditionally known as razales. This same recognition recently was also legally extended to the Roma population, commonly known as “gypsies.”

Colombia ratified International Labour Organization (ILO) Conventions 107 (1957) and 169 (1989) on Indigenous and Tribal Peoples and has applied these treaties in a systematic manner to develop legal instruments for the protection of the rights of peoples and communities. Based on these agreements, the country launched a successful program to survey and legally recognize the boundaries of the ancestral communal properties of indigenous communities. This land program, a pioneer in America and the world, is still under way and has existed since the Agrarian Reform Law came into effect in 1961. The country has also made important regulatory headway for ethnic groups in the areas of health, education, and political participation.

2. This number comes from applying an arbitrary percentage to the 1993 census results from the municipalities where the descendants of African communities were supposed to be living (DNP/Pacific Plan 1999)

"The average per capita income of the Afro-Colombian population varies between 500 and 600 dollars annually, while the national average income is 1,500 dollars. Approximately 74 percent of the Afro-Colombian population is paid less than minimum wage. Life expectancy is lower than the national average, between 10 and 30."

"Illiteracy runs at 43 percent among the Afro-Colombian rural population in rural areas, and at 20 percent in urban areas. On a national level, illiteracy rates are 23.4 percent in rural areas and 7.3 percent in urban areas. Coverage of primary education is 60 percent for the urban Afro-Colombian population and 41 percent in rural areas, while the national averages are 87 percent and 73 percent, respectively. Secondary education coverage is 38 percent, and this is exclusively in urban centers. In the Andean region this same coverage is 88 percent."

"For every 100 young blacks that finish high school in the Pacific region, only two go on to a university; 95 percent of the families cannot send their children to college because they lack the resources. Secondary education in this region is inferior as compared to the rest of the country at a rate of 40 percent."

"The health situation fits within the context of a low socio-economic status of generalized poverty, low quality of life and high NBI. The national epidemiological situation of black communities nationally is characterized by high morbidity and mortality rates, and the prevalence of infectious diseases such as EDA, IRA and tuberculosis. The infant mortality rate is 10–50 percent higher than the national average in regions where the Afro-Colombian population is highly concentrated."

"Access to health services in Afro-Colombian communities is limited and with lower indicators than for the rest of the Colombian population due to the"

II. The Rights of Ethnic Groups in the Context of the Political Conflict and Economic Crisis

a) Surveying and Consolidating the Territorial Rights of Ethnic Groups

i. Recognition and Surveying of Indigenous Homelands
Nearly all indigenous Colombians live in collective territories legally known as resguardos (indigenous homelands). In accordance with the law, these areas are a legal
Box 1. (continued)
lack of coverage and low quality of health services. This is also linked to the lack of adequate health promotion and prevention, and lack of well-trained human resources."

"In comparison to the rest of the Colombian population, in areas of high concentration of black Colombians, fewer people participate in and benefit from the general social security system."

"As regards health management, municipalities with a sizable Afro-Colombian population have very low certification levels. In the Pacific Coast, for example, only three of 42 municipalities in the region are certified, and in the Caribbean only 61 of 183 municipalities are certified "

"The Afro-Colombian population is not included in the institutional provision of health services in Colombia in terms of information systems for planning, epidemiological monitoring systems, nor within the General Social Security System. There is no administrative apparatus to channel health services to the Afro-Colombian population."

"The basic sanitation facilities in Afro-Colombian communities show the differentiated situation as compared to the rest of the country. Indicators for coverage and quality of aqueducts, sewerage and disposal of solid and liquid wastes show a deficit that is evident in the case of the Pacific where only 43 percent of the houses in the municipal capital are covered by aqueducts, and only 20 percent have sewerage. The numbers drop to 5 percent coverage in rural areas. In the Pacific region only 19 percent of the houses have access to these three basic services while in Colombia the average national coverage is 62 percent. Coverage on the Caribbean coast for aqueducts and sewerage is 69 percent and 37.7 percent on average, compared to 79 percent and 63 percent respectively at a national level."

and sociopolitical institution made up of one or more indigenous communities that hold a collective deed, are backed up by the guarantee of private property rights, and are internally governed by an autonomous organization—a council—with its own regulatory system. According to articles 63 and 329 of the Constitution, these resguardos are inalienable and nonprescriptible (that is, the title to these lands cannot be acquired merely through uninterrupted possession of specific duration) (Article 21 of Law 160, 1994).

Currently, these legally recognized and surveyed territories are on extensions of land that are communally owned, covering an extension of 308,161 square kilome-
ters, or nearly 27 percent of the national territory (see Annex II tables). Where the homelands do not have enough territory, land has been acquired through agrarian laws permitting the acquisition of land for indigenous peoples. Table 1 presents the territorial situation of indigenous peoples.

Table 2 presents the legal situation of indigenous land tenure today in Colombia and compares the legal situation of indigenous land tenure in Colombia in 1980 and 2001. The protected areas present the following problems.

- **Imprecise surveying and property lines.** The surveying processes of some of the homelands suffered from technical and cartographic limitations.
- **Illegal occupation by either colonizers or nonindigenous Colombians.** Although INCORA's policies are oriented toward avoiding the inclusion of land plots occupied by colonizers, the reality is that at the moment when a homeland is legally constituted, some of these areas have already been occupied by colonizers—individuals who depend economically on the illegal extraction of natural resources, and also sometimes by cultivators of illicit crops (coca).
- **Difficulties and delays with the compensation and resettlement process of rural Colombians already living on lands within indigenous homelands.** Some colonizers or occupiers who are not indigenous have been affected by the setting up of some indigenous homelands, because they

Table 1. Legal Situation of Indigenous Land Tenure in Colombia, December 2001

<table>
<thead>
<tr>
<th>Types of Land Tenure of Indigenous Peoples</th>
<th>Number Homelands</th>
<th>Area (hectares)</th>
<th>Percent Area</th>
<th>Population</th>
<th>Percent Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous homelands—historic-colonial period Homelands—new—created by INCORA*</td>
<td>55</td>
<td>405,743</td>
<td>1.32</td>
<td>171,201</td>
<td>21.80</td>
</tr>
<tr>
<td>Indigenous reserves</td>
<td>**</td>
<td>30,410,409</td>
<td>98.59</td>
<td>511,303</td>
<td>65.10</td>
</tr>
<tr>
<td>Without a legally defined territory</td>
<td>ND</td>
<td>5,115</td>
<td>0.02</td>
<td>1,000</td>
<td>0.13</td>
</tr>
<tr>
<td>Communities or rural land parcels***</td>
<td>ND</td>
<td>23,964</td>
<td>0.08</td>
<td>71,989</td>
<td>9.17</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>638</td>
<td>30,845,231</td>
<td>100.00</td>
<td>785,356</td>
<td>100.00</td>
</tr>
</tbody>
</table>

ND = Not determined

* Includes homelands dating from the colonial period that were restructured and extended by the Instituto Nacional de Colonización y Reforma Agraria (INCORA) with land purchased from private owners

** A reserve that should legally become a recognized homeland

*** Includes property owners and individual landholders

*Source* DNP-DDT Arango and Sánchez (1998). Based on information from National Department of Statistics, updated through 2001 with data from INCORA
Table 2. Comparison of the Legal Situation of Indigenous Land Tenure in Colombia Between 1980 and 2001

<table>
<thead>
<tr>
<th>Type of Land Tenure</th>
<th>Percent of Indigenous Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
</tr>
<tr>
<td>1 Colonial or historic homeland</td>
<td>Colonial or historic homeland</td>
</tr>
<tr>
<td></td>
<td>36.00</td>
</tr>
<tr>
<td>2 *</td>
<td>New homelands from</td>
</tr>
<tr>
<td></td>
<td>1961 on</td>
</tr>
<tr>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>3 Indigenous Reserves</td>
<td>Indigenous Reserves</td>
</tr>
<tr>
<td>Homelands in process of legalization</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td>4 Civil indigenous communities</td>
<td>Rural land parcels,</td>
</tr>
<tr>
<td></td>
<td>individual landholders</td>
</tr>
<tr>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td>5 Indigenous people without a defined territory</td>
<td>Individual landholders</td>
</tr>
<tr>
<td></td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>Occupants without a defined</td>
</tr>
<tr>
<td></td>
<td>territory</td>
</tr>
<tr>
<td></td>
<td>22.00</td>
</tr>
</tbody>
</table>

* Resguardos were not created prior to 1980 as part of the agrarian reform process
** In 1980 the creation of homelands was halted and the process of creating new homelands was begun with the change of legal regime from reserve to homeland

Source: Arango and Sánchez (1998), Annex 1 for 2001

are living on lands within the territories under communal deed. The State has the obligation to compensate these legal occupants by purchasing the lands they have worked on. In addition to the costs entailed in this reparation process, the visits, evaluations, and procedures are usually bureaucratic, and there is no resettlement policy for dealing with this particular group of people. In some cases, the indigenous communities themselves have decided to find ways to live alongside legal occupants, so that their nonindigenous neighbors do not have to suffer displacement.

- **Difficulties with the Governance of Very Large Indigenous Homelands.** Homelands with large extensions of land are usually difficult to manage. The following problems merit mentioning: (a) the difficulty of forming a general authoritative body that manages the area where diverse ethnic groups live; (b) the difficulties that indigenous peoples encounter in terms of watching over and protecting their own territories. The inability to do this leads to the illegal extraction of natural resources by individuals or companies involved in logging, fishing, and mining, (c) disorganized and incoherent intervention by diverse territorial entities that have jurisdiction in the homeland; (d) the overlapping with protected areas pertaining to the National System of Natural Parks; (e) the presence of insurgent groups that take refuge in indigenous territories and use the population as a human shield; and (f) the location of these homelands in two or more departments and municipalities, which makes them more difficult to administer.
Finally, it is important to mention that there is still a small sector of the indigenous population that has not been able to legalize their territories. These are indigenous communities where the land titling process is more difficult because they live alongside other rural farming communities or other ethnic groups, or they do not have sufficient land and their access for acquisition is limited. The land situation is critical in the following departments: Putumayo (Páez and Awa from the Andean zone), Tolima, and Nariño, where indigenous Colombians are living on tiny plots of land that are not big enough for subsistence and the land is of poor quality.

ii. Demarcation and the Collective Titling Process of the Afro-Colombian Communities

The Afro-Colombian communities have begun living within a regime similar to that of indigenous Colombians, as extensions of land are provided with collective titles. This process began when the 1991 Constitution entered into effect, and was furthered by Law 70 in 1993, and the process has advanced considerably since then. Between 1996 and 2002, through INCORA, the national government surveyed and provided titles for 64 collective territories of Afro-Colombian communities covering an area of 2,695,475,487 hectares. This benefited 27,338 families in the Antioquia, Cauca, Chocó, and Nariño departments. This titling process ran into difficulties because of the lack of new resources and pressure from armed illegal groups. These groups have blocked the titling process or forced out the communities in these territories, causing their displacement.

b) Natural Resources

i. Policies and Environmental Agreement

Colombia has made important progress in terms of decentralization and linking communities to conservation activities. The Ministry of the Environment launched the Environmental Collective Project, which involves a new type of environmental consensus building and planning. As a part of this project, policies were formulated in a holistic manner dealing with territorial organization, adequate management, and the recovery of ecosystems associated with water, conservation, and the restoration of important ecosystems for their biodiversity, sustainability of endogenous productive processes, and the supply of environmental services (green markets). Two important environmental agendas were formulated during the development of this model: the Pacific Agenda and Amazonia XXI. Despite this progress in terms of environmental policy, these agendas still have not been implemented due both to the weakness of the entities in charge of their coordination and implementation, and to the fiscal limitations of this sector.

The Ministry also has a technical proposal for a National Biodiversity Action Plan that was formulated along with indigenous organizations, Afro-Colombian
groups, and environmental groups. This plan has not been implemented. Some analysts believe that these types of policies and the proposals within the Action Plan should be continued during future administrations, and should be revised, adjusted, and above all made operational at all levels of the National Environmental System (SINA).

ii. The Overlap of Environmentally Protected Areas and Territories within Indigenous Homelands and the Collective Territories of Afro-Colombian Communities.

Of the 45 protected areas that make up the National System of Natural Parks, 3 19 indigenous homelands and one indigenous reserve overlap with these areas. This is the case for the Macuira and Punawai National Parks. There are also indigenous homelands that overlap between 80 and 100 percent with natural parks. The following indigenous homelands are in this situation: Quebrada Cañaveral–San Jorge River that overlaps with the Paramillo Park in Córdoba; the Motilón–Barí homeland

Table 3. Natural Parks that Overlap with Indigenous Territories

<table>
<thead>
<tr>
<th>Natural Protected Area</th>
<th>Indigenous Homeland</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paramillo</td>
<td>Esmeralda, Reserva Río Verde, Quebrada Cañaveral</td>
<td>Antioquia and Córdoba</td>
</tr>
<tr>
<td>Cahuinarí</td>
<td>Predio Putumayo</td>
<td>Amazonas</td>
</tr>
<tr>
<td>Amacayucu</td>
<td>Corhú, Mocagua, Puerto Nariño</td>
<td>Amazonas</td>
</tr>
<tr>
<td>El Cocuy</td>
<td>Cobaja–Tejada–Bócota</td>
<td>Boyacá</td>
</tr>
<tr>
<td>Puracé</td>
<td>Puracé and Coconuco</td>
<td>Cauca</td>
</tr>
<tr>
<td>Nevado del Huila</td>
<td>Huila Indigenous Homeland</td>
<td>Cauca</td>
</tr>
<tr>
<td>Sierra Nevada</td>
<td>Kogui–Malayo and Arhuaco</td>
<td>Magdalena, Cesar, and Guajira</td>
</tr>
<tr>
<td>Ensenada Utría</td>
<td>Valle–Boroboro, Junípolí</td>
<td>Chocó</td>
</tr>
<tr>
<td>Macuira</td>
<td>Carraquia Reserve</td>
<td>La Guajira</td>
</tr>
<tr>
<td>La Paya</td>
<td>Jirín, El Tablero, El Hacha, Lagarto Cocha</td>
<td>Putumayo</td>
</tr>
<tr>
<td>Pumave</td>
<td>Caucuna Media and Alta del Guainía, Alto Río Guainía, Cusarí and Isana</td>
<td>Guainía</td>
</tr>
<tr>
<td>Nukak</td>
<td>Nukak</td>
<td>Guaviare/Vaupés</td>
</tr>
</tbody>
</table>

Source: DNP–UDT Based on data on the indigenous territorial regime, 1995

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3 The formation of a National Park System became a reality when the Instituto Nacional de Recursos Naturales Renovables y Medio Ambiente (National Institute of Natural Renewable Resources and Environment, INDERENA) was established in 1968 to create, administer, and manage natural protected areas. In 1974, through Decree Law 2811, the Environmental Protection Code for Natural Renewable Resources was put into effect. The name “National Park System” was given to all areas of exceptional value to national patrimony as areas of conservation and special protection because of their benefits to all inhabitants of the nation, particularly because of their natural, historical, and cultural characteristics.
which overlaps with the Catatumbo-Barí Park in northern Santander, and the Kogui–Malayo–Arhuaco territories that overlap with the Sierra Nevada de Santa Marta National Park.

The Colombian government believes that the existence of areas set aside as natural parks and indigenous homelands are compatible and similar since both legal regimes contribute to the conservation and protection of the nation's natural patrimony. Some legal experts believe that the 1991 Constitution, which recognized the homelands and parks as "inalienable," set up a legal contradiction that should be resolved by keeping in mind the need to preserve the nation's natural patrimony and the preeminence of the territorial rights of ethnic groups—the underlying support for other collective rights. The government is aware of the need to create regulations that reconcile conservation needs with the need to protect the most basic rights of ethnic groups. It should not be forgotten that indigenous Colombians want to directly manage the parks that overlap with their territories. In the Declaration of Puerto Remanso del Tigre Amazon of April 1989, this was the position of the indigenous peoples of the Mirití and Caquetá Rivers. It was also one of the conclusions reached and stated within the Declaration of Santa Marta of the First Latin American Congress on Parks and Protected Areas in May 1997.

c) Territorial Pressure on the Indigenous Homelands and Collective Territories of the Afro-Colombian Communities

i. Colonization Processes

Colonization processes in indigenous and Afro-Colombian territories have historically reduced the vital living space of these peoples and communities. This is the case of the Cofán, Siona, and the Koreguaje peoples and the communities that are the descendants of Africans from the Pasto–Tumaco route in the department of Nariño. The intensity of colonization seems to have slowed down with the collective titling process under way. However, there are some frontiers between homelands and collective territories, and sectors of colonizing farmers that are putting pressure on the resources of these territories even more than on the communal lands themselves. The most troubling phenomenon with respect to colonization processes is colonizers who live off the cultivation of illicit crops. In the future there may be the problem of the possible initiation of new colonization processes because of the clearing of roads that will cross through the territories of ethnic groups.

Some sectors of Colombian society also believe that indigenous peoples have access to too much land, and that they are not adequately exploiting these lands in

4. Article 7 of Decree 622 of 1977 was meant to address this issue, and established that there is no incompatibility between creating a park and an indigenous territory set aside as a reserve
economic terms. Those with this viewpoint do not realize that (a) the creation of indigenous homelands is because of the recognition of the ancestral and historic rights of indigenous peoples as descendants of the first inhabitants of the nation and their right to exercise these rights; (b) that the territories covered by jungle and natural savannas contain fragile ecosystems that are limited in terms of agricultural exploitation and traditional fishing, and that their potential lies in the proper conservation and sustainable use of their biodiversity; and (c), that the economies of ethnic groups are based on another rationale and that these communities have other ways of relating to the environment and of using natural resources. Their economies depend directly on the environmental supply and, as a consequence, on the conservation of wilderness ecosystems.

ii. Illicit Crops

Some indigenous and Afro-Colombian territories have suffered forced occupation or have been the scene of transactions by nonindigenous occupants. These occupants plant illicit crops in the territories in order to avoid State repression. In 1999 Carlos Cesar Perafán estimated that 17 percent of the country’s illicit crops were being cultivated within indigenous territories. Some communities have adopted these crops, but the majority reject them because they consider their current use to be contrary to their traditional beliefs—because in many cultures the coca plant is used in rituals for sacred purposes. These illicit crops have had a negative impact on the indigenous communities of Putumayo, and on Afro-Colombians of the Patía River in the department of Nariño.

iii. The Impact of the Armed Internal Conflict on Communities and Indigenous and Afro-Colombian Families

Indigenous and Afro-Colombian territories have been drawn into the armed internal conflict because of their strategic location or because the homelands and communal lands are located in isolated areas that permit armed illegal groups to take refuge within them. These groups also use them as a rearguard or retreat zone, and use ethnic territories and their inhabitants as a human shield to avoid punitive action by the armed forces. For example, the resguardo belonging to some communities of the Páez People (Naza) settled along the Caquetá River, and their lands were occupied by irregular armed groups that displaced the titleholders from their lands. Many indigenous and Afro-Colombian leaders who have defended the autonomy of their communities have been persecuted, displaced, disappeared, and murdered.

Other consequences of the armed conflict are (a) the intervention of armed groups in community life has fomented conflicts and internal divisions that break down community ties; (b) the armed actors are an obstacle to the functioning of the internal governments of the communities because they often end up substituting for the internal government by making decisions for traditional authorities and taking justice into their own hands; (c) the disintegration of social networks, particularly of
families, because of the forced recruitment of young indigenous men and women by these groups or of persons forced to serve as their guides; (d) the abandonment of farmland resulting in the disturbance of economic life and traditional forms of work, and either temporary or definitive forced displacement, which creates very serious economic, social, and cultural trauma; and (e) the lack of security in these territories because of the cultivation of illicit crops and the illegal exploitation of natural and mineral resources.

The communities belonging to ethnic groups have assumed a position of neutrality toward the armed conflict, but this neutrality has not been respected. The Peace Communities, like those in Urabá, have been seriously threatened by this conflict, as have indigenous communities within the Indigenous Organization of Antioquia.

iv. Ethnic Groups Displaced by the Armed Internal Conflict and Their Return

In 2000, of the 53,280 people whose ethnic origins were known, 18 percent belonged to the Afro-Colombian population and 3 percent to the indigenous population. The territorial disputes between illegal armed groups have generated an Afro-Colombian and indigenous peoples diaspora in the lower Arrato region, on the Naya River, and these groups present a threat to very fragile Afro-Colombian communities such as those along the Mira and Patía Rivers, and to indigenous peoples such as the Chami and Embera del Sinú, among others. Some analysts believe that in addition to the armed conflict (and associated with it), two other factors that generate violent situations are the concentration of rural property and the expansion of pasture for extensive cattle ranching—a phenomenon known as neolatifundio—which is caused by the proliferation of an illegal economy.

Presidential Decree 1396 of 8 August 1996, which created the Human Rights Committee of Indigenous Peoples, has not been made operational. Numerous indigenous communities are struggling to gain respect for their cultures, territories, and independence as they face armed actors in their areas. There are recent examples of peaceful resistance in which the communities were able to dissuade the violent actors from attacking the civilian population and destroying community infrastructure, and the actors left the communal lands. However, these communities do not have real protection. There has been an increase in the number of displaced indigenous communities in recent years because government measures are insuffi-

5 The Report of the High Commissioner for Human Rights of 1999 noted that "many indigenous and Afro-Colombian leaders have been killed or disappeared, and a large number of people from these communities have been forced to move. Armed actors are exercising an alarming level of pressure on the Embera-Catio people in the regions of the high Sinú (Córdoba) and in Juradó (Chocó), on the Uwa people in northern Boyacá, and on Afro-Colombian communities in the Urabá chocoano, the lower and medium Arrato (Chocó), los Montes de María and southern Bolívar...." (2000.21)
cient and ineffective. A similar phenomenon is occurring among the Afro-Colombian population.\(^6\)

**v. The State’s Role in the Protection of Human Rights of Indigenous and Afro-Colombian Communities**

Colombia has made prodigious efforts to protect the basic human rights of ethnic groups, but these efforts often are not enough given the dimension of the problem. The Permanent Roundtable on Human Rights has not held regular meetings, and its work has not been efficient. Some believe this is due to the weakness of the coordinating entity and the lack of operational mechanisms. The Solidarity Network has advanced in carrying out a participatory diagnostic study on the problem of forced displacement, but has not been able to create a specific strategy for ethnic groups through the National System for the Displaced Population. There have also been complaints about the inefficiency and delays in the investigation of kidnappings and forced disappearances of indigenous leaders. Many fear that these crimes will not be solved, and impunity will reign due to the weakness of training processes.

**vi. Deterioration of the Socioeconomic Conditions of Indigenous and Afro-Colombian Communities**

There is a structural type of poverty associated with the disadvantageous forms in which local and community economies are linked with the major commercial circuits. These circuits are extractive and the terms of exchange for their products are unequal. Poverty factors are also associated with a historical deficit of public attention to the basic needs of communities belonging to ethnic groups. Public services, particularly those relating to environmental health, health in general, education, and support services for production are usually deficient in ethnic territories.

When studying quality-of-life indicators by region, an accentuated deterioration in life conditions for ethnic groups is easily observed. The situation of Afro-Colombian communities in the Pacific region is particularly serious, with the lowest quality-of-life indicators in the entire country. Income per capita is less than \$US500; 80 percent of the population cannot meet their basic needs compared with 32.2 percent nationally. Absolute poverty runs at 60 percent, and adult illiteracy hit 37 percent compared to 9 percent nationally. Health coverage did not reach even 30 percent,\(^7\) and the infant mortality rate is one of the highest in Latin America, with more than 100 deaths for each 1,000 live births.\(^8\)

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6 In February 1997, when six communities from the Riosucio municipality solicited their collective titles to their lands—the first to be handed out in the Pacific within the framework of Law 70 of 1993—the entire population was forced to abandon their territory due to the pressure of armed groups operating outside the law (paramilitaries) and that were fighting the guerrillas.

7 In 1998 there were 1 6 doctors for each 10,000 inhabitants

vii. Effects of the Economic Crisis on Indigenous and Afro-Colombian Communities

Families, indigenous communities, and Afro-Colombian rural communities still live in accordance with their own culture and with economic practices that are different from the rest of the society. However, they are becoming increasingly dependent for their subsistence needs on inputs and goods from modern life, and they need monetary income to purchase them. The productive systems of ethnic groups are very vulnerable, and they have been greatly affected in recent years by the limitations they face in participating in markets, by the migration of adults to populated areas because of forced displacement and, in some regions, because of the abandonment of traditional agriculture caused by the cultivation of illicit crops.

These traditional economies are now in a very precarious position because of the crisis of the extractive system (wood, gold, fishing), from which they made their income in the past and the lack of opportunities in production and marketing. These agricultural, forestry, and mining products have little aggregate value, and these groups do not have access to sustainable alternative technologies on a large scale, or to secure niche markets that would allow them to overcome the limitations imposed by an extractive economy. The privatization scheme of productive services for the agrarian sector, while beneficial to the private sector, tends to negatively affect traditional communities. Today indigenous and Afro-Colombian organizations complain about the lack of efficient, adequate, and flexible systems to support production, and to preserve and promote sustainable use of natural patrimony. Such systems would allow communities to perform better in the marketplace, add value to their products, and boost income levels.

viii. Response to Programs to Substitute Illicit Crops and Fumigation

In various forums, indigenous and Afro-Colombian communities have spoken out against the expansion of illicit crops within their territories, but they are also against inadequate eradication methods that can harm life, social organization, culture, and the environment. These groups have come up with important initiatives to manually substitute illicit crops through negotiated agreements. Currently, a substitution project resulting from a mutual agreement between the national government and indigenous organizations (Indigenous Zonal Organization of Putumayo) is under way in the Putumayo región, the part of the country most affected by this problem. This project seeks to eradicate illicit crops through voluntary participation. This initiative, which covers 108 communities and 4,300 families and is supported by the Alternative Development Plan (PLANTE), seeks to generate processes of community organization, education, production, and training in order to build and strengthen another type of productive base that does not involve cultivation of illicit crops.

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9 This mutual agreement to substitute illicit coca crops in the Putumayo department is known as the “Integral Root by Root Plan for the Survival of Indigenous Peoples.”
ix. Deteriorating Health Conditions

There is a general lack of information among ethnic groups about the General Social Security System, and gaps exist in its application to the health of these groups. The territorial entities do not have the technical or institutional capacity to comply with their obligations in terms of providing health services to indigenous peoples and Afro-Colombians. There is no epidemiological profile of indigenous communities, and health professionals have problems understanding their cultural, social, and economic characteristics (Piñeros and Ruz 1998, Sánchez 2000). The morbidity profile of these communities has changed because of the mobility of the rural population that grows illicit crops, displacement, and the extension of the internal armed conflict into formerly isolated regions inhabited by ethnic groups. All this is exacerbated by the difficulties of bringing health services to dispersed communities, particularly due to the violent conflict.

The information available leads to the conclusion that the health situation among indigenous peoples and Afro-Colombians is alarming due to the high incidence and prevalence of infectious diseases such as Enfermedad Diarréica Aguda (Acute Diarrhea Disease, EDA), Infección Respiratoria Aguda (Acute Respiratory Infection, IRA), and tuberculosis. An evaluation of vaccinations done between 1991 and 1996 showed that vaccination rates are over 50 percent between the first and third dosage. There are problems with the continuity of vaccination campaigns and gaps in the cold chain to conserve biological material. Specialists point to an alarming increase in cases of Hepatitis B and malaria. Although a specific evaluation has not been done on this topic, many specialists also believe there is a high incidence of malnutrition, a phenomenon that particularly affects children in the communities where productive systems have been disturbed by the expansion of illicit crops and by the violence.

Indigenous peoples are specifically covered by the health system and a broad sector has been certified. The Afro-Colombian population has not been included within the information system for planning and provision of health services and Social Security. There are very low levels of certification in municipalities with an Afro-Colombian population—less than 1 percent in the Pacific and 3 percent in the Caribbean. The lack of personal identification among the Afro-Colombian population of the Pacific is one limitation in terms of registry. (See Chapters on Health and the Safety Net.)

x. Educational Programs Directed Toward Indigenous Peoples and Afro-Colombians

Colombia has formulated very important policies and guidelines in terms of adjusting the school system to meet the needs of ethnic groups. However, despite these efforts in the field of ethnoeducation, serious doubts persist regarding the quality

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10 The National Education Ministry has been carrying out an ethnoeducation training and professionalization program for teaching personnel across the country through a MEN–SECAB agreement.
of educational services, and there is concern over the urgent need to train teachers from these communities. The study of aboriginal languages—so important in the past as one of the pillars of the ethnoeducational process—has been abandoned, and people are being trained without any connection to the social, biological, and productive characteristics of these communities. (See Chapter on Education)

**xi. Indigenous Participation in Public Investment**

Since the promulgation of the 1991 Constitution, indigenous peoples have begun to have access to financial resources from the nation’s current accounts (*Participación en los Ingresos Corrientes de la Nación*, PICN). It is the job of the National Department of Planning (DNP) to distribute, follow up on, and evaluate the fiscal transfers assigned to the indigenous homelands. Between 1994, when this process began, through 2001, 197,612 million pesos (in 2001 pesos) have been assigned to this sector. Participation grew in general terms until 2000, and then began to decrease, and hit its lowest point in 2001. If this trend continues, the financing for programs to service these communities will be seriously affected. Special care should be taken to ensure that councils and indigenous authorities invest these resources efficiently.

There have been problems and inconveniences with the investment process because mayors and communities are not familiar with the procedures to follow to execute PICN resources, and because of disagreements between municipalities and indigenous peoples over investment plans, the lack of agility in transferring resources from accounts to homelands, and the inefficiency of control and follow-up mechanisms. The new Administration could develop a strategy to accompany and follow up on public investments made in the homelands through the PICN in a way that improves the efficiency of investments, and that empowers communities in their capacity to adequately manage these resources.

**xii. Overview of the Planning Process and Defining Development Policies and Guidelines for Indigenous Peoples and Afro-Colombian Communities**

Colombia has maintained a State policy on the treatment of matters related to indigenous peoples. The last five state development plans have included guidelines for policy on indigenous issues. Through the mandate of Law 70 of 1993, a special plan was contemplated for Afro-Colombians. The progress made in terms of the recognition of territorial rights is very important, as are advances in laws and regulations to provide health and educational services. However, serious problems remain in relation to methodologies used to evaluate the welfare of indigenous peoples and Afro-Colombian communities, and in relation to development plans. For example, the methodologies for measuring poverty have not been properly adapted to the conditions and particularities of indigenous peoples and Afro-Colombian communities. The new government needs to design quality-of-life indexes specifically for ethnic groups, and follow up on institutional and community action to measure impact on the quality of life for these populations.
There are five serious concerns regarding development plans.

- The weakening linkages between territorial entities and the homelands and communal lands, and the systematic follow-up on guidelines for development plans and their implementation
- Public investment for indigenous peoples has been falling in real terms
- The need to improve the community economies and the sustainable use of resources of the homelands and communal lands
- In relation to the development plan foreseen for Afro-Colombians, the lack of a baseline, and the linking of environmental policies to environmental reality in the homelands and communal lands
- There is little support for institutional training and development.

The new government should focus on these areas by setting up expert panels with the participation of qualified personnel and indigenous peoples and Afro-Colombians. This will facilitate their understanding and the design of alternatives and guidelines for a policy that takes into account the reality of ethnic groups.

d) The Vision of the Future for Ethnic Groups

Indigenous peoples in Colombia have experienced a slight demographic recovery. There is also a tendency among ethnic groups to change their lifestyles and settlement patterns. These communities are altering their demographic patterns and survival strategies because of internal armed conflict, the expansion of illicit crops, and increasing national integration. This means that in the future, the indigenous, Afro-Colombian, and Roma populations will have greatly changed the way they live and consume. Many members of ethnic groups will become urbanized or semi-urbanized, with large groups living in cities, and in general the communities will demand new and improved services.

The fact that some laws now favor ethnic groups will mean that many rural farming communities of indigenous ancestry will also demand their rights. This trend could cause problems because of its implications from a budgetary point of view, in particular its effect on ethnic groups and on the homelands, and possible Territorial Indigenous Entities as regards their share of public investment. The demand for land programs either to recover ancestral lands or to acquire more land in areas where rural farmers only have access to tiny plots (minifundios) could cause complications.

These high costs may require that the State pay immediate attention to new populations. However, these costs can be compensated for in the long term through the

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11 Experts recommend that the Pacific Region be given special treatment, and that policies be based on the conclusions reached by the BioPacific Project, in the Pacific Agenda XXI, environmental nongovernmental organizations (World Wildlife Fund Colombia, Natura Foundation), and research centers.
existence of local communities with a strong sense of identity and belonging, greater social cohesion, greater willingness to assume the challenges of the present and future, and a desire to participate more effectively in the democratic life of the nation, regions, and localities. The experience of Colombia and other countries in Latin America shows that the most effective way to achieve social and economic development is to strengthen grassroots communities and provide integral institutional support for their productive and social initiatives. This is also one of the most effective ways to prevent the expansion and influence of illegal armed groups among these indigenous populations.

With their extensive territories of jungle and natural savannas, the natural resources on their lands, and their ancestral knowledge about ecosystems and species, ethnic groups in Colombia possess a very important natural patrimony. Now and in the immediate future, their territories are of strategic importance because of their biodiversity and the world’s interest in conserving and using their natural resources in a sustainable manner. This reality will require considerable effort so that indigenous peoples and communities can carry out environmental and productive organization of their territories with the scientific, technical, and financial support of the state, and with a bicultural perspective. This will help strengthen the capacity of communities for conservation management and for sustainable use of biological resources, and will turn biodiversity into an opportunity so that these communities can autonomously improve their own quality of life and create their own development strategies. Future relations between the State and ethnic groups will revolve around these two themes: conservation and the sustainable use of biodiversity.

Colombia does not have a mechanism in place to measure the quality of life of ethnic groups. Despite the development of a body of law for this sector, there has been a growing deterioration of conditions for health and education. The changes in the laws to assure greater and improved health and educational services have not had the same impact in rural areas as in urban areas, particularly in regions inhabited by ethnic groups. It is expected that high-impact infectious diseases will increase in the isolated communities, and that there will be a drop in the quality and competitiveness of the school system. Efforts should be made to counteract these trends using the existing body of law, and through the development of the needed financial and institutional mechanisms.

With the creation of Indigenous Territorial Entities, the territorial planning currently underway presents an opportunity to reorganize public finances and competencies that will guarantee public investment and basic services for indigenous terri-

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12. According to the UNDP–DNP Human Development Index, in 1999 Colombia rated 57 among 174 nations, which means it is a country with a medium level of human development, but with a tendency toward regression because the country had dropped four points since 1998. Some studies point to the unequal distribution of income, the violence caused by the armed conflict, and the expansion of illicit crops as the greatest obstacles to human development.
tories. The current system of transferring public resources to indigenous homelands has been severely criticized because it favors only indigenous Colombians. Afro-Colombians have been left out and view this mechanism as discriminatory because they expect the same treatment.

In the immediate future, the country needs to improve, recover, and extend its highway infrastructure and its productive infrastructure in general. It is possible that many of these projects will affect territories belonging to ethnic groups. This will probably mean that legal mechanisms for consultation and the definition of policies will need to be revised, as will mechanisms that permit consensus building with ethnic groups. This will help to avoid any negative impacts of the foreseen public works on the lives, culture, and environment of these communities.

According to many analysts, a lasting peace is essential for indigenous and Afro-Colombian communities to be able to reap the benefits of development. Such a peace will also help communities recover and raise the levels of productivity and competitiveness of their economies, improve health conditions, and strengthen their capacities and educational level in accordance with the new social, productive, and technological demands of the regions in which they live.

III. Policy Recommendations

There is no greater contribution to the peaceful existence of indigenous peoples and Afro-Colombians than (a) recognizing and guaranteeing their territorial rights, (b) supporting through public policies for communities and their organizations the strengthening their capacity to manage their own affairs, territories, and resources, (c) creating secure conditions for the free exercise of their culture; (d) providing adequate basic services, particularly health and education, and services related to production, and (e) encouraging greater democratic participation by ethnic groups as citizens in all levels of public life. The following recommendations and proposals to the government are made in this spirit, and they are summarized in three general guidelines for policymaking.

a) Respect for New Models for Living Together and Human Rights Protection for Ethnic Groups

To guarantee the fundamental rights of ethnic communities, the new government could carry out a tolerance campaign to inform the population about the basic rights of these groups, emphasizing the specific nature of these rights. The Public Ministry could carry out this campaign and could also create an appropriate mechanism to monitor the human rights situation of indigenous groups, Afro-Colombians, and the Roma peoples, and create an agenda to prevent, detect, and manage situations where these rights are threatened. An early-warning system is urgently needed, as is a program to prevent forced displacement of ethnic communities. Members of ethnic groups hope to return to their territories and farmlands, and it is the State's duty
to guarantee them a safe return. The National System for the Displaced Population has made considerable progress, and the new Administration could provide the financial and institutional resources needed to support displaced families and communities belonging to ethnic groups.

The new government could also support initiatives that foster peace in indigenous and Afro-Colombian territories, and also increase the feasibility of the proposals of ethnic groups so that they can play a more active role in the peace process. This will also support a more active role for ethnic groups once peace is attained, as they rebuild their lives and social infrastructure in communities affected by the violence. Future negotiating entities for peace, and institutions involved in peace building, should consider including qualified members of indigenous peoples and Afro-Colombian organizations in these entities. The new government could also develop special programs for women, particularly heads of households, and children affected by and/or displaced by the violence.  

Policy guidelines and programs could also be considered by the new government that would reinforce the internal governing institutions of indigenous and Afro-Colombian peoples at all levels. It is necessary to move forward with respect to the study, consultation on, and implementation of indigenous jurisprudence in order to strengthen internal systems of social control of the indigenous communities themselves. The government could also follow up on the experiences of projects to voluntarily and manually substitute illicit crops, such as those carried out by the Indigenous Zonal Organization of Putumayo. These experiences can be replicated and adjusted to attain positive results in other indigenous and Afro-Colombian communities, in order to avoid the use of coercion and to promote alternatives for voluntary substitution.

b) Protection of Social, Economic, and Cultural Rights of Ethnic Groups

There are various initiatives for territorial planning and organizing the nation, and for ethnic groups. The Indigenous Territorial Entities present an opportunity to reorganize public finances and entities in charge of the Indigenous Homelands. Existing alternatives should be studied with extreme care and, above all, the opportunities and risks of the proposed territorial reorganization should be examined. Warning signs should be carefully monitored concerning the possible fomenting of unnecessary tensions between indigenous groups and nonindigenous Colombians, and/or the fomenting of controversy and possible divisions that may erupt inside ethnic groups. A well-planned prior consultation process is probably the best tool to guide this process that could have profound implications for the lives of indigenous

13. Conditions for women and children are dire in the context of the armed conflict. The situation in Urabá and Chocó shows how the weight of the crisis generated by the violence and displacement falls on the shoulders of women, particularly those who are heads of households.
peoples. Afro-Colombian communal lands should also be recognized as special territorial units.

A new government could develop programmatic guidelines that are development-oriented and that could consolidate the economy of ethnic territories based on biodiversity and other natural resources. These guidelines could take into account the possible negative environmental, social, and cultural impacts, and boost the aggregate value of local products. This process should include possible adjustments in legislation for the regulation of the regime of territorial entities recognized in the Constitution for indigenous territories, and improve investment practices for the fiscal transfers of public resources for the indigenous homelands, and channel these resources to health, education, and productive services with an emphasis on training. The new government could promote, develop, and adopt a policy and a special credit and financial program for indigenous homelands, communal lands of Afro-Colombian communities, and Roma communities, with a strong productive and entrepreneurial training component, and with adequate technical assistance.

The new government could significantly consolidate and demarcate indigenous homelands and the communal lands of Afro-Colombians. Financial arrangements should be made so that responsible entities can carry out these tasks and delegate some surveying tasks to organizations to speed up the process. Some indigenous homelands were set up with technical and cartographic deficiencies, and these could be resolved by agreeing on programmatic guidelines. A detailed study is needed on the situation of lands occupied by Afro-Colombian communities in the Caribbean region.

The new government could evaluate and define a clear policy regarding the resettlement of rural farmers living on lands belonging to the Indigenous Homelands in order to guarantee the territorial rights of the communities and farming families, and to contribute to improving the governability of indigenous territories by traditional authorities and to mitigate factors that can cause conflict. The new administration could also consider integral strategies for regions where ethnic groups and a stable nonindigenous farming community live together peacefully, with the goal of favoring models of peaceful coexistence and intercultural cooperation. This implies guaranteeing land security to both communities, ethnic groups as well as small farmers, and equal access to basic and productive services foreseen for the rural sector.

With the participation of territorial entities, the new administration could make an effort to improve community infrastructure of services for ethnic groups, especially in health, education, production, recreation, and sports. Some experts have

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14 At this point, coverage is nearly complete in terms of the recognition of indigenous territorial rights. There is one ethnic group in the Amazon along the Bernardo River that has not been contacted and that urgently needs protection.

15 When they were set up, some of the indigenous homelands affected colonizers or nonindigenous occupants that were living within the communally owned territory. The state is obligated to compensate these legal occupants by purchasing the farmlands that they were cultivating.
recommended forming a high-level commission to evaluate the health and education situation of ethnic groups and to propose alternatives for government services, particularly for the most vulnerable population. This commission could also propose and follow up on the plans, programs, and projects for investment in health and education. The new government is in a position to make an important contribution to the health of indigenous peoples and the Afro-Colombian and Roma communities by extending the coverage of immunization campaigns and, in particular, to protect children. The promotion of aboriginal languages and the specialization in the education of ethnic groups are of special interest.

c) Conservation and Sustainable Use of Natural Resources of the Collective Territories and Indigenous Homelands

The new government could gear its policies toward activating adequate mechanisms to strengthen the participation of indigenous and Afro-Colombian communities in the management and benefits of sustainable use of biodiversity. In the same manner the government could promote and strengthen the equal participation of women in management and sharing in the benefits of biodiversity. Through support for pilot projects of participatory organizations, the government could promote the definition and elaboration of criteria, plans, and the regulation of management of collective territories of Afro-Colombian communities and Indigenous Homelands. At the same time the new government must keep in mind that these communities and their organizations should have the ability to administer their natural patrimony in a sustainable manner from an ecological, economic, and cultural point of view. Thus, it is necessary to channel sufficient resources and technical assistance to support community organizations so that they can speed up plans for environmental organization and the sustainable use of their territories. The Ministerio de Medio Ambiente (Environment Ministry, MMA) and the Autonomous Regional Corporations could develop a program of support and technical assistance along these lines.

16. The strengthening of the community in environmental terms also implies developing its capacity to participate in and negotiate on crucial issues such as the conservation of biodiversity in their territories and the sustainable use of biological and genetic resources, both wild and cultivated. It also means strengthening traditional organizations and systems of authority, and in particular the development of cultural initiatives to strengthen their own systems of management for their territories.

17. The Ministry of the Environment has supported community initiatives for organization and planning, and there are successful experiences that nongovernmental organizations have supported (WWF, Gaia Foundation, ETNOLLANO) that can also be used. At the same time, it is necessary to value, recover, and develop the potential of sustainable components of indigenous and Afro-Colombian systems for the use and conservation of biodiversity.
The new government should launch a strategy for the protection and conservation of strategic ecosystems. This strategy should integrate the network of existing reserves and parks, indigenous homelands, the communal lands of Afro-Colombian communities, and initiatives of civil society in general. Achievements by the new government in these areas could mean that the protection of wild ecosystems contributes to the strengthening of territories and traditional systems of knowledge, conservation, and sustainable use of biodiversity. The Ministry of the Environment could promote a process to develop the body of law to support Chapter IV of Law 70 regarding land use and the protection of natural and environmental resources in the communal territories of Afro-Colombians. The communities and institutions should be widely consulted about this body of law.

The new government should revise and adjust legal mechanisms and develop entities that can direct the consultation process. It must ensure that indigenous and Afro-Colombian communities are informed of this process, and that they agree with them before they are undertaken. This is particularly important with respect to new investments in mining, hydrocarbon exploitation, forestry, and prospecting. In addition to laws, the government could also advance in the implementation of "codes of conduct" and voluntary certification so that the patrimonial rights of these communities, and their right to participate and benefit from productive processes, are fully recognized.
Annex I
Legal Advances in Colombia as Related to the Rights of Ethnic Groups

a) Advances in the Field of Indigenous Territorial Rights

Indigenous territorial rights were consecrated in the 1991 Constitution, and the foundation was laid for future territorial entities to autonomously manage the territories, conceived as appropriate spaces, within the general framework of the State. Currently, a project for the Law of Territorial Organization is being contemplated. Law 160 of 1994 also developed the fundamental norms regarding indigenous lands.

b) Gains in the Consolidation of the Rights of Afro-Colombian Communities

The Constitution contemplates the cultural particularities of the Afro-Colombian population and recognizes these communities for the first time as an ethnic group. Once this Constitution took effect, a vigorous social movement of Afro-Colombian communities developed, particularly in the Pacific region, to demand the fulfillment of their territorial rights. Through the development of the transitory article 55 of the Constitution, Law 70 of 1993 was expedited in order to recognize and provide property titles for the communal lands of Afro-Colombian communities. To develop and support this law, the national government reoriented loan BIFF 3692 CO and channelled it toward the collective titling process for Afro-Colombians and indigenous peoples in the Pacific region.

c) Advances in the Health Field

According to Resolution 10013 of 24 September 1981 of the Health Ministry, programs for primary care provided to indigenous communities should be adapted to the organizational, political, administrative, and socioeconomic structures of these communities. Their values, beliefs, traditions, attitudes, and cultural rights must be respected. After implementation of the 1991 Constitution and Law 1000 of 1993, in particular, a subsystem of health care was set up that covered a broad sector of the indigenous population. By 2000, this system had provided 472,000 subsidies to indigenous Colombians, with an estimated coverage of 64 percent (Sanchez 2000:144). This system has permitted the participation of the Associations of Councils regulated by Decree 1088 of 1993 so that they can operate as Enterprises for the Administration of the Subsidized Regime, Health Solidarity Enterprises, and Institutional Providers of Health Care, the three legal entities that are contemplated within the general system. This specific subsystem does not exist for the Afro-Colombian communities. Through Decree 300 of 27 February 2001, laws were
passed and regulations implemented to support the Constitution and functioning of the entities of health promotion (EPSs). The EPSs were made up of councils and/or traditional indigenous authorities. Through Law 691 of September 2001, regulations were formulated to facilitate the participation of ethnic groups in Colombia's General System of Social Security.

d) Legal Advances in Education

Decree 1142 of 19 July 1978 and Resolution No. 3454 of 13 April 1984 of the National Education Ministry laid the groundwork and general guidelines for education for indigenous peoples. After the 1991 Constitution entered into effect, Law 115 was enacted in 1994, and its third chapter is on education for ethnic groups including indigenous peoples and Afro-Colombians. This law establishes the principles of intercultural exchange and respect, an integral approach, linguistic diversity, community participation, flexibility, and progressivity. This law was supported by Decree 804 in 1995. As a support for Article 42 of Law 70, Decree No. 2249 of 1995 was expedited to set up the Pedagogical Commission of Black Communities.

e) Legal Advances in the Environmental Field

Colombia is one of the most biodiverse countries on the planet. While covering less than 1 percent of the earth's surface, it is home to an estimated 10 percent of the total species of living flora and fauna (Hernández and Sánchez 1988). According to "An Amazon Without Myths" (1994:64–65), the country also leads the world in number of bird species (1,721 species identified), is second in terms of amphibians (359 species) and angiosperms (45,000), is sixth in number of reptiles (383), and is seventh in the number of mammals (359) and butterflies (59).

The theme of conservation and sustainable use of wilderness areas is closely linked with the territories and lives of indigenous peoples and Afro-Colombian communities. Nearly 75 percent of the country's forests are located within the territories that belong collectively to indigenous Colombians (Indigenous Resguardos) or to Afro-Colombian communities (Communal Lands of Black Communities). The preservation of the natural patrimony of the nation depends on the conservation and sustainable use of these collective territories, and on the physical and cultural survival of the communities the subsistence of which is directly based on biodiversity.

There are two fundamental legal instruments in Colombia in terms of natural resources: the National Code for Environmental Protection and Renewable Natural Resources, and Law 99 of 1993, which set up the Ministry of the Environment, reorganized the public sector charged with managing and conserving the environment and renewable natural resources, and established the National Environmental System. This law mandates representation of members of the indigenous peoples on
the boards of the Regional Autonomous Corporations, which are charged with environmental management at the regional and departmental level.\textsuperscript{18}

\textit{f) Overview of the Current Development of Laws and Institutions}

The 1991 Constitution represented a definitive step forward for indigenous peoples and Afro-Colombians with respect to the consolidation of their most basic rights. The foundation has been laid for a new relationship between the State and ethnic groups, and for a new model of society based on the acceptance of the pluriethnic and multicultural character of the nation.

The \textit{acción de tutela} has become a fundamental tool for the defense of indigenous rights, and the controversies that this new legal defense body has generated have produced a rich body of jurisprudence. The current Constitutional Court deserves special mention for the development of laws that support the aspiration of deepening democratic participation, pluralism, and the values of diversity. Within the new institutionality, the legal body \textit{Defensoría del Pueblo} (Public Ombudsman’s Office) has also played a decisive role in the protection of indigenous rights. Although laws have already been written regarding popular action for the defense of collective rights, no progress has been made on the definition of own jurisdiction of indigenous peoples.

Some specialists believe that new laws need to be developed and legislation needs to be harmonized in many fields to more effectively consolidate the rights of indigenous peoples. The \textit{Fuero Indígena} (Indigenous Tribunal) has still not been revised, and there are legal gaps, particularly in the environmental field, that still need to be resolved. Within the framework of the Caribbean Development Bank Agreement on Biological Diversity and Decision 391 of the \textit{Comunidad Andina} (CAN), it is necessary to protect the biological, cultural, and intellectual patrimony of indigenous peoples and their communities.

The Indigenous Territorial Entities envisioned in the 1991 Constitution have not been legally developed. The development of this body of law is a difficult process

\textsuperscript{18} Law 99 in Article 22—Promoting and Disseminating the Environmental Experience of Traditional Cultures—establishes the following: “The Ministry and the scientific institutes that promote development and the dissemination of knowledge, values and technologies as regards environmental management and natural resources of indigenous cultures and other ethnic groups” Article 76 ratifies ILO Convention 169 and the Constitution: “The exploitation of natural resources should be done without affecting the cultural, social and economic integrity of indigenous communities and traditional black communities, in agreement with Law 70 of 1993 and Article 330 of the national constitution, and the decisions on these matters will be taken after consulting with the representatives of these communities.” Article 67 establishes that the Indigenous Reserves—a territorial entity defined in the 1991 Constitution—will have the same functions and duties as defined for municipalities in environmental matters.
because it is linked to the Organic Law of Territorial Organization, and because of the lack of consensus and clarity regarding the scope of these laws. It is hoped that these territorial entities will provide an efficient way to build development alternatives that are autonomous, and that fit the needs and desires of indigenous peoples and Afro-Colombian communities.
Annex II

Table A.II.1 Ethnic Groups and Indigenous Population by Department, 2001

<table>
<thead>
<tr>
<th>Administrative and Political Division</th>
<th>Number of Ethnic Groups**</th>
<th>Year 2001</th>
<th>Population</th>
<th>Percent of Nation</th>
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<td>AMAZON</td>
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<td>VAUPES</td>
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<td>21,727</td>
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<td>GUAVIARE</td>
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<td>3.01</td>
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<td>9</td>
<td></td>
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<td>328</td>
<td>.04</td>
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<td>ATLANTIC</td>
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<td>ARAUCA</td>
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<td>META</td>
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<td>87</td>
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<td>VICHADA</td>
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<td>MAGDALENA</td>
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<td>ANTIOQUIA</td>
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<td>NARIÑO</td>
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<td>CHOCO</td>
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<tr>
<td>TOLIMA</td>
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<td>CORDOBA</td>
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<td>CALDAS</td>
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<td>SUCRE ***</td>
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<td>QUINDIO</td>
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<td>99</td>
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<td>CUNDINAMARCA</td>
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<td>RISARALDA</td>
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<tr>
<td>SAN ANDRES Y PROVIDEN*</td>
<td>1</td>
<td>21</td>
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<td>SANTANDER *</td>
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<td>.17</td>
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<td>TOTAL</td>
<td></td>
<td>785,356</td>
<td>100.00</td>
<td></td>
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* The majority groups in these departments are Arhuaco, Barí, Coyama, Pies, and Wayuu
**This column cannot be added up because of the simultaneous presence of an ethnic group in two or more departments
***Corresponds to the indigenous homeland of San Andrés de Sotavento reported in the department of Córdoba

Source: DANE/INCORA DNP-DDT 2001
<table>
<thead>
<tr>
<th>Cod.</th>
<th>Name of Ethnic Group</th>
<th>Population</th>
<th>Percent Total Population</th>
<th>Area (hectares)</th>
<th>Percent Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>ACHAGUA (ajagua, axagua)</td>
<td>283</td>
<td>0.036</td>
<td>3,318</td>
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<td>AM</td>
<td>AMORÚU (wpwwe)</td>
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<td>0.022</td>
<td>94,670</td>
<td>0.369</td>
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<td>AD</td>
<td>ANDOKE (andoque, cha’oje, businka)</td>
<td>597</td>
<td>0.076</td>
<td>57,900</td>
<td>0.187</td>
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<td>AR</td>
<td>ARHUACO (ljk, bintukua, ika, artuaco)</td>
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<td>1.884</td>
<td>196,028</td>
<td>1.880</td>
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<td>AW</td>
<td>AWA (cuaiker, cuanquer)</td>
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<td>BARA (wai maja, posanga-mira)</td>
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<td>BS</td>
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<td>BARJ (motolón, barrra, dobocubí, cunasuya)</td>
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<td>BT</td>
<td>BETOYE (jirrarre)-NHLA-</td>
<td>800</td>
<td>0.101</td>
<td>702</td>
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<td>BO</td>
<td>BORA (meamunya)</td>
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<td>CÑ</td>
<td>CANAMOMO (Incluye San Lorenzo)*</td>
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<td>CH</td>
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<td>0.114</td>
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<td>CI</td>
<td>CHIRICOA</td>
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<td>CO</td>
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<td>CN</td>
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<td>DE</td>
<td>DESANO (wsa, koretia, winá)</td>
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<td>0.312</td>
<td>265,179</td>
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<tr>
<td>DJ</td>
<td>DJUS* -NHLA-</td>
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<td>EMBERA CHAMÍ</td>
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<td>33,261</td>
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<td>23,694</td>
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<td>GUAYABERO (mirua, guayavero, cumima)</td>
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<td>2.211</td>
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<td>HI</td>
<td>HITNÚ (macaguane, jirru, macagusa, buhun)</td>
<td>441</td>
<td>0.056</td>
<td>5,029</td>
<td>0.163</td>
</tr>
<tr>
<td>RB</td>
<td>INDIGENOUS RESIDENTS OF BOGOTA**</td>
<td>1,300</td>
<td>0.165</td>
<td>0</td>
<td>0.000</td>
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<tr>
<td>IG</td>
<td>INGA (inganao)</td>
<td>19,079</td>
<td>2.429</td>
<td>109,913</td>
<td>3.563</td>
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<tr>
<td>KA</td>
<td>KAMENTSÁ (kamssá, camssá, sibundry-gache)</td>
<td>4,773</td>
<td>0.060</td>
<td>5,231</td>
<td>0.170</td>
</tr>
<tr>
<td>KJ</td>
<td>KARIJONA (carijona, carifuna, huanacoro-umaua, kaiobona)</td>
<td>307</td>
<td>0.039</td>
<td>1,619,180</td>
<td>5.2494</td>
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<tr>
<td>Cod.</td>
<td>Name of Ethnic Group</td>
<td>Population</td>
<td>Percent Total Population</td>
<td>Area (hectares)</td>
<td>Percent Total Area</td>
</tr>
<tr>
<td>------</td>
<td>----------------------</td>
<td>------------</td>
<td>-------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>KY</td>
<td>KAWIYARÍ (cabyari, kawari, kabyari)</td>
<td>311</td>
<td>0.0396</td>
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<tr>
<td>KF</td>
<td>KOFÁN (cofán)</td>
<td>877</td>
<td>0.1117</td>
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<tr>
<td>KO</td>
<td>KOGUI (kágaba, cogui, kogi, koguan, kogh)</td>
<td>9,911</td>
<td>1.2620</td>
<td>384,877</td>
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<tr>
<td>KU</td>
<td>KUBEÓ (panui, cubeo, cobowa, hipwá, kansiwa)</td>
<td>6,647</td>
<td>0.8464</td>
<td>3,432,897</td>
<td>11.1294</td>
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<tr>
<td>KB</td>
<td>KUIBA (cubas, wamone, chiricoa, maibén)</td>
<td>2,445</td>
<td>0.3113</td>
<td>1,599</td>
<td>0.052</td>
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<td>KP</td>
<td>KURRIPAKO (inclusuye baniva-(currípaco, currípaco)</td>
<td>7,827</td>
<td>0.9966</td>
<td>3,616,357</td>
<td>11.7242</td>
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<td>LE</td>
<td>LETUAMA (lituama, detuama)</td>
<td>705</td>
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<td>MK</td>
<td>MAKAGUAJE (macaguaje, macaguaxce)</td>
<td>50</td>
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<td>MA</td>
<td>MAKUNA (sara, idc masa, buhagana, sroa, isloa)</td>
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<td>0.1285</td>
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<td>MASIGUARE</td>
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<td>MT</td>
<td>MATAPI (jupichiya)</td>
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<tr>
<td>MI</td>
<td>MIRANÁ (mrunba, mraya)</td>
<td>715</td>
<td>0.0910</td>
<td>0</td>
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<tr>
<td>MS</td>
<td>MUISCA (chibcha -NHLA-</td>
<td>1,859</td>
<td>0.2367</td>
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<tr>
<td>NA</td>
<td>NASA (páez, poet, masa yuwe)</td>
<td>138,501</td>
<td>17.6354</td>
<td>401,065</td>
<td>1.3002</td>
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<tr>
<td>NO</td>
<td>NONUYA (nunuya)</td>
<td>228</td>
<td>0.0290</td>
<td>59,840</td>
<td>0.1940</td>
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<tr>
<td>NU</td>
<td>NUKAK (makú, macú, cacua, judpa, yuypude, wacara)</td>
<td>1,483</td>
<td>0.1888</td>
<td>954,480</td>
<td>3.0944</td>
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<tr>
<td>OC</td>
<td>OCAINA (okainae, orebe, diokaya)</td>
<td>137</td>
<td>0.0174</td>
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<tr>
<td>PT</td>
<td>PASTO (quillacinga, quillasinga)</td>
<td>69,789</td>
<td>8.8863</td>
<td>39,880</td>
<td>1.293</td>
</tr>
<tr>
<td>PI</td>
<td>PIAPOCO (daze, taze, cupaco, papokoco, weneñika)</td>
<td>4,926</td>
<td>0.0672</td>
<td>424,970</td>
<td>1.3777</td>
</tr>
<tr>
<td>PR</td>
<td>PIAROA (dearuwa, wo’tiheh, maco)</td>
<td>773</td>
<td>0.0984</td>
<td>181,188</td>
<td>0.5874</td>
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<tr>
<td>PY</td>
<td>PIRATAPUYO (parata-puya, wai kana, uaiakama, wakhana)</td>
<td>697</td>
<td>0.0887</td>
<td>303</td>
<td>0.0100</td>
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<tr>
<td>PS</td>
<td>PISAMIRA (papíwa, pisaturuyo, wasona, wasina)</td>
<td>61</td>
<td>0.0078</td>
<td>0</td>
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<tr>
<td>PV</td>
<td>PUJIVAVE (pubuntu, uapi, guapunare, wanyimni)</td>
<td>6,604</td>
<td>0.8409</td>
<td>4,012,183</td>
<td>13.0075</td>
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<tr>
<td>SA</td>
<td>SALIMA (salima)</td>
<td>1,929</td>
<td>0.2456</td>
<td>42,682</td>
<td>1.384</td>
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<tr>
<td>SE</td>
<td>SENU -NHLA-</td>
<td>34,566</td>
<td>4.4013</td>
<td>11,963</td>
<td>0.3888</td>
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<tr>
<td>SK</td>
<td>SIKUANI (JIVE) (guahibo, guajibo)</td>
<td>23,006</td>
<td>2.9294</td>
<td>2,400,329</td>
<td>7.7818</td>
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<tr>
<td>SI</td>
<td>SIONA (ganteyabain, ganteyan, ceona, zeona, koka kanú)</td>
<td>734</td>
<td>0.0935</td>
<td>13,127</td>
<td>0.4263</td>
</tr>
<tr>
<td>SR</td>
<td>SIRIANO (sura masa, crrnga, chranga, si-ra)</td>
<td>749</td>
<td>0.0954</td>
<td>0</td>
<td>0.0000</td>
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<tr>
<td>TW</td>
<td>TAIPANO (tajano, edura, taunano)</td>
<td>22</td>
<td>0.0028</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>TN</td>
<td>TANIMUKA (ufina, tanimuca, tanimboka, ohafiara, opaima)</td>
<td>1,247</td>
<td>0.0158</td>
<td>0</td>
<td>0.0000</td>
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Table A.11.2 (continued)

<table>
<thead>
<tr>
<th>Cod.</th>
<th>Name of Ethnic Group</th>
<th>Population</th>
<th>Percent Total Population</th>
<th>Area (hectares)</th>
<th>Percent Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>TARIANO (tarana)</td>
<td>445</td>
<td>0.0567</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>TT</td>
<td>TATUYO (juna maja, pamoa, taturaypo, ana, suara)</td>
<td>331</td>
<td>0.0421</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>TI</td>
<td>TIKUNA (tucuna, tukuna)</td>
<td>7,102</td>
<td>0.9043</td>
<td>276,645</td>
<td>0.8969</td>
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<tr>
<td>TO</td>
<td>TOTORÓ -NHLA-</td>
<td>4,130</td>
<td>0.5259</td>
<td>3,406</td>
<td>0.0110</td>
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<tr>
<td>TS</td>
<td>TSIRIPU (manposo, sinpu)</td>
<td>163</td>
<td>0.0208</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>TU</td>
<td>TUCANO (desca, dasca, tucano, yaca masa)</td>
<td>6,996</td>
<td>0.8908</td>
<td>576,655</td>
<td>1.8695</td>
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<tr>
<td>TL</td>
<td>TULE (kuna, rulemalá, bayano, yule, canibe-kuna)</td>
<td>1,231</td>
<td>0.1567</td>
<td>10,298</td>
<td>0.0334</td>
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<tr>
<td>TY</td>
<td>TUYUKA (dojkapura)</td>
<td>642</td>
<td>0.0817</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>UI</td>
<td>UITOTO (witoño, wuito, mutus, muamane, mi-ka, mi-pode)</td>
<td>7,343</td>
<td>0.9350</td>
<td>6,380,965</td>
<td>20.6870</td>
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<tr>
<td>UW</td>
<td>U'WA (tunebo, uwua, lache)</td>
<td>7,231</td>
<td>0.9207</td>
<td>352,422</td>
<td>1.1425</td>
</tr>
<tr>
<td>WN</td>
<td>WANANO (guanano, kutoria, wumaño)</td>
<td>1,395</td>
<td>0.1776</td>
<td>38,750</td>
<td>0.1256</td>
</tr>
<tr>
<td>WU</td>
<td>WAUNAN (waunana, wounan, noamamé, waumyeu)</td>
<td>8,177</td>
<td>1.0412</td>
<td>189,452</td>
<td>0.6142</td>
</tr>
<tr>
<td>WA</td>
<td>WAYUU (guajiro, wayu, uisira, wa)</td>
<td>149,827</td>
<td>19.0776</td>
<td>1,082,547</td>
<td>3.5096</td>
</tr>
<tr>
<td>WW</td>
<td>WIWA (aranzo, guamaca, malayo, sana, dumuna)</td>
<td>1,922</td>
<td>0.2447</td>
<td>209</td>
<td>0.0007</td>
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<tr>
<td>YG</td>
<td>YAGUA (hahamwo, mushara)</td>
<td>297</td>
<td>0.0378</td>
<td>4,209</td>
<td>0.136</td>
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<td>YN</td>
<td>YANACONÁ -NHLA- (mitmae)</td>
<td>21,457</td>
<td>2.7321</td>
<td>43,098</td>
<td>1.397</td>
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<tr>
<td>YA</td>
<td>YAUNA (kameveya)</td>
<td>103</td>
<td>0.0131</td>
<td>0</td>
<td>0.0000</td>
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<tr>
<td>YK</td>
<td>YUKO (yukpa, yuco)</td>
<td>3,651</td>
<td>0.4649</td>
<td>34,218</td>
<td>0.1109</td>
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<td>YU</td>
<td>YUKUNA (yukuna, yukuna-mapapi)</td>
<td>550</td>
<td>0.0700</td>
<td>212,320</td>
<td>0.6883</td>
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<tr>
<td>YR</td>
<td>YURI (carabay, auros)</td>
<td>217</td>
<td>0.0276</td>
<td>0</td>
<td>0.0000</td>
</tr>
<tr>
<td>YI</td>
<td>YURUTI (wa suta masa, wadyana, wadzana, totsoca, totkana)</td>
<td>687</td>
<td>0.0875</td>
<td>0</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**TOTAL** 785,356 30,845,231

* No known denomination Given the same name as the homeland
** Corresponds to representatives of 47 ethnic groups, residents of Bogotá, according to the 1993 census
-NHLA- Do not speak their respective aboriginal language.
Ethnic groups with other names in parentheses Corresponds to the way the ethnic group describes itself or is described in ethnographic literature (Annex I)

Note The Munane, located in the Amazon department, are included within the Utoto ethnic group.
Some ethnic groups that appear with zero in the hectare column share a territory with other ethnic groups. This is the case for the Kogus and Arhuacos in the Sierra Nevada of Santa Marta, and the Utoros that share the eastern part of the Vaupés Homeland with 18 ethnic groups.

Sources DNP/DDT "Guía Etnográfica de Colombia " Arango and Sánchez (1998) DANE, postcensus study, updated as of December 2001 with homelands constituted by INCORA
Annex III

A.III.1 Some Basic Demographic Indicators in Four Indigenous Regions, Piñeros Marion, and Ruiz Magda, 1998

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Region</th>
<th>Region</th>
<th>Region</th>
<th>Region</th>
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</thead>
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<tr>
<td></td>
<td>Caribbean</td>
<td>Andean</td>
<td>Amazons</td>
<td>Tierra</td>
</tr>
<tr>
<td>Basic needs not met</td>
<td>Indigenous¹</td>
<td>Indigenous¹</td>
<td>Indigenous¹</td>
<td>Indigenous²</td>
</tr>
<tr>
<td>– NBI – (per person)</td>
<td>25.44</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Gross birth rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– TBN – per thousand</td>
<td>26.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life expectancy: Men (years)</td>
<td>38.0</td>
<td>55.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45.23</td>
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<tr>
<td>Life expectancy: Women (years)</td>
<td>40.75</td>
<td>57.80</td>
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<tr>
<td>Masculinity Index at Birth</td>
<td>105</td>
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<td></td>
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<tr>
<td>Population under 15 years of age</td>
<td>48</td>
<td>43</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Population under 20 years of age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global fertility rate (children)</td>
<td>8.3</td>
<td>5.5</td>
<td>6.9</td>
<td>50</td>
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<tr>
<td>Urban fertility rate (children)</td>
<td>7.67</td>
<td>3.02</td>
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<tr>
<td></td>
<td>7.67</td>
<td>2.65</td>
<td>4.41</td>
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<tr>
<td>Rural fertility rate (children)</td>
<td>7.67</td>
<td>5.68</td>
<td></td>
<td></td>
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<tr>
<td>Infant mortality rate (per 1000)</td>
<td>111.7</td>
<td>40.7</td>
<td>48.6</td>
<td>138</td>
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<tr>
<td>Annual growth rate (per 1,000 inhabitants)</td>
<td>17.66</td>
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<td></td>
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<tr>
<td>Illiteracy (population over 15 years of age)</td>
<td>8.6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Gross rate of school enrollment (primary)</td>
<td>113.15</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Gross rate of school enrollment (secondary)</td>
<td>80.42</td>
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</tr>
<tr>
<td>Net rate of enrollment (primary)</td>
<td>82.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net rate of enrollment (secondary)</td>
<td>61.95</td>
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<td></td>
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<tr>
<td>Urban population* (per 10,000 inhabitants)</td>
<td>7.4</td>
<td>7.4</td>
<td>7.4</td>
<td>70.8</td>
</tr>
<tr>
<td>Rural population* (per 10,000 inhabitants)</td>
<td>92.6</td>
<td>92.6</td>
<td>92.6</td>
<td>29.2</td>
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<tr>
<td>Doctors per 10,000 inhabitants</td>
<td>9.2</td>
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</table>

¹ Piñeros and Ruiz (1998).
Table A.III.2 Colombia, Population and Indigenous Area and the Population and Total Extension by Department, December 2001

<table>
<thead>
<tr>
<th>Political and Administrative Division</th>
<th>Total Population</th>
<th>Indigenous Population</th>
<th>Percent Indigenous Population</th>
<th>Total Area (Hectares)</th>
<th>Indigenous Area (Hectares)</th>
<th>Percent Indigenous Area</th>
<th>Percent National Indigenous Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon</td>
<td>72,350</td>
<td>20,521</td>
<td>28.36</td>
<td>2.61</td>
<td>10,966,500</td>
<td>10.36</td>
<td>83.40</td>
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<tr>
<td>Antioquia</td>
<td>5,448,304</td>
<td>16,291</td>
<td>0.30</td>
<td>2.07</td>
<td>6,361,200</td>
<td>129.19</td>
<td>5.19</td>
</tr>
<tr>
<td>Arauca</td>
<td>247,444</td>
<td>3,591</td>
<td>1.45</td>
<td>0.46</td>
<td>2,381,800</td>
<td>128.16</td>
<td>5.38</td>
</tr>
<tr>
<td>Atlántico</td>
<td>2,171,395</td>
<td>449</td>
<td>0.02</td>
<td>0.06</td>
<td>338,800</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Bogotá</td>
<td>6,571,749</td>
<td>1,300</td>
<td>0.02</td>
<td>0.17</td>
<td>158,700</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Bolívar</td>
<td>2,039,240</td>
<td>328</td>
<td>0.02</td>
<td>0.04</td>
<td>2,597,800</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Boyacá</td>
<td>1,373,028</td>
<td>4,725</td>
<td>0.34</td>
<td>0.60</td>
<td>2,318,900</td>
<td>220.275</td>
<td>9.50</td>
</tr>
<tr>
<td>Caldas</td>
<td>1,119,479</td>
<td>48,885</td>
<td>4.37</td>
<td>6.22</td>
<td>788,800</td>
<td>30.106</td>
<td>3.82</td>
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<td>Caquetá</td>
<td>427,378</td>
<td>6,835</td>
<td>1.60</td>
<td>0.87</td>
<td>8,896,500</td>
<td>638.294</td>
<td>7.17</td>
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<tr>
<td>Casanare</td>
<td>292,523</td>
<td>5,536</td>
<td>1.89</td>
<td>0.70</td>
<td>4,464,000</td>
<td>148.476</td>
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<td>Cauca</td>
<td>1,276,423</td>
<td>190,069</td>
<td>14.89</td>
<td>24.20</td>
<td>2,930,800</td>
<td>531.150</td>
<td>18.12</td>
</tr>
<tr>
<td>Cesar</td>
<td>978,650</td>
<td>17,874</td>
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Total 42,975,715 785,356 1.83 100.00 114,174,800 30,845,231 27.02 100.00

Source DNP-DDT “Guía Etnográfica de Colombia,” based on DANE/population projections according to department for 2001

Table A.IV.2 Distribution of Resources by Fiscal Sector Prioritized by Indigenous Authorities, 1994–99

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Source: DNP-UDT Evaluation and follow-up reports on resources transferred to homelands, 1994, 1995, 1996
DNP-UDT. Follow-up and evaluation of the participation of indigenous homelands in public investment during 1998 and 1999, document for territorial development Number 54, November 2001
References


Instituto Humboldt de Investigaciones de Recursos Biológicos 1998 “Colombia Biodiversidad Siglo XXI.” Bogotá.


Forced Internal Displacement

This Chapter was written by Jairo Arboleda and Elena Correa.

I. Summary

Forced displacement, mainly as a result of the social and armed conflict, is the most serious humanitarian and social problem in Colombia today. It uproots people and disrupts family life, and causes loss of human, social, and physical capital, generalized impoverishment, and high costs for families and the State. The government has formulated a policy and an action plan to deal with this problem, including prevention, humanitarian assistance, and reestablishment1 of the internally displaced population (IDP). During the last two years progress has been made in dealing with this problem. (a) policy has been formulated and institutional arrangements have been made by assigning overall planning and coordination of execution responsibilities to a single agency—the Red de Solidaridad Social (RSS); (b) an integrated information system is being developed to estimate, characterize,2 and register the IDP; (c) humanitarian assistance has been provided through a network of national and international nongovernmental organizations (NGOs); and (d) efforts have been made to address the issues of prevention and reestablishment.

Despite this notable progress, several issues still need to be addressed: (a) lack of priority given to the problem of forced displacement, both nationally and internationally; (b) lack of preventive measures to reduce or mitigate the impact of the armed conflict, which is the main cause of displacement; (c) insufficient understanding of the magnitude and characteristics of the IDP and of the reasons for its

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1 Reestablishment means that, with government support, the internally displaced population returns to their place of origin or is relocated to a different place.
2 Characterize means to identify and assess the key characteristics of the population—age, gender, place of origin, education, employment skills, and so forth.
displacement; and (d) little success in reestablishment and socioeconomic stabilization of the IDP, the ultimate goal of government policy.

Building on the progress made so far, future efforts should focus on (a) Making the Problem of Forced Displacement a Priority and cover the displaced population according to their needs in the governmental programs; (b) Preventing the risks of displacement by implementing effective measures at the local level and protecting the assets of displaced people; (c) developing a shared methodology among key stakeholders to estimate and characterize the IDP to better understand their needs and demands; and (d) creating appropriate incentives and opportunities for return, relocation, or integration.

II. Background

The forced displacement of population, a phenomenon closely linked to the causes of violence in Colombia, has been a constant in the history of the country and is perhaps one of the underlying causes of most of the country’s current problems.

After the Spanish conquest and during colonial times, thousands of natives were assassinated and others were forced to leave their lands and migrate to inhospitable places or to work as slaves in mining businesses. Thus, the estimated 3 million to 4 million inhabitants living in Colombian territory before the conquest were reduced to 136,753 by the end of the 18th century (Jaramillo Uribe 1979). After the country won independence, the two factions that struggled for power and resources sank the country into permanent violence that led to nine civil wars and dozens of regional revolts (Tirado Mejía 1989). These wars and conflicts forced some of the population off their land, although there are no estimates of the magnitude of such displacements because there was no national population census during that period.

Between 1930 and 1953, violence continued to underlie the combination of stability and crisis, which characterized the political and social regime (Pécaut 1987), when agrarian and workers’ struggles reached several parts of the country. Such struggles and rights acquired by farmers and urban workers were met with violence on the part of owners and leaders, giving rise to the first massacres during the mid-1930s. This conflict was spread and became more intensive in the so-called época de la violencia (era of violence) between 1946 and 1966, which resulted in the death of over 200,000 Colombians and the displacement of 2,003,600 people, according to estimates by Oquist (1995) and Agier and Hoffman (2001). These figures represent 17 percent of the country’s total population in 1951 and 12 percent of the population in 1964, according to national census data. As Pécaut (1987) has noted, the power groups seemed to have no alternative other than violence when they faced social claims.

This situation, together with other social and economic factors that led the population to migrate to the cities, generated constant growth of the urban population and, within a short period of time, the urban to rural population ratio was inverted,
as shown in Figure 1. The most affected areas were those in the coffee-growing region, precisely those that experienced the highest increments in the rate of cultivated area. While 250,000 people were expelled from the coffee-growing areas of the country, such areas were growing by approximately 200,000 hectares (Campo 1977).

The "era of violence" generated new problems, including the creation of self-defense groups among peasants who fled to the jungle to save their lives. Later, due to the assassination of those who signed amnesty agreements with the government during the 1950s, they created guerrilla movements, which later took on the revolutionary flag. The acts of these guerrilla groups in the rural areas and their fundraising strategies led landowners to create self-defense groups that were the seed of the current paramilitary groups. Within this scenario, drug-trafficking groups begin to arise, reaching maximum strength in the 1980s. The battles among all these groups both with each other and with the military armed forces gave rise to yet another cycle of forced population displacement, to both inside and outside the country.

Despite the fact that the problem of forced population displacement and its consequences on the economic, social, and political situation of the country are so old, it was not until only a few years ago that it began to receive attention. This is because this problem have grown in magnitude since the 1980s, and reached national and international importance because of increasing interest in the respect for and protection of human rights.

Beginning in 1989, and on the initiative of local NGOs and international agencies, regional and national preliminary studies were undertaken on internal dis-

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**Figure 1. Urban–Rural Population**

![Graph showing urban and rural percentage over time](image-url)
placement. In 1995, the Colombian Bishops Conference published the first nation-
wide research, “Desplazados por la violencia en Colombia” ("Displaced by Violence
in Colombia"), which has served as a framework to study and follow up the dis-
placed population. The structure of the Catholic Church, through its dioceses
(approximately 67) and parishes (approximately 2,800), has played a key role in the
systematic study of the problem and the attention paid and relief services provided
to the displaced population.

a) Causes of Displacement

Unsolved social conflicts of the Colombia history underlie the repetitive cycles of
violence and displacement. The expression “displaced by violence” hides the real
causes of the problem. In order to handle it, it is necessary to know its real causes to
find the adequate solutions.

Many authors, analysts, and government agencies coincide in relating forced dis-
placement with land conflicts, which has existed since the 19th century. They also
agree that land hoarding has been one of the main ways to build capital, and one of
the key factors in the creation of dominant groups in Colombia (Pécaut 1987).

Kircher (1992) points out that the root cause of violence and displacement is the
conflict over land ownership and economic interests related with land (oil, agribusi-
ness, drug trafficking). Thus, the areas affected by violence are rich in natural
resources (gold, platinum, oil, minerals, biodiversity), desirable for the construction
of large investment projects (interoceanic canals, hydroelectric plants, strategic
roads), or fertile and thus desirable for the expansion of agricultural, agribusiness,
or livestock projects. The violent appropriation of land is facilitated by the impunity
enjoyed in Colombia by the perpetrators.

In addition to these traditional forms of land appropriation, drug trafficking
arose during the latter decades of the 20th century as another reason to appropriate
land because drug trafficking requires land both to grow the plants and to process
the drugs. Both activities are illegal and thus trigger violence. Simultaneously, the
guerrilla movements began to develop their expansion project, with the purpose of
building local power, and they found a significant source of financing for their poli-
tical and military projects in the most dynamic economic sectors of the country—
oil, mining, and drug-trafficking (Zuluaga 1998). As response to this expansionist
project as well as the guerrilla’s tactics to fund their activities (kidnapping and extor-
tion among others), paramilitary groups began to appear to protect landlords and
drug traffickers, giving rise to a dispute over the control of the territory, with the
purpose of obtaining and controlling resources and political power. These disputes
over the control of the territory, together with the above-mentioned causes, have
triggered most of the population displacements since the 1980s. Recently these
problems have been compounded by fumigation operations, the eradication of ille-
gal crops, and military operations conducted under the framework of Plan Colom-
bia (CODHES 2000).
b) Responsible Parties

As result of the situation described above, the direct and material responsible for population displacement are the paramilitary, the guerrillas, the State armed forces, and the crossfire among these groups. Some point to the increased role of the paramilitary due to its expansion and increase in number, and their role in the land control and appropriation processes. According to the RSS, in 2001, 46 percent of total displacement was generated by the paramilitary, 12 percent by the guerrillas, and 19 percent by other parties. However, there are significant differences among the various sources of information. For example, Consultoría para los Derechos Humanos y el Desplazamiento (Consultant on Human Rights and Displacement, CODHES) records attribute a greater percentage of forced displacement to the guerrillas.

c) Estimation of the Magnitude of the Problem

Because of the nature of forced displacement, determining the number of people forcefully displaced is not an easy task. According to Suárez (2001), the main methodological difficulties are related to the high mobility rate of the displaced population (most displaced people move two or three times before finally settling down), to the dispersion and instability of the residence patterns, and to self-protection strategies that include anonymity, silence, and the loss of personal and collective background, which they prefer to keep to themselves for security reasons.

Currently, there are several systems to estimate the displaced population, including the SISDES (Sistema de Identificación de Desplazados) used by CODHES, the Sistema de Información sobre Población Desplazada de la Conferencia Episcopal de Colombia (Colombian Bishops Conference’s Information System on Displaced Population, known as RUT), and the Sistema de Estimación de Desplazamiento Forzado por Fuentes Contrastadas (System to Estimate Forced Displacement through Compared Sources, SECF), created two years ago by the RSS. There are differences among these systems, some of them due to the objective of the system, some to the methodology used to gather the information, some to the places where the information is recorded, some to the periods covered by the information, and some to the IDP itself. These differences have led to discussions regarding the actual magnitude of the problem and debates about types of intervention, coverage reached, and target population.

This Chapter will use CODHES’s system (SISDES) because it has been conducted on a more systematic basis, since 1995, and it has national coverage. Nevertheless, it is worth emphasizing that all methods show an underregistration of the IDP because of the characteristics of the phenomenon they measure, and because there are no displaced population data available prior to 1985.

Table 1 and Figure 2 show that the number of IDP reached 2,502,052 people between 1985 and 2001, with a large and permanent increase since 1997. Despite the differences among the various sources, this increasing trend is present in all. The
Table 1. Internally Displaced Population

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<td>1998</td>
<td>308,000</td>
<td>1,555,000</td>
</tr>
<tr>
<td>1999</td>
<td>288,127</td>
<td>1,843,127</td>
</tr>
<tr>
<td>2000</td>
<td>317,000</td>
<td>2,160,127</td>
</tr>
<tr>
<td>2001</td>
<td>341,925</td>
<td>2,502,052</td>
</tr>
</tbody>
</table>

Source: CODHES

Figure 2. Displaced Population Accumulated Between 1985–2000
RSS shows a 50 percent increase in displaced population between 2000 and 2001. This increase is shown in the 2001 displacement figure reported by CODHES (CODHES Informa, February 2002), of 341,925 people; that is, 934 displaced people daily, equivalent to 39 every hour. According to the population forecast of the Departamento Nacional de Estadísticas (National Department of Statistics, DANE), the IDP represents 5.8 percent of the current Colombian population, estimated at 43,070,703 in 2001.

In 2000, Colombia ranked first in the world among the countries with most displaced population in absolute terms, and eighth in relative terms, as shown in Table 2.

Besides being internally displaced, people have also been displaced to other countries. According to the United States Committee for Refugees (USCR), during 2000 alone, over 225,000 people left the country for violence-related reasons and settled in other countries as either refugees or immigrants. Some asked for political asylum in the United States (3,400), Europe (2,230), and Costa Rica (1,456); another 105,000 people were living in Ecuador, Panama, and Peru under conditions similar to refugee status, and a large number of people were living as illegal aliens in various countries. Based on government figures, the USCR estimated that 1,100,000 Colombians had abandoned the country during 1996–2000 for violence-related reasons.

If we add the number of internally displaced people to those who have been displaced abroad, and the refugees, we get a total of 3,260,127 people, or fully 7.6 percent of the Colombian population.

Figures for the number of displaced people returning to their homes are scarce. The RSS recorded the return of 30 percent of the displaced population between January 2000 and June 2001, but it is unclear how many people are still displaced.

Table 2. Displaced Population by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Population</th>
<th>Displaced Population</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurdistan</td>
<td>4,669,000</td>
<td>700,000</td>
<td>14.99</td>
</tr>
<tr>
<td>Bosnia-Herzegovina</td>
<td>3,839,000</td>
<td>450,000</td>
<td>11.72</td>
</tr>
<tr>
<td>Angola</td>
<td>12,400,000</td>
<td>1,200,000</td>
<td>9.68</td>
</tr>
<tr>
<td>Azerbayan</td>
<td>8,000,000</td>
<td>612,000</td>
<td>7.65</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>21,923,000</td>
<td>1,450,000</td>
<td>6.61</td>
</tr>
<tr>
<td>Georja</td>
<td>5,006,000</td>
<td>280,000</td>
<td>5.59</td>
</tr>
<tr>
<td>Iraq</td>
<td>22,450,000</td>
<td>1,200,000</td>
<td>5.35</td>
</tr>
<tr>
<td><strong>Colombia</strong></td>
<td><strong>41,500,000</strong></td>
<td><strong>1,800,000</strong></td>
<td><strong>4.34</strong></td>
</tr>
<tr>
<td>Croatia</td>
<td>4,500,000</td>
<td>174,000</td>
<td>3.87</td>
</tr>
<tr>
<td>Guatemala</td>
<td>11,100,000</td>
<td>250,000</td>
<td>2.25</td>
</tr>
<tr>
<td>Rwanda</td>
<td>8,300,000</td>
<td>180,000</td>
<td>2.17</td>
</tr>
<tr>
<td>Armenia</td>
<td>3,800,000</td>
<td>75,000</td>
<td>1.97</td>
</tr>
<tr>
<td>Uganda</td>
<td>21,500,000</td>
<td>400,000</td>
<td>1.86</td>
</tr>
<tr>
<td>Peru</td>
<td>25,200,000</td>
<td>250,000</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Displaced population Internally Displaced People, Hampton Jane (Editors) Earthscan Publications Ltd., London
d) Characteristics of the Displaced Population

AGE AND GENDER GROUPS. Available figures show that although in the beginning most of the population displaced was composed of women, current trends show rates are now similar for both genders. The same rate prevails among heads of households; according to RSS data, half the heads of households are women.

Individuals under 18 years of age comprised 46 percent of the population displaced during 2000, and 48 percent displaced during 2001. These are minors who, in addition to losing one or both parents and their entire social environment, have also lost access to education. Recent research conducted in Bogotá shows that 77 percent of the displaced school-age population does not have access to education (Andrade and Álvarez 1999).

On the other hand, the study conducted by the Bishops Conference for the 1984–95 period found that 3 percent of the displaced population was over 65 years of age. If this trend prevails, there may actually be some 75,000 elderly people displaced. This is very serious, since this age group is highly vulnerable in a displacement situation, and even more so if displacement is caused by violence.

ETHNIC GROUPS. The RSS estimates that of the total population displaced during 2000 and 2001, 18 percent were Afro-Colombian and 5.4 percent were Indigenous. The RSS suggests that the proportion of these groups among the displaced population is 53 percent higher than the percentage of the total Afro-Colombian and Indigenous population in the country, while other estimates indicate that the percentage of Afro-Colombian population is lower than the overall national figure, but that of the Indigenous population is three times higher. The RSS analyzes the increased displacement of these groups by pointing out that the map of the Indigenous territories partly coincides with the map of large infrastructure projects, high biodiversity, subsoil wealth, illegal crops, and armed struggles, which are all factors leading to displacement.

SOCIAL AND ECONOMIC CHARACTERISTICS. Due to the conditions of the conflict, the displaced population has been mainly rural. Most heads of households displaced during 1985–94 were small and medium-size farmers (43 percent). The remainder included housewives (9 percent), employees (7 percent), and school teachers (5 percent). Half had completed primary school, 17 percent high school, and 7 percent college or university. Sixteen percent were illiterate, which is twice the national rate. Only one of every five manages to find his or her way back into the productive system (22 percent). Analyses prepared by Lozano and Osorio (1998) on the IDP between 1995 and 1997 detected that 60 to 69 percent had ties with rural areas, and found differences in household composition, gender of heads of households, and the education level of displaced households with and without ties to the rural sector. Rural households have more members and their heads show higher illiteracy rates and, in general, lower formal education levels. These characteristics make them more
vulnerable in a displacement situation, since they normally move to large cities where their skills and survival strategies do not match the new and demanding urban conditions, thus worsening the problem of their low education levels and the large number of people they have to maintain.

After 2000, urban inhabitants began to be displaced, partly due to the confrontation between paramilitary groups and guerrilla militias. The most significant cases are the cities of Barranquilla and Medellín.

c) Lost Property

Records on the IDP show that most of the people displaced owned their lands and houses until 1995. After that, data show an increasing number of occupants without legal title (Lozano and Osorio 1998). Before displacement occurred, between 55 and 69 percent lived in their own homes. After displacement, only 12 percent own a house, and 52 percent live in small, overcrowded rented rooms and shacks, with no access to public utilities. A study conducted by Erazo and others (2000) on a sample of recently displaced people in the cities of Bogotá, Cartagena, and Medellín found that around 50 percent of the people surveyed in Cartagena and Medellín, and 37 percent surveyed in Bogotá, said that they either owned or rented land before being displaced, and that 58 percent of them had their ownership titles. Most of them had plots less than 20 hectares, although there were differences among the various regions, and most of them either abandoned their lands or their lands were taken away from them. Furthermore, 84 percent of such lands had houses built and 20 percent had other construction on them. Other lost assets include equipment and machinery, draft animals, cattle, electric appliances, and other household goods and appliances. In their study, Lozano and Osorio (1998) reported that in just one municipality in the Department of Córdoba, the paramilitary stole at least 3,000 head of cattle, at an average market price of approximately 500,000 pesos each—that is, 1.5 billion pesos, in just one municipality in less than a year.

f) Areas Affected by Displacement

The areas affected within the national territory have also been increasing significantly, and according to the RSS, the entire national territory is affected. While during 1985–94 there were 18 Departments that expelled population, during 2000 this figure grew to 26, and during the first half of 2001 this figure grew to 29; that is, only two Departments in the entire country did not record any displaced population during the first half of 2001. Regarding the host Departments, these have also been increasing, from 15 during 1985–94, to 29 in 2000, to 31 in 2001, covering the entire national territory.

Within the Departments, the affected municipalities totaled 480 during 2000 (43 percent of the total municipalities in the country). Of these, 158 municipalities
were exclusively expellers, 158 were exclusively hosts, and 164 were both expellers and hosts. Nevertheless, the problem focused around specific regions, since 37 municipalities expelled 75 percent of the population and 31 hosted 75 percent. The Departments with most population displacement were Antioquia (33 percent), Bolivar (18 percent), Chocó (11 percent), Valle del Cauca (7 percent), and Meta and Sucre (4 percent each).

During the first half of 2001, the number of municipalities affected grew to 547 (49 percent of the country’s total). From 37 municipalities that concentrated 75 percent of the IDP, the problem grew to cover 69 municipalities that expelled 77 percent of the population. In turn, the hosting of displaced people is also concentrated around specific areas, such as the Department of Antioquia (22 percent), Bogotá (10 percent), Bolivar and Magdalena (9 percent each), and Putumayo and Cesar (5 percent each).

g) Consequences of Displacement

The consequences of this forced displacement of the population are especially dramatic for the people who experience it, but are also very serious for the country. For the people, it represents a serious deterioration in their quality of life, from the physical, social, economic, and psychological standpoints. In other words, Colombians who did not live in poverty and who had adequate means to raise their families began to live in absolute poverty. The traumas and psychological problems caused by the way they were displaced compounded the problem. Thirty-nine percent of the women who are now heads of households saw their husbands or sons killed. Children have witnessed massacres and homicides. Fear, repressed hatred, discouragement, and depression characterize this population that is later rejected and stigmatized wherever they relocate. Finally, the displaced population is left with no political or social influence. This is a patent example of marginalized population, with no access or representation.

There are also serious problems for the country. In rural areas, expulsion transforms the land ownership process, which is related to what some have come to call the “agrarian counter-reform” by sectors associated with drug traffickers, large landowners, and cattle raisers. In the urban sector, there is a sudden increase in population with no resources, which increases the deficit in housing, public services, utilities (water, sewage, electricity, and transportation), and social services (education, health, recreation), and engenders the construction of substandard settlements and the problems of informal economies, unemployment, and environmental preservation issues.

Politically, displacement entails the loss of credibility in the legal, social, political, and economic system, creating a situation of lack of governability and weakening of democracy, because the State is unable to protect the life, assets, and dignity of its citizens as mandated by the Constitution, not to mention a growing impunity regarding all the events that lead to forced displacement
The problem of displacement in Colombia has already affected neighboring countries (Ecuador, Panama, Venezuela), where some displaced families have relocated, some as refugees and some as illegal aliens.

b) The Government's Response

The government's response to assist the IDP can be divided into three stages. In the first stage, from 1985 to 1995, when the problem began to worsen, the government did nothing to care for this population. For over 10 years the population had to fend for itself. During the second stage, from 1995 to 1999, the government prepared economic and social policy documents on the issue. In 1997 created the National System for Assisting Displaced Population and enacted Law 387 providing for integral assistance of the IDP. It was four years of legislative activities but not of real actions. The third stage began in late 1999, after the government designated the RSS as the entity responsible for servicing this population and when the RSS started activities to assist displaced population through alliances with NGOs, and with the support of international agencies.

Upon taking office in 1998, the current Administration evaluated the lack of progress under the law and introduced important changes. First, it assigned planning and coordination responsibilities to a single agency, the RSS, in the Office of the Presidency (Presidential Decree 487, March 1999). Second, it established a new policy and formulated a plan to implement it (Republic of Colombia, Office of the President, November 1999). Third, a three-year budget was approved by the Cabinet to finance the implementation of the Action Plan (CONPES document 3057, November 1999, April 2000).

The government also adopted the United Nations Guiding Principles on Internal Displacements, which emphasize the State's obligation to prevent, protect, and assist displaced population according to UN standards. It created the Unidad Técnica Conjunta (Joint Technical Unit, UTC), made up of the United Nations High Commissioner for Refugees (UNHCR) and the RSS, to design and execute all actions aimed at handling the displaced population. Other organizations involved are the Grupo Temático sobre Población Desplazada del Sistema de las Naciones Unidas en Colombia (United Nation's Task Force in Colombia on Displaced Population), formed by the Food and Agriculture Organization of the United Nations (FAO), International Organization for Migrations (IOM), Organización Mundial de la Salud (OMS), the Pan-American Health Organization (PAHO), the United Nations Office of the High Commissioner for Refugees (UNHCR), the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the UTC, and the World Bank.

By late 1999, the Action Plan for the Integral Assistance of the Displaced Population was issued. It comprises four components: (a) prevention; (b) humanitarian aid; (c) return, relocation, and social and economic stabilization; and (d) protection (see CONPES No. 3057 of 1999 for the full text and Figure 3 for a summary of the policy).
Figure 3. Plan of Action for the Prevention and Attention of the Displacement

- Prevention
  - Security
  - Local empowerment

- Prevention and Attention Policy of the Forced Displaced Population

- Normalization
  - Prevention
    - Security
    - Incentives
      - Empowerment of social and human capital
      - Land legislation

- Emergency Humanitarian Attention

- Reestablishment
  - Land housing
  - Productive projects
  - Social services

Under this Action Plan the government has provided considerable humanitarian aid. According to the RSS, between January 2000 and June 2001 the government invested around COP104,000 million (around US$46 million), of which 81 percent was funded with own resources and the remainder through cofunded projects.

A great limitation of this government-formulated plan is that it services only the registered population, and people can register in the Record only before one year of being displaced. Because this Action Plan has been in effect only since late 1999 and not all displaced people have information about it and access to the registration process, it is estimated that the State's aid reaches only 17 percent of the total IDP.

i) Other Institutions Working on the Issue

At the national level, the Catholic Church has played an important role in both studying the issue of displaced people and assisting the displaced population. There are also a large number of NGOs, including CODHES, which created the information system that has made it possible to grasp the magnitude of the problem, that have contributed to making it visible both nationally and internationally.

The government's efforts have joined those of international agencies, some of which were already addressing the problem. They include the UNHCR, the World Food Program (WFP), the IOM, the European Union Humanitarian Aid Office (ECHO), UNICEF, the International Committee of the Red Cross (ICRC), Save the Children, and Médicos sin Fronteras (Doctors Without Borders).
III. Main Issues

Issue 1: Lack of Priority to the Problem of Forced Displacement both Nationally and Internationally

Colombia is a country in which population displacement has been the rule rather than the exception throughout its history, particularly during the latter half of the 20th century. Despite this grave social problem, most governments, society at large, and the international community have paid little attention to the economic, political, and social reasons behind the problem, or to the multiple vulnerabilities affecting those displaced.

Even though the government policy and programs described above reflect an important effort to meet the humanitarian and development needs of this population, the actual priority assigned to the problem is much less clear when judged by the notable gap between design and practice. For example, of the three-year budget plan, only 30 percent was actually made available for implementation in 2000, and 54 percent in 2001. This is despite the fact that even the planned budgets fall dramatically short of the projected need and that the problem of displacement is becoming more acute.

The attitude of Colombian society toward the IDP is ambiguous if not outright negative. For many Colombians, the simple fact that these people have been displaced as a result of the armed conflict is sufficient evidence that they are guilty of collaborating with one side or the other. This is one of the reasons many of the internally displaced remain unnoticed. It may also explain their preference for large cities and the relatively low number of those registered in the official rolls. A further illustration of this lack of interest in Colombian society in the IDP is the fact that none of the leading presidential candidates or their teams made this acute problem an issue in their campaign.

The international community, in turn, pays only partial attention to the IDP. Most of the support by the organizations in the UN system or the aid of bilateral agencies and other international organizations addresses the needs of this population primarily in terms of human rights. The priority of the international community in the past three years clearly has been the peace process.

Even though the establishment of a National System for the Integrated Attention of the Displaced Population due to Violence is a valuable development, it has not fulfilled its mandate, for three main reasons. First, the ministries have limited financial and technical capacity to respond both because of the magnitude and complexity of the problem, and the inability of these organizations to adapt to special demands due to their responsibilities toward their regular clients. Second, integration of delivery among government agencies is a complex challenge. It requires sectoral coordination, a concerted effort with other public and private service providers, and a partnership approach, none of which are common features of public bureaucracies. Third, political tension is generated by competing priorities between ongoing commitments to
regular clients and the emergency demands of the new ones. In effect, the economic crisis and the serious fiscal restrictions of social sector agencies and territorial governments limit their ability to provide adequate services.

In the midst of this reality, addressing the needs of the IDP, a much less stable and highly vulnerable population, is not likely to be a priority.

**Issue 2: Lack of Preventive Measures to Reduce or Mitigate the Impact of the Armed Conflict, the Main Cause of Displacement**

As noted, the historical reasons for population displacement in Colombia are many and overlapping: strategies of natural resources control by influential individuals or interest groups, conflict over land and expropriation by wealthy and politically powerful families, defensive actions of drug traffickers to protect their plantations and laboratories, conflicts among armed actors with antagonistic ideological beliefs, attempts by the armed forces to reestablish their legitimacy, and the fumigation of coca fields.

All of those causes are interrelated and generate the armed conflict, which is perceived by victims and the public as the main factor causing displacement. The mechanisms used by guerrilla and paramilitary groups, the two main contending parties, are military incursions into civilian residential areas, massacres, direct threats to individual families, selective assassinations or disappearances, and generalized threats to the population of the locality or town.

The armed conflict has escalated during the past three years. Paradoxically, it appears that the government peace initiative introduced at the end of 1998 had a considerable negative impact on the intensification of the armed conflict, by motivating the armed parties to position themselves militarily in view of the upcoming dialogue with the government. As a result, displacement increased considerably, particularly during 2001. Both the RSS and CODHES point to a major escalation of displacement.

This discouraging result occurred despite the fact that the core strategy of Colombia’s *National Development Plan, 1998–2002* was the removal of the root causes of the conflict through massive investment in social and economic development in the most conflicted zones of the country. The peace process, a key component of the plan, followed a two-track approach: (a) at the national level, negotiations with the various armed groups; and (b) at the regional and local level, initiatives to build a preventive capacity to address social and armed conflict. Nevertheless, the peace process at the national level failed completely in February 2002. This failure of the peace negotiation with armed groups means that the main factor affecting displacement continues without being effectively addressed, and will increase even more in the near future.

Some relatively successful local initiatives to build preventive capacity at the regional and local level and to achieve peace have been led by Church and civil society organizations, including the Peace and Development Program for the Middle Magdalena region, partially funded by the World Bank. There is evidence that the
participatory, community-driven approach of this and other initiatives has managed to create some capacity to resist displacement at the local level. This is the result of the creation of social and economic assets, and a greater presence of the State, both of which provide a greater stake and capacity for the population to resist.

On the other hand, despite Law 387/97 encompasses the protection of the patrimonial assets belonged to displaced people, it has not developed any action to make effective this protection. For that reason, displaced population become extremely poor and their assistance represents high cost for the government.

However, with few exceptions, the municipal, district, and regional committees for the integrated attention to the population displaced by violence, created by Law 387 of 1997, have been unable to fulfill their responsibilities, particularly the development of preventive capacity to deal with social and armed conflict. The committees lack resources, know-how, and frequently, political will. The large flow of displaced people presents significant challenges for both the displaced people and the local government. It is not possible for the displaced to find adequate employment and to access basic social services at a time of acute general unemployment and fiscal restrictions in the country, not to mention the inadequacy of their traditional rural skills in an urban environment. Local governments are unable to provide those social services and opportunities to the IDP due to the fiscal crisis and tight budgets, which are not adequate to meet even the needs of their own citizens.

All these factors result in the inability of local governments and institutions to reduce the impact of the armed conflict, or to manage the large flows of displaced people from within or outside the municipality.

**Issue 3: Insufficient Understanding of the Size and Characteristics of the Internally Displaced Population**

It is difficult to estimate the number of people who have returned or relocated, or who remain internally displaced. The lack of a uniform methodology to track and classify this mobile population has led to varying conclusions regarding the size and characteristics of the IDP and of the reasons for their decision to leave. Studies vary in terms of coverage, zones of study, information-gathering methods, and periods of time, and sufficient information is sometimes unavailable and not always reliable. Therefore, the data are not comparable and the numbers do not necessarily agree. For example, estimates of the size of the population that remains displaced, of demographic and social data, of ethnic composition, and of the prevalence of children, youth, and women among the IDP, varies according to the source.

Understanding the size of the population displaced, its composition in terms of sociodemographic and ethnic characteristics, human capital and occupational profile, and the specific reasons for leaving their places of origin is essential for the management of a plan of action addressed to the IDP. Information is critical to guide planning, allocation of resources, design of interventions, public information, and monitoring and evaluation of programs.
In 2001, the government, under the leadership of the RSS, took the initiative to integrate the diverse information and registry systems, some managed by NGOs and others by State agencies. The objective of the initiative is to establish an integrated information system shared by all relevant stakeholders to estimate and register, on a regular basis, the displaced population. The system includes (a) a method to estimate the size of the population, (b) a national survey to characterize and profile the IDP, and (c) a Unified Registry System of the population eligible for State services. This initiative is being coordinated with other public and private stakeholders (CODHES, the Bishops Conference, ICRC, universities, DANE, the Instituto Geográfico Agustín Codazzi (IGAC), the Instituto Nacional de Colonización y Reforma Agraria (INCOAR), and Defensoría del Pueblo toward a common approach and use of the same data.

So far, however, progress on the components of the system has been uneven. Significant progress has been made in setting up the countrywide Unified Registry System of IDP in cooperation with UNHCR. The RSS coordinated the creation of the registry, which is operated by the Public Defender and Attorney General offices at the local level that receive requests from the IDP and in turn submit them to the RSS for attention. The Registry is computerized and the elapsed time between application for IDP benefits and a response by the RSS is 15 days. As of June 2001, 76,533 households totaling 376,856 people were registered (Red de Solidaridad Social, October 2001, p. 19). This is only 17 percent of the total estimated IDP. This number is just slightly over the number of those displaced during 2001.

Much less progress has been made on the other two components, devising a common methodology to estimate the magnitude of the problem, and the characterization of the IDP. In the meantime, the RSS uses the method of information based on compared and contrasted sources to estimate the population displaced, and defines some characteristics of the population based on the information provided by those who are already in the national registry.

**Issue 4: Little Success in Reestablishment and Socioeconomic Stabilization of the Population**

The policy and Action Plan for integrated attention to the IDP calls for strengthening prevention mechanisms, promoting and consolidating voluntary return, improving humanitarian assistance measures, protecting those affected, and reestablishment and economic stabilization of the displaced population. This policy recognizes the multiple risks and high vulnerability of the displaced: loss of private and public assets, inadequate work skills, violence, and social and political risks.

Although the law and Action Plan call for integrated attention, the bulk of the limited resources that have been made available by the national government in the past two years go to providing humanitarian assistance (emergency food, shelter, health care, and so forth). This assistance has been provided through gov-
ernment contracts with NGOs including the Colombian Red Cross, and the network of local Catholic Church parishes coordinated by Pastoral Social in several cities.

Few reestablishment and economic stabilization projects—where the efforts to address the needs of the IDP were to be concentrated under the Action Plan—are under way, leaving the larger needs of the IDP unaddressed, including the provision of basic social services. This means that after the three-month period of official humanitarian assistance ends, the displaced population has no real option of either returning to their place of origin or relocating. This is in marked contrast to the intention of the government plan to “invest massively in providing sustainable solutions for the IDP, whether upon returning home, being resettled in rural areas or remaining in the urban or semi-rural areas where they are currently located” (Presidency of the Republic, brochure, n.d., p. 7).

Furthermore, the few families in reestablishment projects have a difficult time accessing technical assistance or productive assets. Land and credit for relocated IDP tend to be handled by the respective government agencies in traditional ways in terms of collateral, interest rates, terms, and so forth. Since these families are almost totally without assets, credit for housing, land, and productive projects as traditionally handled are not viable for displaced families. Finally, the reestablishment actions tend to be isolated from rural and urban settlement strategies, and do not take into account previous experience in the country.

Thus, the well-conceived agenda set out by the government for meeting the medium-to-long-term needs of the IDP has not been implemented beyond humanitarian assistance, and there is a huge gap between policy formulation and practical implementation. Consequently, displaced families remain a vulnerable group, the human development needs of which should receive priority attention.

**IV. Recommendations**

Based on our analysis, we recommend building on the existing legal and institutional framework and achievements of the past five years, and focusing on implementation and results in four main areas: (a) giving greater priority to the displaced population in the access to social assistance programs and to the investments in productive activities, building the capacity of the organizations of the internally displaced to access services and influence policy and programs, and designating the RSS to deal exclusively with this problem; (b) reducing displacement through effective preventive measures at the local level and providing municipalities with the incentives and resources so they can fulfill the preventive and coordination responsibilities assigned to them by law; (c) developing a shared methodology among key stakeholders to estimate and characterize the population displaced to better understand their needs and demands; and (d) creating appropriate incentives and opportunities for return, relocation, or integration.
In addition, three cross-cutting approaches are recommended for the implementation of action plans: (a) a regional and territorial focus in the application of the policy, in recognition of the diversity of the country and the concentration of the problem of displacement in particular areas; (b) a true alliance mentality between government and state agencies, nongovernmental and Church organizations, and the community organizations of the host localities and of the IDP. This means agreeing on a common objective, creating synergies by complementary contributions, agreeing on rules of the game, and sharing the risks to achieve the objective; and (c) simultaneous attention to the needs of people in the host community and to the IDP to reduce the tensions around access to limited services and resources.

Recommendation 1: Make the Problem of Forced Displacement a Priority and Cover the Displaced Population According to Their Needs in the Governmental Programs

The incoming administration must recognize that forced displacement is one of the most salient manifestations of the devastating impact of the violent conflict on the civilian population of Colombia. Making this problem a greater priority in the government plans will also contribute to a greater commitment and action by the larger society.

The following measures are recommended:

- Remove access barriers for the participation of the IDP in the poverty-targeted social programs, particularly in all current programs of the Red de Apoyo Social. To achieve this:
- Develop a plan through collaboration with municipal governments for the application of the Sistema de Selección de Beneficiarios (System of Beneficiary Selection, SISBEN) questionnaire and issuance of the SISBEN cards as part of household characterization of the IDP in the process of registration with local authorities. In addition, create a special fund to reimburse local governments and private service providers for the cost of nutrition, education, and health services provided to officially registered IDP. That way, local governments and service providers will have an incentive to assist the IDP.
- Promote and fund a campaign geared to the internal strengthening of the organizations of the IDP at the local and national level, as a means of giving voice to and empowering this large segment of the Colombian population, a typical example of the disenfranchised, currently without political leverage or representation.
- To the extent possible extend the services to the population displaced since 1980 on the basis on their needs.
- Focus the mandate of the RSS exclusively on the IDP, and transfer other current functions and responsibilities to other agencies. In addition, allocate all resources for the internally displaced to RSS so that it can establish contracts and agreement with other state and private organizations in the provision of services.
Recommendation 2: Prevent the Risks of Displacement by Implementing Effective Measures at the Local Level and Protecting the Assets of Displaced People

Our analysis shows the devastating effects of the armed conflict on the displacement of the civilian population. Thus, the end of the conflict or the mitigation of its impact is the most important condition to reduce displacement. In view of the ongoing armed conflict, one option is the implementation of practical preventive measures at the local level to reduce the risk of displacement. The following measures are recommended, some of which are based on empirical findings of a recent study commissioned by the World Bank (Erazo and others 2000):

- Focus on regions, municipalities, or localities at high risk, and within those, on the groups at high risk of being threatened. One indicator of high risk in a geographic area is the presence of two or more armed groups in that area. The groups at highest risk are heads of household under 35 years of age, owners of land and crops, and leaders of active social organizations.
- Increase the perception of security among the civilian population. The presence of entities such as the police force, Departamento Administrativo de Seguridad, the Peoples Defender, and international organizations increases residents' perception of security, increases the political cost of violence by the armed groups, and becomes an incentive to remain in the area of residence.
- Protect the rights on the assets of displaced people or at risk of displacement. Toward this end, provide the technical and financial resources to implement Decree 2007/01 on the protection of rights on land by owners, possessors, tenants, or occupants, in selective regions or municipalities of high risk.
- Promote direct dialogue between local authorities and organized citizens and armed groups to demand respect for the fundamental human rights of citizens, and to exclude specific areas or places such as schools, hospitals, cultural centers, and homes from the armed conflict.


Given the existence of multiple and different systems of estimating and characterizing internal displacement in Colombia, it should be a priority to adopt a common methodology and develop a unified system. Consequently, within the existing normative framework, the RSS as coordinator of the National System of Information on the Displaced Population must develop, in agreement with all key public and private stakeholders, the information infrastructure and instruments required to estimate, characterize, and register the IDP.
The following measures are recommended:

- Strengthen the technical committee with those implementing the various systems, namely, specialized NGOs (particularly CODHES and the ICRC), universities, the Bishops Conference, and international humanitarian agencies to develop a unified system to estimate the total population displaced, regardless of the reasons for displacement. This should become a valid and reliable instrument useful for the design, execution, monitoring, and evaluation of the policy and plans of action to assist the IDP. The system must account for all those displaced, draw the territorial mapping of displacement, quantify and differentiate those who return and those who relocate, quantify those who require the attention of the State, and other relevant features. Once the system is in place, this technical committee or a similar body will continue to monitor the system as an independent social accountability mechanism.

- Conduct a national survey based on a probability sample of the entire population displaced—not just those registered—building on the experience of existing characterization efforts, particularly those by the International Migrations Organization, CODHES, PROFAMILIA, and the ICRC. Critical variables of the survey for the characterization of the IDP are age, gender, ethnicity, place of origin, place of destination, date of displacement, education, skills and capacity or incapacity, reasons for displacement (preventive measure or direct threat), preferences to return or relocate, and the perpetrators who caused displacement. This type of information is essential for the design of interventions. For example, if the majority of the displaced population is under 18 years of age and under the responsibility of a mother, the intervention must take these factors into consideration. Currently, there is a lack of specialized measures geared to youth, and particularly children, many of whom are orphans.

Recommendation 4: Create Realistic Incentives and Opportunities for the Reestablishment—Return, Relocation, Integration—of the IDP

Recognizing the achievements in the management of humanitarian assistance, the incoming administration must go beyond humanitarian assistance and focus on the weakest link of the IDP policy: reestablishment and economic stabilization. The information provided by the implementation of Recommendation 3 will help to clarify and quantify characteristics and conditions of the IDP relevant to the design of reestablishment, such as (a) reasons for displacement (preventive or direct threat or violence); (b) preferences (return, integration, or relocation); and (c) requirements (protection of assets, financial support, psychological support, technical assistance). To bridge the gap between policy formulation and practical implementation, the following measures are recommended:
• Distinguish between preventive displacement and displacement as a result of direct threat or violence. It is argued that those who leave for preventive reasons make an assessment of the costs and benefits of leaving and consider several factors before making the decision to depart and choose a destination. Those displaced by direct force are unable to make the same assessment because their lives are at stake. The risk of returning and the social and economic stability of these two cases may differ considerably, and thus the approach to reestablishment may vary. Families that made the decision of preventive displacement are more likely to return and take advantage of available opportunities in their place of origin. In addition, they may be more stable and have some resources at their disposal. On the contrary, families that made the decision based on a direct threat or violence will prefer integration in the site where they are now or to relocate, and they may need full support to become stabilized.

• Establish regionally focused social funds as instruments that promote self-reliance in reestablishment projects oriented to community action to secure or recover assets, community-driven reintegration and development activities; and social and economic stabilization of particularly vulnerable groups, such as women heads of household and youth (men and women) in those focused regions, municipalities, or localities. Existing national programs such as the Peace and Development Program for the Middle Magdalena region, the Rural Enterprise Zones program, and others may offer valuable lessons on how to establish those funds. Similarly, international experiences such as the Azerbaijan Social Fund for the Development of Internally Displaced Persons, the Rehabilitation Program for Displaced and Deported Households Due to the Ethno-Entrench War, the Emergency Reintegration and Recovery Project of Rwanda, and the Emergency Demobilization and Reintegration Project in Bosnia-Herzegovina, may be used as examples.

• Promote focused regional productive initiatives that offer opportunities for the displaced population to undertake economic activities contributing to their reestablishment and economic stabilization. These initiatives may include integrated peasant farms or external market-related activities. The Productive Partnership for Peace Support project is an example of such an initiative on agribusiness.

• Finally, seek external support (grants and loans) for the reestablishment of the displaced population in an attempt to restore confidence in the legitimate interest of the State in tackling the problem. This will be a signal to the public that the incoming administration gives priority to the problem of the IDP. This emphasis is consistent with the generalized belief that “economic and social stability and human security are preconditions for sustainable development” (World Bank 2001).
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Natural Resources and Global Commons: Capital for Sustainable Development

This Chapter was written by Walter Vergara and Juan Pablo Ruiz.

I. Background

Colombia has a rich endowment of natural capital represented by large biodiversity assets, diversity of soils, extensive primary and secondary forests, abundant water supply, and substantial hydrocarbon deposits. These elements also play an important role in the conservation of the quality of the global biosphere, or global commons, which includes the protection of global biodiversity, control of the impact of anthropogenic activities in global climate change, and conservation of international waters.

Contribution to Global Biodiversity

Colombia is recognized as one of the five “megadiverse” nations in the world (Mittermeier 1998), and thus one of the most biodiverse. It is first in number of species of amphibians and birds, and second in vascular plants. With a total area of 1.14 million square kilometers, representing about 0.8 percent of the world’s surface area, Colombia is home to about 15 percent of all known terrestrial species. Thus, in terms of density (the number of species per square kilometer), the country probably ranks first worldwide. The country also possesses 18 ecoregions (WWF/World Bank Report 1996), the second highest of any country in Latin America. The most recent ecosystem map of Colombia (Humboldt Institute 1998) identifies 65 ecosystem types The presence of mountains, savannas, and jungles has given rise to ecosystems rich in water potential, with very fragile soils and complex hydrological regulation mechanisms.
Contribution to Global Carbon Sinks

From a climate change perspective, Colombia has large tracts of pristine and secondary forests that act as important reservoirs of carbon, which otherwise would be released into the atmosphere with global warming effects. The three largest land categories are forest, still largely pristine, yet under growing stress (46 percent of the total), agricultural ecosystems (24 percent), and savannah (19 percent). The country is a large carbon sink.¹ The potential for afforestation and reforestation of former forest cover, although not yet sized, is also thought to be significant and thus could play an important role in efforts to capture carbon. Afforestation and reforestation efforts have recently been recognized under the Kyoto Protocol and thus constitute potential sources for carbon finance. Other ecosystems that act as carbon sinks in Colombia include large tracts of wetlands and mangroves. Field measurements indicate an excellent capacity for CO₂ sequestration in these ecosystems.

Potentially high levels of social and environmental benefits are also linked to the conservation and restoration of Colombian forests, including an increase in average income per hectare, if credits from carbon sequestration activities are valued at a level similar to the value of credits obtained through carbon mitigation activities that could provide viable alternatives to the current unsustainable activities of illicit crop production, extensive cattle ranching, and destructive exploitation of the natural forest.

Contribution to CO₂ Mitigation

As a producer of energy, Colombia relies heavily on hydroelectricity for power generation, but it is also an important producer and exporter of gas, oil, and coal. Mining activity has been increasing steadily; mining and hydrocarbons together represented 13.5 percent of gross domestic product (GDP) in 1980, rising to 5.6 percent in 1999 (DNP-UMACRO 2000).

The electricity generation sector is highly competitive with respect to the potential carbon credits market. The abatement options for the overall system indicate a significant potential to reduce carbon emissions (National Strategic Study 2000) through improvements in the efficiency of the installed capacity and from the introduction of renewable sources.

Potential for Improvements in the Efficiency of Generation of the Existing Power System. All changes in the grid-generation system affect the entire system through the efficiency-based dispatch program of the National Electricity Grid. The models used by the Unidad de Planeación Minero Energetica (UPME-Mining and Energy Planning Unit), which coordinates national energy planning and dispatching, compile the effects of changes at the plant level and estimate

¹ A carbon sink is an ecosystem with a net absorption of CO₂ from the atmosphere.
impact on emissions at the total grid level. On the basis of additionalities, estimated using this model, the thermoelectric power production sector presents excellent potential for application of the Greenhouse Gas Mitigation. This potential rises from the relatively low average energy efficiency generation of 23 percent compared with new technologies that can cost-effectively increase efficiency to 50 percent and beyond.

With additional carbon credits as financial flows, renewable energy sources hold substantial promise in Colombia. Solar, wind, and hydro have all significant potential in the country, and many projects could become competitive when carbon emission credits are factored in. For example, the Public Services Company of Medellin has formulated a 20 MW CDM project for wind energy generation in the Guajira state that also produce benefits for local communities. This project, which forms part of Colombia’s initial CDM portfolio, could generate important demonstration effects for the use of the CDM in renewable energy programs in the Andean and Caribbean regions. Another project formulated by the private sector would use the kinetic energy of a steep river basin in the Andes to generate electricity without the need for a dam and to protect the surrounding high mountain (Paramo) ecosystem. These initiatives indicate a large yet untapped potential for renewable energy (other than standard hydro) in the country.

Under optimal conditions, the export of carbon emission reductions (CERs) could generate, according to the NSS study, up to US$435 million per year. If this potential were realized, CER exports could rival those of the banana and cut flowers sectors (see Figure 1), which are of major importance to the Colombian economy. Adding the potential collateral social benefits of these projects indicates that the greenhouse gas emissions reduction market could be a strategic development option for Colombia. The potential for greenhouse gas reduction and CER generation from Colombia’s economy clearly indicates the country’s ability to contribute to real, long-term mitigation of climate change, not as a function of imposed caps but in response to market forces.

**Contribution to International Waters**

The country is home to headwaters of large tributaries to the Amazon and Orinoco Water Basins, and thus is an important source of stability for the ecology of the larger northern Amazon ecoregion and the Orinoco Basin. Available fresh water per surface unit is estimated at 58 liters per second per square kilometer, with close to 1,000 permanent rivers, giving it the fourth-greatest availability of any country in the world (Marín 1992). These watersheds feed a vast region of significant natural capital, including some of the most biodiverse forests in the world, large forested areas, and other assets that would be compromised by the destruction of the ecosystems linked to the headwaters. Many of the points of origin of the large tributaries of the Amazon are in the high alpine ecosystems of the Andes, which in turn are being threatened by the anticipated impacts of climate change.
Stewardship of this large natural capital is essential to the long-term sustainability of economic development of the nation, yet it has traditionally not been counted as part of the capital assets of the country. The global community also has a large stake in the conservation and sustainable use of these assets because the proper management of them has global and regional consequences of concern under the biodiversity, climate change, and international water conventions.

Proper management of natural capital, in particular the primary forests of the Amazon region, also has implications for the global cultural heritage, because this region is home to diverse indigenous groups, many of which still conserve their own languages and customs.

II. Past and Recent Policy Initiatives

Biodiversity Strategy
In late 1999, the government published the first Biodiversity Strategy as part of the enabling activities to the Biodiversity Convention. An action plan has been drafted and is being supported in the Andean region through a full-size project and several other grants in key ecosystems throughout the country. The objective of the Proyecto Cohesivo Ambiental, part of the National Development Plan or work program of the last administration was “to restore and conserve priority areas within the strategic..."
ecoregions,2 promoting regional and sectoral sustainable development within the context of the construction of peace.

The Proyecto Colectivo Ambiental included:

- A water program to increase continental water regulatory capacity and to promote efficient use and reduce contamination of continental and maritime waters
- A biodiversity program to increase conservation and restoration of natural ecosystems within the strategic regions and protection of endangered species, to strengthen knowledge and innovation about components and use of biodiversity, and to strengthen society’s and the State’s technological, management, and negotiation capabilities to maximize the social and economic benefits of biodiversity
- A forest program to promote State and private action to conserve and foster the sustainable use of forests, reforestation, ecological restoration, and establishment of productive plantations to incorporate forests into the national economy and increase the quality of life for the population.
- A productive processes sustainability program to promote sustainable use of biodiversity and conservation of traditional knowledge for regional economic and social benefit
- A green markets program to provide an incentive for the sustainable production of goods and services of biodiversity in national and international markets

The National Policy on Biodiversity was adopted in March 1997. It develops the principles and objectives of the Convention by seeking to promote conservation, knowledge, and sustainable and equitable use of biodiversity. The National Biodiversity Strategy and Action Plan (1998) has identified strategies for implementation of the National Policy. These are:

- Promotion of conservation of biodiversity through consolidation of the national system of protected areas, slowing the loss of biodiversity, restoration of degraded ecosystems, protection of endangered species, and promotion of ex situ conservation
- Promotion and encouragement of the sustainable and equitable use of biological resources through sustainable management of natural resources, development of the economic potential of biodiversity, and assessment of the economic value of biodiversity
- Improvement and complementing the knowledge of the value and services that biodiversity assets represent

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2 The regions identified by the Colombian government as strategic ecoregions are Chocó Biogeográfico, Eje Cafetero, Macro Colombiano, Magdalena Medio, Nevado del Cocuy y Nororiente, Piedemonte Amazónico, Serranía de Perijá, and Sierra Nevada de Santa Marta
CONSERVATION AND SOCIAL MANAGEMENT: The "Policy for Consolidating the National System of Protected Natural Areas" (Natural Parks System Special Administrative Unit, UAESPNN, 1999) seeks to transform the nature of UAESPNN management from a conservationist policy to one of conservation based on social management. The focus is on generating local benefits associated with conservation, and emphasizing work with traditional communities. The "parks with people" concept involves working with people both inside and outside the National Natural Parks System, because the resilience of ecosystems is a main concern. The new policy does not exclude conservation per se, but emphasizes the need to establish a relationship between using a space for this purpose and the benefits for the local population.

To achieve "on-site" conservation, the UAESPNN plans to develop the Regional Protected Areas Systems. This represents a significant process of decentralization in conservation management, and in the management and use of natural ecosystems (UAESPNN 2002)

Regime for Land Conservation

There are four categories of land zoning that provide a varied degrees of protection:

INDIGENOUS RESERVES. The country has set apart about 30 million hectares, or nearly 26 percent of the country as indigenous reserves. Most indigenous reserves are covered in natural forests containing a very significant share of the country's biodiversity.

COMMUNAL LANDS IN BLACK COMMUNITIES. Black communities own approximately 3 million hectares—about 2.5 percent of the country—all in the Chocó biogeographic region. This area is considered to be one of the world's most important conservation hot spots due to its great biodiversity, the high number of endemic species, and the high risk of destruction.

NATIONAL NATURAL PARKS. The National Natural Parks System (SPNN) comprises 46 areas with a total of about 9.6 million hectares, approximately 8.5 percent of the country. The system is highly representative of Colombia's different marine and inland ecosystems. There is an overlap with the indigenous reserves, which cover about 30 percent of the SPNN area.

3 According to the post-census studies of the Departamento Nacional de Estadísticas (National Department of Statistics, DANE) in 1997, Colombia's indigenous population was made up of about 785,000 individuals belonging to 82 different groups. Eighty percent of the indigenous population lives in these reserves
4 Within the SPNN there are tropical rain forests, dry forests, and subhumid tropical forests, xerophytic and desert scrublands, Andean and cloud forests, moors, natural savannas, alluvial forests near rivers, and mangroves, among other types of vegetation.
PRIVATE RESERVES. The Civil Society Reserves Network (RRSC) is a network of owners who have provided part or all of their lands for conservation purposes through their own initiatives. In 1993, Law 99 officially recognized civil society natural reserves. Today the RRSC has 120 affiliated reserves, and over 50 applications for affiliation are under study, making it the most significant private alternative for supporting conservation processes.

OTHER CONSERVATION CATEGORIES. The Forest Protection Reserves and the Forest Protection-Production Reserves, with 2.1 million hectares, have already been demarcated and have management plans in place. There are Integrated Management Districts with 2.8 million hectares, and 500,000 hectares of land officially protected by municipalities and departments (UAESPNN 1999). There are also remnants of “Forest Reserve,” created by the Second Act of 1959, representing nearly 60 percent of the country’s surface area at that time. This has not been put into another category, and today represents about 15 percent of the country. These lands belong to the country and are known as national reserves.

**National Strategy for Use of the Clean Development Mechanism (CDM)**

With the support of the National Strategic Studies Initiative, the country has also defined an agenda of action in climate change, including the identification of a portfolio of measures to make use of the Clean Development Mechanism under the Kyoto Protocol. The country has ratified the Kyoto Protocol and initiated steps to organize the market for carbon credits through a number of actions that include:

- Creation of a climate change office, with active participation of the private sector, the responsibilities of which are to:
  - Design methodologies and approval criteria for the selection of emission reduction and carbon sequestration projects in Colombia through, among other things, the development of project formulation procedures and the establishment of a national registry of carbon projects
  - Design a capacity-building program for participants on potential carbon sequestration projects that includes dissemination of relevant project formulation information and carbon market opportunities, provision of training to potential project developers and key regional actors, and promotion of institutional arrangements for grouping of small projects.

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5 A civil society natural reserve is defined as all or part of a property that conserves a sample of a natural ecosystem and is managed according to the principle of sustainable use of natural resources. Its activities and uses are established in accordance with regulations determined in collaboration with nonprofit environmental organizations.
• Preparation of a portfolio of potential projects for carbon finance (through the Clean Development Mechanism or other means of carbon finance)
• Adoption step-by-step CDM project formulation manuals for the forestry and energy sectors
• Design of a marketing strategy for Colombia's carbon sequestration projects that includes assessing potential international markets, international promotion of said projects, and the carrying out of related fundraising activities.

The country is also in the process of designing and implementing a program to protect watersheds and headwater areas, and thus the water cycle in the region. Given the large reliance of the nation on hydropower, this program is critical. However, the international implications and global benefits have not been accounted for.

The country also recently signed the Stockholm convention (regulating toxic substances), and is an active participant in the Montreal Protocol for control of ozone depleting substances.

III. Main Issues

The long-term wealth of a country depends on maintaining its reserves of social capital, produced assets, and natural capital (represented by available renewable and nonrenewable natural resources) in a manner that allows for sustainable economic growth. Sustainability implies that the wealth or added value available to the people of the country does not diminish over time (Quiroga 2001).

Colombia is in the midst of one of the most serious macroeconomic and fiscal crises in its history, one result of which is drastic reductions in the central government’s budget, particularly for investment. The environment and agricultural sec-

6. A key indicator of sustainability is Genuine Savings. This is understood to be what a country has saved, after taking into account the depreciation of natural resources and the damage done by pollution, and investment or variation in human capital (World Bank 1997). To calculate Genuine Savings (G), Net Savings are calculated using traditional methods, and income from resources or expenditure of natural resources is subtracted. If this indicator is negative in value, the country’s welfare will diminish over the long term. The extraction of nonrenewable natural resources cannot be considered net accumulation of wealth. As the result of poor measurements, the faster a country exhausts its natural resources the more quickly its gross national product grows. This, of course, violates the principles of basic accounting, since it enters the expenditure of capital as if it were working capital.

7. The World Bank estimates that net savings (gross savings minus normal capital depreciation) amounted to $3.9 billion dollars in 1998, and $1.5 billion in 1999 (www.worldbank.org/ees). However, genuine savings (net savings minus depreciation of natural resources) was only $927 million in 1998 and -$3.9 billion dollars in 1999.
tors have been hit particularly hard. This crisis provides a strong impetus to develop creative solutions for financing and implementing sector policies and carrying out new investment. Partnerships between the various levels of government, civil society, the business community, and international agencies are being actively sought. Yet, despite the crisis, the natural capital assets of the nation have not played a relevant role in either identifying solutions, or as a part of strategy to secure sustainable development. Colombia's active and in some respects pioneering work and participation in international agreements dealing with global property should position the country to effectively make use of its natural capital as a tool for sustainable development.

Another critical element of the sectoral context in Colombia is the tremendous social unrest, if not outright civil war, in many areas of the country. Many of these areas are effectively under the control of guerrilla organizations or right-wing paramilitary groups. However, in many cases, the conflict is not incompatible with conservation of natural capital assets. Examples of many local initiatives for conservation prove this, such as the creation of municipal protected areas, the network of private reserves (more than 200), and communal hunting, fishing, and wood extraction vedas. In addition, the Colombian institutions have learned to deal with the conflict, while participatory approaches have proved effective for gaining local support. The majority of the Colombian population has lived in areas that have experienced highly violent periods, and have developed a strong feeling of belonging. Ensuring effective participatory approaches, appropriate dissemination of information, adequate incentives, and economical alternatives can have a clear impact on the conservation of natural capital assets.

The value of the country's global assets may play an important role in efforts to achieve financial stability in the long term. However, to do so, the country faces serious obstacles, which could be summarized as follows.

**Unsustainable Use of Biodiversity (Forced Extinction of Species and Habitats)**

The main factor in the deterioration of Colombia's natural capital is the destruction of highly fragile ecosystems of strategic importance to the country's sustainable development, given their high economic and ecological worth with global value. This destruction is most serious on steep mountainsides in the Andes, in critical areas for water generation, and in naturally forested areas in the Chocó biogeographic region and the Amazon flatlands, and is due to the displacement of poor rural people and ethnic minorities to these areas. It is estimated that colonization in

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8. In 1995, environmental investment represented 1.94 percent of the national budget, and in 1996 that figure had declined to 1.5 percent. In 2000, environmental investment was only 0.7 percent of the national budget, and in 2001 it fell even more, to 0.56 percent (DNP–DPA 2000). This is a clear indication of the declining priority of environmental management to the national government.
naturally forested areas is advancing more than 221,000 hectares a year (IGAC/CORPOICA 2001). This phenomenon is aggravated by the fragmentation of natural ecosystems by illicit crops.

Despite the biodiversity strategy and efforts supported through the global environment facility (GEF) and other sources of support, biodiversity assets are under severe stress. In fact, two of the top conservation of biodiversity hot spots (Northern Andes and the Choco Corridor, as defined by Conservation International), are located in Colombia. Sources of stress include expansion of the agricultural frontier, unsustainable mining and hydrocarbon prospecting and exploration, armed conflict, urban sprawl, lack of awareness, and poor valuation of biodiversity assets. The expulsion of poor rural people and indigenous groups to high, steep mountainsides, which are fragile and strategic ecosystems, promotes the destruction of sources of water and soil loss in the Andes.

The environmental effects—economic, ecological, and social—caused by the destruction of these ecosystems, have been traditionally treated as pure externalities. Mechanisms or economic incentives need to be applied to encourage poor rural people to modify some of their agricultural practices in ecosystems and topography that they are not used to farming. In this way they could arrive at new productive arrangements to take advantage of the kind of sustainable potential that these kind of strategic ecosystems could generate if they were adequately managed.

If there are no economic transfers from those who benefit from the environmental services9 to those who are located in the current or potential generating areas of those services, the individual producer located in the critical zones would look for the maximization of his benefits from his piece of ground, without including in his analysis the economic and social effects that his activity could generate for third parties. The recuperation and conservation of environmental services can be achieved only where the cost of reversion of the productive systems would be smaller than the economic, ecological, and social benefit to the productive agents or consumer groups that would pay for it.

Not only the watersheds and slope zones are critical areas of conservation and management. In the jungles of the Amazon and the Choco—naturally forested areas—the agricultural frontier continues to advance through the use of low productivity and ecologically and economically unsustainable systems. Even without considering the destruction of natural capital, the potential contribution to the GDP of the agricultural border expansion in these areas would be minimal.

Land degradation, caused by unsustainable practices in agriculture and forestry, is becoming a serious problem. Inappropriate resource use patterns in rural landscapes threaten the biodiversity of nearby protected areas and the potentially signif-

9. Environmental services constitute the positive effect (social or economic) that can be derived from the ecological or scenic function of an ecosystem. Examples include the mitigation of greenhouse gases, the ability to gather water for human use, biodiversity conservation, and provision of scenic beauty for recreation and ecotourism.
significant biodiversity resources. Such ineffective natural resource management also contributes to greater rural poverty. Most producers are aware of and concerned about the problem, but do very little about it because there is scarce adequate technology and assistance, and what exists is not properly disseminated. In addition, there is very little financial help for changing practices.

Among rural people in fragile ecosystems, attempts to establish single-crop agriculture have resulted in greater economic vulnerability, loss of self-sufficiency in food production, genetic loss, loss of biodiversity and traditional know-how, and an increase in rural poverty (Conroy, Murra, and Rosset 1996; Altieri 2001, Torres 2001). Specialization in small-scale rural farming goes hand in hand with the cultural homogenization that means the disappearance of traditional indigenous and rural knowledge. Rural people in fragile and marginal areas need alternatives like the Comprehensive Production Systems (SPIs), technology for better management of soil and local resources, information on markets, and compensation strategies for environmental services.

Another threat to global biodiversity is illegal crops. Due to lack of physical access, this activity is usually undertaken in areas covered by natural ecosystems. Although there are isolated cases, in the Andes this activity is mainly concentrated in the Macizo area and Serranía de Perijá. In these cases, in addition to deforestation for cultivation, herbicides used for eradication are suspected of causing great damage after poisoning water and dispersing natural habitats.

Poor Understanding of Carbon Sequestration and Mitigation Potential

The difficulties met in the sustainable use of biodiversity are also common to the conservation of forests as a carbon sink. However, because carbon sinks have been slow to be recognized under the CDM as an important element in the fight against global climate change, the country also faces difficulties in having these assets properly valued in the international carbon credits market, unless they are linked to afforestation and reforestation programs. Independent of these difficulties, the poor understanding of the potential for the Colombian natural forests to play a role in carbon sequestration is compounded by the following issues.

- There is a need for additional work on baselines (business-as-usual scenarios) and methodologies that can be used to argue additionality (actions that could be financed by the community of nations) before the Clean Development Mechanism.
- There is a need to consolidate the new climate change office to ensure its long-term sustainability, though the involvement of private sector participation and other key stakeholders.
- There is a lack of an independent certification mechanism that could promote the assessment and valuation of these assets from a climate change perspective.
- There is a need to confirm sequestration potentials.
As a result of the relatively high country risks, there is a need to develop and apply risk-reduction mechanisms that could be used by investors in carbon sequestration credits of Colombian origin.

On the mitigation side, many of the difficulties faced in the realization of the carbon sequestration impact also affect the carbon mitigation potential. In addition to those outlined above (lack of baselines, certification mechanisms, institutions), there is also a need for a comprehensive review of the impacts that additional international agreements on climate change may have on traditional carbon and oil exports. In the case of coal, there is interest in developing a green coal certificate system that would link exports of Colombia’s coal to the promotion of carbon sinks (through reforestation). However, the traditional lack of integration between the energy and environmental agendas in the country has acted as a deterrent to common action.

There is also a lack of understanding of the impacts of climate change on ecosystems and their capacity to deliver environmental services such as water supply, biological stability, and the recycling of nutrients such as nitrogen. While, the government has prepared an initial communication to the Climate Change Convention identifying impacts and mitigation potential, there is a need for additional efforts to clarify the extent of the impacts and the needs for adaptation to climate change.

For example, climate change impacts on the headwaters of the river basins, and net impacts on the water cycle and the high alpine forests, are all likely to have an affect on the stability of the ecosystems involved in the generation and regulation of hydroelectricity and in the regulation of the hydrology of many rivers. Therefore there is a need to identify these impacts and adaptation and mitigation measures. The key issues here are the lack of understanding of the impacts of climate change on rainfall and the stability of the Paramos. Also, the effects that increased climate variability may play in the hydrological cycle of the region have a potentially critical importance.

Poor Linkage Between Global Issues and Local Development

There is a need to strengthen the identification and valuation of cobenefits (benefits above and beyond those of global interest). Cobenefits are key to bringing local ownership to efforts to value and protect the global commons; however, this has been hampered by the lack of understanding of the types of benefits that could be accrued as part of programs that promote, for example, mitigation or sequestration, conservation of biodiversity, and protection of watersheds or other ecosystems that lend environmental services of global value. It will only be possible to conserve biodiversity, along with other environmental heritages of global importance, if it is possible to harmonize local, regional, and global benefits (World Bank 2001).

Projects and programs to value and protect the commons must be carefully formulated with local social and economic groups in order to develop strategies and methodologies that will yield benefits of local value, such as projects that control
leakage, ensure additionality, provide permanent CO₂ storage, and generate high levels of social and environmental benefits.

The focus on maximization of social and environmental benefits in project and program formulation would support improved livelihoods of rural workers and a more environmentally sustainable model of production. Results indicate that positive leakage may be more probable than negative leakage, given the enthusiastic embrace of the CDM opportunity by the groups associated with project design and development. Of great importance, the increase in the average wages supported by the projects exceeds the stated salary needs of rural workers. The project-specific cash-flow analyses calculated under the National Strategic Study indicate that wages begin to increase gradually over time and attain levels four to five times greater than current minimum wages, due to the multifunctional nature of the projects, the added income from CO₂ capture, and the sustainable uses of the local natural resources base.

The multiple-use focus of the projects offers a better probability of sustainable and productive use of the commons than projects that focus only on protecting the commons from an international perspective (under the CDM or the GEF programs), because of the ability to optimize the cost, income, and collateral benefits for all stakeholders involved.

To summarize, most economic and social sectors of the Colombian economy have a tremendous, if unintended, impact on the global commons. This is particularly so for sectors such as agriculture, education, transportation, energy, and foreign trade. In most cases, policies and incentives in particular are defined without close consideration of biodiversity issues, often resulting in measures incompatible with biodiversity. The main reason for this is lack of good knowledge of the goods and services that protection of the commons offers to those sectors, the economic externalities of sustainable use and proper stewardship, and understanding of the impacts on the sustainability of the economy from improper management of the natural capital assets of the nation. There is an urgent need for national leadership to coordinate major initiatives on this duality of purpose (local/global).

Social Conflict and Use of Natural Resources

Conflicts over land use and zoning. The essential point of conflict over land use in Colombia is the contrast between current and potential uses. According to the Instituto Geográfico Agustín Codazzi (Geographic Institute, IGAC, 2001), there is a serious disconnect between appropriateness of use and actual use of land. Too much land is being used for extensive cattle ranching at the expense of land that is either better used for agriculture or should be kept under forest cover.

Despite some regulatory headway, the development and implementation of Land Zoning Plans is still very incipient. Tropical rainforest is still being turned into pastureland for large-scale livestock operations, Andean mountainsides are cultivated using inappropriate techniques, and protected forests in hydrographic basins are cut.
down and desertification continues to increase. In short, ecosystems that generate environmental services of great economic and social importance are being destroyed.

Infrastructure development, especially highway construction, in areas with no potential other than for logging, has led to accelerating destruction of natural ecosystems. Infrastructure development has, perversely, become an incentive to cause even greater environmental deterioration, thus reducing the country’s ability to achieve sustainable development.

IV. Policy Recommendations

Invest in Conservation and Sustainable Use of Natural Capital

The centerpiece of the Colombian government's sustainable development strategy should be to use an increasing amount of the natural capital that is turned from reserves into income—oil and mining royalties—to finance environmental management and the sustainable use of natural resources and generally contribute to Colombia's sustainable development.

This needs to be complemented with an effort to capitalize the services that the natural capital of the nation provides to the global community (global biodiversity, climate protection and conservation of international waters). This will also contribute to investments in the conservation of the natural capital and to the sustainable development of the nation.10

Key elements of the policy agenda include:

i. Promote the conservation and sustainable use of biodiversity

- Discourage further extension of agricultural frontiers (avoiding investments in infrastructure that could foment colonization in tropical rain forest or other fragile zones that are frequently destroyed in pursuit of short term and unsustainable agriculture or livestock operations) as part of the efforts to conserve natural capital. Furthermore, it would be useful to impose high taxes on anyone who converts ecosystems into pastureland in fragile forest and watershed areas.
- Consolidate the gains of the land zoning regime as an instrument of conservation and further enable its application through the engagement of local communities. For example, support to organizational processes of local communities in the 36 percent of the country where there are com-

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10. An essential component of the technological challenge for developing Colombia’s rural sector is to take advantage of the biodiversity and resources of the forest in a sustainable manner. Turning tropical biodiversity into a competitive advantage demands a research effort qualitatively different from the one being made in other areas of the world, and demands both a reorientation of the research efforts and an increase in the financial resources dedicated to this goal.
municipal lands, indigenous reserves, national parks, forest reserves, and private natural reserves would enable a strong alliance of local, national and global interests that on paper have much in common. These includes the following elements:

- The consolidation of indigenous and Afro-Colombian peoples on their own lands is a strategic aspect of conservation and sustainable use of natural resources. In this context, there is an urgent need to formulate and implement the Management Plans for communal lands in indigenous and Afro-Colombian communities.\(^{11}\)
- Broad public participation in conservation will strengthen new agreements for managing protected areas with nongovernmental and community organizations, including minority ethnic groups.
- Adoption of a "social policy for conservation" through the the support of organizational processes in local communities aimed at managing and using the Regional Protected Areas Systems.
- Promote the development of new markets for products from the sustainable management of natural resources.
- For example, economic incentives are needed to support efforts to integrate biodiversity into production systems and to identify and develop new markets. The greatest opportunities are in essential oils, medicinal plants, ornamental plants and wildflowers, exotic tropical fruits, natural dyes, certified tropical woods, ecotourism, and agrotourism.
- Opportunities for new markets must be linked to the rights and the appropriate use of both indigenous and rural peoples’ knowledge.
- A regulatory framework of incentives for organic agriculture must be consolidated to help encourage certified organic markets for small, medium, and large producers.

\textit{ii. Integrate the global commons into national development planning}

- Make explicit use of financial mechanisms considered under the Kyoto Protocol, biodiversity convention, and agreements on the protection of international waters as a potential source of revenue, thus creating incentives for, among other things, energy conservation, forest management, and sustainable use of watersheds. This can be achieved by:
  - Internalizing the results of the recent First Communication to the Convention in the overall economic planning of the new Administration.
  - Incorporating the results of the vulnerability studies as an input for the overall plan of action of the Ministry of Environment and the corresponding Regional Corporations so that adaptation actions can be visualized and acted upon

\(^{11}\) For more information on this issue, see Chapter on Indigenous Peoples and Afro-Colombian Communities
• Adopting a national plan of action on climate change, for overall coordination and facilitation; this plan of action would serve as the basis for the Second Communication to the Convention.
• Adopting a National Plan of Action on conservation and management of international waters and desertification issues.
• Adopt a Plan of Action on adaptation to the impacts of climate change that can be used as a basis for securing international community support.
• Promote participation of local communities in awareness, valuation exercises, and identification of use of the global commons in local development initiatives. The best strategy to internalize global commons issues is to make them pay for local development concerns. Colombia's experiences with the initial set of projects under the CDM portfolio (Jepirachi in Wayuu Territory and Rio Amoya in the community of Chaparral) are good examples that could be replicated.
• Strengthen application of the institutional and regulatory framework to extend protection of the global services provided by the natural mitigation and sequestration capacity of the nation. Within the existing normative framework, develop an agreement with all key public and private stakeholders, including the information, infrastructure, and instruments required to identify, formulate, and implement mitigation and sequestration opportunities. We recommend:
  • Continuing the recently completed arrangements to coordinate climate change issues through an interagency committee under the office of the Vice-President.
  • Continuing plans for the organization of the Colombian Office for Greenhouse Gas Mitigation, and making efforts to sustain the office in the long term through the involvement of private investors and agencies.
• Ensure multisector participation in policy discussions, decisions, and regarding access and use of the global commons (energy, agriculture, forestry, not just environment). The mechanism already created for the Vice-President's office to play a facilitating role in climate change should be maintained and replicated for other commons issues (biodiversity, international waters).
• Explore the potential link between the sustainable development agenda, use of the commons, and the peace process. Specifically, the valuation and capture of revenues from environmental services (protection of international watersheds, emission credits, carbon sinks, biodiversity services) represent potential revenue for rural communities. These revenues may help crop eradication and indirectly assist with the peace process.

iii. Engage the natural capital assets of the nation in macroeconomic management
• Given the large natural capital assets (biodiversity, indigenous cultures, carbon sinks, international basins), there exists an important opportunity for the country to use these assets in debt management Nature-for-debt swaps
should be explored as an alternative to adjustment loans. The debt swaps could lower the existing debt of the country, reducing their burden on the budget, and increase the area under protection, conservation, and management. These swaps could reduce the sovereign debt of the nation and catalyze the conservation of natural capital through either:

- The organization of new natural reserves, indigenous areas, or areas of conservation; or
- Commitments to set aside areas that could be preserved for future generations. Specifically, large tracks of the Eastern Plains, Amazon, and Orinoco Basin could be earmarked for protection in exchange for debt reduction.

iv. Assess the potential for multiple environmental services

- For example, forests play a key role in climate change, biodiversity conservation, and protection of water basins, and serve as habitats for indigenous cultures. These multiple roles need to be integrated into sustainable strategies and practices. At the national level, legal instruments and economic incentives must be developed to guarantee that environmental services are provided. This will allow for progress in the recovery or conservation of natural ecosystems in many of the country's micro-basins.
- For farmers located in fragile and strategic ecosystems—protected watersheds and hillsides with steep slopes—it is fundamental to stimulate the poly-functional character of the agriculture, and the use of the space. This means supporting activities that complement agricultural activities, such as local systems to charge for the environmental services, agro-tourism, certified organic agriculture, peasant markets in the big cities, and artisan-manufactured goods.
- Identify incentives and disincentives to promote sustainable management of natural assets, including the potential role of emission-reduction revenues (carbon finance) and adaptation funds or other sources, under the proposed Clean Development Mechanism.
- Train Human Capital for Sustainable Development. Investment in education and professional training for sustainable development needs to be refocused so that an understanding of the natural environment, its features, and its potential becomes a key aspect of education in Colombia. The focus on environmental training must begin in elementary school. Conditions that inspire the public to demand a more effective institutional role in the environment will result in strong support for sustainable development initiatives. Government investment in public participation in environmental management is highly profitable in the short term.
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Building a Government of Quality
At the Crossroads of Decentralization:
Recentralization, Federalization

*This Chapter was written by Fernando Rojas.*

**Introduction: The Gap Between Objectives and Achievements**

For nearly 10 years, between the mid-1980s and the mid-1990s, Colombia deposited economic, political, and administrative expectations in the promising basket of decentralization reforms. The country fell in love with the ideals of decentralization, and those ideals moved constitutional powers, the Executive, and the Legislative, to pass reforms that would have been unthinkable otherwise. However, the results of Colombian decentralization have fallen short of expectations.

Section I of this Chapter summarizes the gap between the postulated benefits of decentralization and the actual results in Colombia from the mid-1980s to the present. Section II discusses both the factors and the particular features of decentralization design and implementation that may account for the partial failure of decentralization in Colombia. Section III discusses the present crossroads of the decentralization process in Colombia. It weighs the pros and cons of the three broadest courses of action that appear to be open for the next legislature and the next government. By openly discussing those basic options, this Chapter brings to the table options that the country has only begun to discuss, including a partial reversal of decentralization. Those three broad avenues are:

- The prevailing course of action consisting of fine-tuning and adjusting decentralization to lessons learned and contemporary fiscal and political realities
- The options of recentralization in the short term which—paradoxically—is not incompatible with intensification of decentralization, to the point of federation or confederation, in the long term
- Neither proposing nor discussing a new course of action while other government policies silently produce a reversal of decentralization.
Section IV elaborates on what appear to be feasible recommendations for putting decentralization back on track.

I. Colombia: A Country Committed to Decentralization, Groundbreaking Reforms, and a Precedent-Setting Decentralization Framework

Colombia adopted an integral approach to decentralization reform—including fiscal, social, political, and administrative goals and tools—before any other country in Latin America and the Caribbean (LAC). Since the constitutional reform of 1986, which introduced elections for local mayors, decentralization has been charged with primarily political goals such as restoration of peace and deepening democracy, administrative goals such as strengthening management capacity at sub-national levels or improved intergovernmental communication and coordination, and fiscal goals such as the relief of local and regional pressures on the central budget or downizing the central government. Other LAC countries—including Brazil and Venezuela in 1988 and Bolivia during 1994–96—soon followed the Colombian precedent by enacting comprehensive, multidisciplinary decentralization reforms.

Colombia has been widely recognized as one of the leading countries in fiscal decentralization reform in LAC. First in 1986, then in the constitutional reform of 1991 and corresponding legal and regulatory developments, the country transferred substantial revenues and significant responsibilities to subnational governments. The package of fiscal transfers was well balanced, combining general-purpose transfers for a wide range of services (Participaciones) with earmarked transfers for education and health (Situdo Fiscal). Two of the three transfers defined in the 1991 Con-

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1 Most important of all, the Colombian pathbreaking Law 60 of 1993 for distribution of revenues and responsibilities across levels of government.
2 Like most other countries, Colombia has for decades sought to consolidate an adequate system of intergovernmental relations—fiscal and otherwise. Indeed, Colombian precedents in decentralization go far beyond the Constitutional reform of 1986 (which introduced elections—rather than Executive appointment—of mayors) Since the Constitutional Reform of 1968 and Law 33 of the same year, Colombia sought to strengthen subnational governments and ordered both general revenue sharing for departments and municipalities and specific sharing of the Value Added Tax for municipalities. Since the mid-1970s, Colombia discussed how to reform the roles and responsibilities of levels of government, and attempted one major constitutional amendment. The so-called—and much-heralded—bird Report on Colombian intergovernmental fiscal transfers focused the debate on macrofiscal policy (see R. M. Bird, Finanzas Intergubernamentales en Colombia. Informe Final de la Mud, Departamento Nacional de Planeación, Bogotá, [1981]). The subnational tax reform of 1983 (Law 14 and supplementary decrees) strengthened own revenues and sought to stimulate additional fiscal effort at subnational levels.
stitution were formula ruled, and transfers were timely and transparent. The problem with those transfers—that still remains after the constitutional reform of 2001 that unified main fiscal transfers into a single fund—was that conditionality was not sufficiently defined and responsibilities were not sufficiently divided to allow monitoring, enforcement, and accountability.

The size of fiscal transfers, plus own revenues of subnational governments, entitled Colombian departments and municipalities to nearly half of current public sector revenues, a share so high that it is rivaled only by the total share of subnational government revenue in Argentina and Brazil, the two most-established federations in LAC. The radical pace of fiscal decentralization can be visualized by the drastic jump in total subnational expenditures as a percentage of gross national product (GNP), beginning with less than 3 percent in the mid-1960s, then gradually scaling up in a sustained way through the constitutional and legal reforms of 1968, 1983, 1986–88, and 1991–93, until reaching a peak of nearly 14 percent of GNP since 1999. As a matter of fact, Colombia, a unitary country since 1886, is more fiscally decentralized than federal Mexico or Venezuela, and certainly more than any other unitary country in LAC.

Fiscal decentralization was also pursued as a means of raising the investment/current ratio of public expenditures, expanding subnational sources of revenue and enhancing the fiscal effort of departments and municipalities. Finally, Colombia preceded countries like Brazil or Mexico in adopting a market-like set of rules and monitoring mechanisms to regulate subnational borrowing. The so-called Ley de Semaforos of 1996 was a pioneer in LAC in introducing new measures and market signals for subnational indebtedness capacity, which included transferring the risk of lending to commercial credit institutions.

From a social point of view, Colombia sought to use decentralization as a tool for increasing social expenditures, enhancing efficiency in education and health, compensating territories with weak fiscal capacity, and targeting safety networks for a more effective fight against poverty. During the 1990s, total social expenditures jumped faster in Colombia than any other country in LAC—from nearly 8 percent of GNP during 1990–91 to more than 16 percent during 1996–97. Similarly, per capita distribution of fiscal transfers to municipalities kept a positive correlation with the index of unsatisfied basic needs during 1995–2001.

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3 Those two transfers were the so-called Sistume Fiscal (initially created by the Constitutional Reform of 1968 for financing health and education, then adjusted and kept through the Constitution of 1991) and the Participaciones (a transfer primarily targeted to education, health, low-income housing, and water, but potentially applicable to just about any local responsibility). The third transfer, the distribution of a part of oil and mining royalties to departments and municipalities, created by the Constitutional Reform of 1991, has never been distributed in as transparent a way as the Sistume Fiscal or the Participaciones.

Colombia invested heavily in strengthening the management capacity of subnational governments. The country was also a leader in Latin America in partially recognizing that subnational governments have different management capacities. After struggling for decades with the delicate issue of nonuniform rules for regional (departments) or local (municipalities) governments that belong to a unitary country, Colombia followed the Spanish precedent of voluntary, quasi-contractual arrangements for gradual transfer of revenues and responsibilities to subnational governments that qualify for such a transfer. Beginning in 1993 the country adopted a gradual process of the transfer of health and education resources and responsibilities to those subnational governments that effectively demonstrated capacity to manage, account, and report to the central government according to common standards established by the central government. The so-called certification process—which for the first time cast Colombian decentralization in a contractual, results-oriented framework—was geared to strengthening accountability and enhancing efficiency. This sort of "incomplete-contract" approach was observed with most interest, adjusted, and adopted by other LAC countries in subsequent years.

Political goals at times have been the driving force behind Colombia's long march toward decentralization. The reforms of 1986–88 and 1991–93 both postulated decentralization as a means to strengthen representative and participatory democracy. The political potential of decentralization for strengthening governance and autonomy at subnational levels appeared to be endless, and by the early 1990s the country entertained debates on federalization—something unheard of in Colombia since the failed confederation and federation arrangements of 1853 and 1863 and the return to a unitary form of the state in 1886 and 1910. More so than in any other country in LAC, Colombia pursued decentralization with the hope of reestablishing peace and governance. Electoral reforms supplemented the transfer of resources and responsibilities to ensure genuine local representation, and opened the door to independent candidates (from the two largely clientele-dominated traditional political parties) and distinct government coalitions at regional and local levels.

Colombia was the first unitary country in LAC to adopt the trend-setting practice of elected governors for the intermediate level of government. Closer relations

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5. Primarily the largely failed Programa de Desarrollo Institucional of the first half of the 1990s
6. The country first tried an across-the-board, uniform transfer of responsibilities to municipalities in 1986. Municipalities then received substantial additional transfers but failed to effectively assume responsibilities, thereby creating a vertical imbalance that needed correction. That vertical imbalance was made more acute—and threatened macroeconomic stability—when the central government failed to quickly reduce expenditures and downsize ministries for sector responsibilities transferred to subnational levels.
7. Going back all the way to the Constitutional Reform and Law 33 of 1968 that clearly differentiated Bogotá from the rest of the country for purposes of fiscal transfers.
8. Paraguay and Ecuador adopted similar reforms. Peru has announced election of intermediate governments for the end of 2002. Chile has often entertained the idea of electing the regional intendentes. The Dominican Republic is currently debating a similar reform.
between citizens and elected governments should bring about islands of excellence in terms of political legitimacy and governance. Decentralization was postulated as a powerful tool for easing the tensions that had fueled internal conflict during the last 40 years. By granting higher autonomy to local and regional jurisdictions, citizens and governments could work out solutions to particular problems, thereby alleviating the burden of regional demands on the national level. From the mid-1980s to the beginning of the 1990s the country appeared to be ready to sacrifice 100 years under a unitary system for the sake of political stability. Like Spain in Mediterranean Europe, Colombia undertook drastic political decentralization reforms far beyond all unitary countries and some of the federal countries in Latin America, with the only possible exceptions of Argentina and Brazil.

Soon after the constitutional reform of 1986 that introduced popular elections for local mayors, municipalities created their own federation—one of the first of those lobbying and support institutions to be created in LAC. Regional governments followed suit after the constitutional reform of 1991 ordered elections of governors. By 2002 subnational governments and other stakeholders of the decentralization process were generally organized and well established. Universities and independent think tanks actively follow decentralization. Taken altogether, there is in Colombia a vibrant, often well-articulated decentralization community that continuously debates and tries to keep an eye on the process of decentralization in the country.

a) Unsatisfactory Fiscal Results

In spite of Colombia’s pioneering and ambitious decentralization reforms throughout the last two decades of the 20th century, the process of state decentralization is still far from complete. Despite government commitment to and creativity in decentralization reform, most stakeholders (including local and regional governments) appear frustrated by the initial results. By 2001 a good number of departments and municipalities were heavily overindebted, and the central government was forced to provide partial bailouts—conditioned on subnational commitment to adjustment programs. The central level has had no capacity to effectively monitor subnational fiscal effort, current expenditures, or indebtedness capacity. There is widespread evidence of disproportionate growth of current expenditures at the cost of subnational investment and debt service. Quality enhancement in education is far from what the country bet on when it earmarked more than 30 percent of current government revenues for education. Health services have also been negatively affected during the combined transition to decentralization and market-oriented reforms. Finally, fiscal

9 Bailouts and required adjustment packages were adopted by Law 617 of 2000. Following the precedent of Brazil’s Fiscal Responsibility Law, Law 617 introduced severe fiscal discipline rules and corresponding monitoring indicators and sanctions.

10 See Education Chapter
transfers have become one of the critical factors threatening macroeconomic stability. The two major transfers (the *Situado Fiscal* and the *Participaciones*, that account for over 40 percent of central government current revenues and were unified in a single fund after the constitutional reform of 2001) have been insufficient to cover increases of current expenditures, particularly the growth of the teacher payroll (salary and benefits included).

Since the growth in the teacher payroll is primarily due to decisions at the national level, moral hazard is high, and the central government has been bound to come to the rescue of subnational governments with additional, temporary transfers that soon become permanent. Teacher rigidities (such as regarding relocation, number of hours in the classroom, and teacher–student ratios) have moved local or regional governments to appoint their own teachers, thereby creating additional fiscal pressure on the total public sector bill. Moreover, additional transfers have always proven to be insufficient to pay for increases in teacher and other subnational payrolls.

*b) Insufficient Capacity Strengthening*

After nearly 10 years since the reforms of 1991–93 were hailed as precedent setting for the entire region, fiscal decentralization has by and large failed to deliver better quality, higher coverage, or more efficient services. Weak management capacity and underdeveloped administrative frameworks are at least partially responsible for the failure of fiscal decentralization. With a few, noteworthy exceptions, local and regional governments have not demonstrated the capacity to increase subnational tax efforts, mobilize additional resources, or increase efficiency in allocation and production.\(^{11}\) The central government largely ignored the required standards for certification of departments for social expenditures and—under political pressure—went ahead with the transfer of education resources and responsibilities to those departments that did not meet the required qualifications. After 10 years since the most recent wave of decentralization and hundreds of millions of dollars invested in capacity strengthening of subnational governments,\(^{12}\) the 2000–01 reforms had to introduce emergency solutions to the problems of poor budgeting and accounting, fiscal irresponsibility, lack of accountability and transparency, unclear division of responsibilities, the endless push for additional transfers, the debt push moved by significant fiscal imbalances, and insufficient hard budget constraints at subnational levels.

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12 Including the heavily financed *Programa de Desarrollo Institucional* (PRI) of 1991–95.
c) Decentralization Did Not Meet Democracy and Governance Expectations

Elected governors complain that the main responsibility of intermediate levels of government has been downgraded to printing the checks for teachers and other unionized workers whose salaries are discussed and agreed at the national level. Mayors realize that central government agencies have kept control of social investment funds and other discretionary sources of funding to protect the electorate interests of national politics over locally based elections. In spite of electoral reforms to further fragment electoral jurisdictions and single-candidate slates, subnational governments continue to be largely dependent on central government parties and contacts in Bogotá. Perhaps the largest political question that remains to be answered is what is the most adequate degree of autonomy for subnational governments in view of the internal conflict the country is going through.

II. Factors that Account for Partial Failure of Decentralization in Colombia

Despite all the merits—including careful preparation and gradual building up—of the Colombian decentralization framework, the truth is that it does not provide governments with the necessary incentives for subnational governments to give absolute priority to enhanced efficiency in service delivery, responsiveness to local residents, or fiscal discipline. Fiscal, political, and administrative decentralization factors combine to deviate behavioral signals and incentives from the expected goals of decentralization. Besides factors that are internal to the decentralization process, at least three main external factors have during the last few years jeopardized the achievements demanded from decentralization: internal conflict, economic recession, and weak governance at the central level.

a) Fiscal Decentralization Factor

In the expenditure column, both the design and implementation of decentralization have protected the supply side of service delivery. In the revenue column, the country is not adequately exploiting the revenue potential of subnational governments.

i. Cost-Based Rigidities, Debt Push, and Weak Accountability

Rigid cost-based fiscal transfers have been the most critical problem of the fiscal design of decentralization since the Constitution of 1991, and Laws 60, 99, and 100 of 1993. Although those reforms were largely inspired by demand-based transfers, political factors—including labor laws and budget inertia—ensured the continuity of supply-driven transfers for education and—to a lesser extent—health. As a result, the country has been de facto committed to increasing transfers in proportion with salary and benefit increases or expanded payroll. When earmarked transfers for
health and education have been insufficient to pay for rigid education costs, local
governments used to allocate increasing portions of the Participaciones. If both the
Situado Fiscal and the Participaciones became insufficient, the central government
created additional transfers—initially on a temporary basis, and later institutional-
ized and made permanent.13

At the end of the day, payroll increases decided at the national level are consum-
ing most of the fiscal transfers that were originally intended to strengthen the capac-
ity of subnational governments to respond to citizen priorities and enhance efficiency in allocation. Although the constitutional reform of 2001 unified the main transfers and set a ceiling on their rate of growth, the fundamental problem of weak
subnational management of education—and corresponding debt-push vertical imbalance—still remains.

Neither are subnational governments accountable for quality and quantity of basic services, nor is the central government legally responsible for delivery of social services. Revenue transfers have a life of their own, regardless of actual division of responsibilities. Subnational governments resort to all sorts of debt (direct, indirect, floating, contingent) when they find transfers insufficient to pay for their own staff or for functions recently devolved by the central government. In sum, rigid cost-based fiscal transfers create vertical fiscal imbalance and debt push, weaken hard budget constraints, and make it impossible to single out responsibilities for social service delivery.

ii. Underutilization of Subnational Fiscal Capacity

The confusing division of expenditure responsibilities has not only created signifi-
cant fiscal imbalances, but has also diluted the potential fiscal effort incentive of
what would otherwise be a well-balanced package of general purpose and earmarked fiscal transfers. As recently documented by the evaluation of decentralization by the National Planning Department, most municipalities underuse the revenue potential of their own sources of revenue, particularly the property tax.14 As a matter of fact, the very design of subnational tax policy and administration contributes to under-
utilization of the property tax and the vehicle tax, two of the three largest sources of local tax revenue in Colombia.15 First, the central government still interferes with valuation rules that limit the creativity of local governments to update cadastral values for property taxation. Second, it is still difficult to combine the property registry, still largely in the hands of the national government, with the property tax cadastral.

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13 The most recent example is the Fondo Educativo Compensatorio (FEC).
14 Departamento Nacional de Planeación, DDT (2002). Evaluación de la Descentralización
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15 The other major source of tax revenue—often the largest one, particularly in larger
municipalities—is the turnover tax on gross sales, known as impuesto de industria y comercio
In addition, standards for valuation of vehicles, which is also the responsibility of the national government, often underestimate the current value of used vehicles.

It must be noted that some municipalities have at times reacted positively to the revenue incentives of the decentralization framework. Documented cases indicate, for instance, that intermediate cities such as Envigado, Manizales, Pasto, Rionegro, and Valledupar have occasionally taken advantage of their own revenue potential to provide the cities with additional resources. But in the absence of an adequate incentive framework, these cases are usually short-lived.

Bogotá and Medellín have demonstrated more sustained fiscal effort. Both cities run their own multipurpose real estate cadastres. Medellín has traditionally kept high tax administration standards while Bogotá has systematically strengthened its tax administration for more than a decade. The tax challenge for these larger cities is therefore different from the challenge for most other municipalities in the country. As happens with so many other metropolitan areas of the world, Bogotá and Medellín appear to be willing to reduce fiscal dependency from central government transfers. What both cities are demanding is additional, more dynamic sources of local revenues. Both claim that their tax administration—particularly in the areas of fiscalization and reduction of tax evasion and tax avoidance—are probably better equipped than the national tax administration.

Given the importance of separating the taxes of the 10 or 20 largest cities and metropolitan areas from the taxes of the other 1,000 or so municipalities, the remainder of this section discusses how and why Bogotá has come to the conclusion that it can go only so far with existing tax bases, and is demanding that the central government authorize the city to manage new taxes of its own.

**iii. The Exhaustion of Tax Sources and the Demand for New Taxes in Bogotá**

To improve its tax policy and tax administration, Bogotá needs to (a) address the fiscal crisis that has hit the country since 2000, (b) improve service delivery in a context of confusing division of responsibilities and weak accountability across levels of government, (c) further reduce fiscal dependency rates by using the full potential of current taxes and by seeking additional sources of tax revenues, (d) redefine the role of local government through privatization and outsourcing measures, and (e) carefully manage borrowing and maintain overall responsible fiscal policies.

For the last five years Bogotá has kept investment rates well above the national and subnational average. The Capital District has also achieved considerable improvement in service delivery, particularly in education (coverage and quality), road maintenance, water and sanitation (coverage), telecommunications, security, and street lighting. Bogotá is currently developing new programs for the sustained care of street children and internally displaced people. However, the city faces serious revenue constraints. The expected fiscal deficit of the Capital District for 2002 totals COP400 billion (roughly US$180 million), despite the fact that in the last 11 years the municipality has cut down current spending. Two main factors appear to account for the expected current deficit:
• The central government is beginning to be in arrears with education and royalty transfers. This is the first time this has happened in Colombia since the introduction of decentralization in 1986–88.

• The full potential of the city’s own revenues is underutilized: (a) the City Council has denied the six tax reform proposals sequentially presented by the present administration, in spite of substantiated evidence of residents’ willingness to make an additional fiscal effort; and (b) national policies and intergovernment arrangements prevent full management control of tax bases by the city administration.

Although the city still has some room for capital income from privatization, it can no longer rely on privatization—at least not the way the previous city government did. In the absence of tax reform and substantial revenue from privatization, the city has used part of its considerable indebtedness capacity to partially cope with the fiscal deficit and underinvestment. Borrowing has been partially allocated to current expenditures (particularly education, since central government transfers for education in Bogotá have always left a substantial portion of the city’s expenditures in education to be paid by the local government). The city government realizes this is not a fiscally sustainable policy and is struggling to find ways to increase current revenues.

To improve its financial situation the government of the Capital District is pursuing a three-pronged approach to (a) expand tax bases and strengthen tax administration, (b) increase tax rates, and (c) explore new tax bases.

(a) Expand the Tax Bases and Strengthen Tax Administration for Currently Existing Taxes

• Property Tax (Impuesto Predial). The property tax is the second-largest source of tax revenue for Bogotá. Property tax revenues increased tremendously during the first few years after introduction of self-reporting, then declined somewhat afterward—which can be at least partially attributed to the slowdown of the real estate industry during the last few years of the 1990s. Self-reporting has been pretty much abandoned and the tax administration has gone back to almost exclusive reliance on regular cadastre valuation. It is estimated that Bogotá property tax assessment reflects an average 70 percent of commercial value (compared to 85 percent in Medellín, the city that has traditionally had the best property tax administration). City management is now pursuing an expansion of the property tax base through (a) further elimination of tax exemptions, including some exemptions established by the national level, which therefore escape the control of the city; and (b) either better coordination with the national level for or transfer from the national level of the property tax registry.

• Vehicle Tax. Bogotá has only limited control of the vehicle tax since (a) Colombia has a residential-based vehicle tax that appears to require a national
vehicle registration system, and (b) valuation is established by the National Ministry of Transport—which has led to considerable undervaluation. The city is now pursuing ways to coordinate with the national government for purposes of vehicle registration. It is also trying to develop its own valuation and to have it accepted by the national government

- **Beer Excise and Gasoline Surcharge (Sobretasa a La Gasolina).** Again, the city is seeking greater participation in auditing and control via administrative arrangements with the national government. It is confident it can do better than the national government in terms of fiscalization.

Taken altogether, the potential marginal increase in revenue that can be expected from the above reforms is very small when compared to the city’s need for additional revenues.

**(b) Increase Tax Rates**

The city is seeking an average increase of 35 percent in the rates of the industry and commerce turnover tax Expected tax revenues from this tax increase are COP200,000 million, or roughly half of this year’s expected deficit. Much of the weight of the rate increase would fall on the financial sector. Although the city realizes that the Impuesto de Industrias y Comercio (ICA) is far from being neutral—indeed, it can create tax distortions like probably no other tax in the country—it has little room to raise current tax revenues from other tax sources controlled by the local administration.

**(c) Explore New Tax Bases**

The city administration is implementing three additional sources of tax revenue that have already been authorized by law.

- **Contribución de Plusvalía.** This property-tax-related levy has been a source of much urban improvement in Spain and—although less so—in Brazil. North American cities like New York, Chicago, Indianapolis, and Mexico City have also recently applied creative forms of benefit-based taxation and local public-private partnerships to renovate deteriorated parts of the urban landscape (as in the case of the southwest-most tip of Manhattan and the Times Square area in New York City), or to consolidate historic downtown areas (as in the case of Mexico City).16

- **Inter- and Intracity Tolls.** The city is seeking the support of both the national and departmental (Cundinamarca) governments to reach a revenue-sharing arrangement regarding intercity tolls on the seven main roads leading to the city. Similar to other Latin American cities, Bogotá should shortly

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adopt intracity tolls, particularly at the periphery. Again, tax revenues would represent at best 0.5 percent of the current deficit.

- **Contribución de Valorización.** This tax has been in existence for a long time and recent administrations have tried to make the most of it. The newness in the approach of the present administration consists of imposing rather substantial valorization levies on every city “mega-project,” such as the urban transport system or Transmilenio.

Again, taken altogether, the above three new sources of tax revenue not only have a small revenue potential but, similar to the vehicle tax, they provide the city with earmarked revenues that the government cannot readily allocate to growing current expenditures, such as education.

Given the above panorama, it is no surprise that the Bogotá administration has come to the conclusion that present sources of tax revenues and intergovernmental arrangements for tax management do not correspond to the needs, revenue potential, or fiscal performance of the city. With a view to demonstrating its point to both the national level and the local City Council, the city government has called for voluntary contributions (a 10 percent voluntary surcharge on the property tax and the ICA) from taxpayers already convinced that the city makes effective and efficient use of tax revenues. Some 40,000 taxpayers (90 percent property tax, 10 percent ICA), many of them belonging to the lower income levels, have already subscribed to this voluntary contribution, for an average of COP22,000 per taxpayer.

The medium-term goal of the city is to persuade both the central level and the local City Council to approve new—potentially more dynamic and more cost-effective—sources of revenue for Bogotá. The city envisions tax-sharing arrangements with the central level for both the income tax and the VAT. According to city studies, a 1 percent surcharge on the VAT would produce additional revenues for the city sufficient to cover the present deficit. In addition, the city is confident it can increase tax revenues through more effective auditing and collection processes than those currently applied at the national level.

**iv. Debt-Push Decentralization**

While the decentralization process in Colombia has brought advances in governance and provision of public services in a relatively small number of municipalities, the effect on intergovernmental fiscal relations has been generally negative. Fiscal imbalances—compounded by inadequate revenue sources for larger municipalities—create a debt push that has moved many subnational governments to borrow excessively. Regardless of existing regulations, the pressure is there for politically motivated local governments to take advantage of borrowing opportunities for uncreditworthy entities in order to overspend, at the cost of overindebtedness at the subnational level. Despite the so-called Ley de Semáforos and Law 617 of 2000, the country has no effective mechanism to either prevent or sanction fiscally irresponsible municipalities.
First, the national level does not appear to have sufficient information and monitoring capacity to effectively implement current laws. Second, as international experience has indicated, the best preventive mechanism—short of prohibiting subnational borrowing altogether—is to effectively transfer the risk of overborrowing to the lending agency via banking regulations and independent credit rating agencies. In turn, the most effective sanctioning mechanism is to take away fiscal management from fiscally irresponsible municipalities and give it back to the national level until adequate adjustment has taken place and a new management culture is in place. Since Colombia does not yet have effective preventive or sanctioning mechanisms, if and when political pressure mounts, the central government is likely to be too weak politically to resist demands of special interest groups.

v. Administrative Decentralization Factors

Since decentralization first started in earnest in 1986, the central government has recognized the need to invest resources in strengthening management capacity. However, central government spending for strengthening management capacity has largely failed because (a) it has been primarily targeted to subnational governments, and by and large, those programs have overlooked the need to strengthen the central government to enhance transparency in and capacity for intergovernment coordination and reporting; (b) top-down programs have proved to have little or no impact. On the contrary, horizontal exchanges among subnational governments have been widely recognized as more effective than central–subnational programs; and (c) most programs have lacked precise focus.

What are those management capabilities that are essentially required? No decentralization process can succeed in the absence of common accounting, budgeting, reporting, disclosure, and procurement standards. Although Colombia is advancing toward integrated financial management at the national level and in some major cities (such as Bogotá), the country is still far from properly connecting budget planning and execution with treasury disbursements and accounting for reliable meas-

17 In the Latin American context, Mexico adopted such a quasi-market regime in 1999–2000.
18 As the central government did one time with the capital city of Bogotá in the not-too-distant past.
19 It can be argued that the Brazilian Law of Fiscal Responsibility is being properly implemented. However, surveys of similar measures adopted by Brazil throughout its recent history have pointed out that proper implementation of the Law of Fiscal Responsibility is more the result of a change in culture (generalized fear of hyperinflation) than the actual monitoring and sanctioning capacity of Brazilian federal authorities.
20 The central government recently invited local governments and lending institutions to follow credit ratings by reputable agencies and make adequate capital provisions accordingly. However, adoption of this mechanism is voluntary for both municipalities and lending institutions, and there appears to be no single case in which it has been properly practiced.
urement of decentralization costs and benefits. Likewise, although the country is moving toward a comprehensive fiscal information system, the proposed system falls short of the information needs for monitoring and evaluating decentralization. As demonstrated by the recent evaluation of 10 years of decentralization in Colombia, current accounting and reporting standards do not lend themselves to identifying the results of decentralization (what and how some subnational governments are doing better than others or better than what the central government used to do). In the absence of results-oriented budgets, accounting, and reporting, no intergovernment performance or result agreement can be effectively monitored. Similarly, procurement standards in the country are still far from the most advanced systems of Latin America, such as the Brazilian and Chilean, and Mexico’s Compranet financial databases for all levels of government, and the current situation does not lead to the building of trust between central and subnational governments.

vi. Political Decentralization Factors

Like in most other LAC countries, the role and resources of subnational levels of government has been largely determined in Colombia by tradition and current political constraints. This is particularly true of the role and resources of departments, the intermediate level of government in Colombia. As frequently happens with the intermediate level of government in unitary countries, the Colombian Constitution of 1991 is rather ambivalent when it prescribes the role of departments. Following the tradition of the French departments, Colombian departments are recipients of delegated and deconcentrated functions from the central government.

At the same time, Colombian departments elect governors and assemblies of their own that are supposed to autonomously manage departments’ own responsibilities. The country has long debated the reorganization of the intermediate level of government either by grouping today’s departments into larger regions or by adopting a new territorial division along the lines of traditional provinces. The so-called reordenamiento territorial has been one of the most frequently invoked issues of the decentralization process. However, no policy decision to redraw the government map or the country has ever been reached. In the meantime, departments have reasserted themselves as bureaucratic structures that charge excises on alcohol and tobacco and live largely out of central government transfers. Only a handful of departments (most notably the department of Antioquia) provide efficient services and play a strengthening, subsidiary role with respect to municipalities.

Colombian departments have a limited role of their own. Most would not meet the necessary requirements to adequately play a subsidiary role, vis-à-vis municipalities, with limited fiscal or management capacity. The idea of making departments an intermediate step in the process of decentralizing responsibilities to municipalities—as in

the previous certification process for health and education—largely failed because most departments were neither prepared to efficiently deliver social services nor were they in a position to prepare their own municipalities to gradually assume social responsibilities. Since chances for reorganizing the territorial division of the country appear to be slim, perhaps the best Colombia can do is to clearly redefine the role of departments as a deconcentrated level of government that can play a subsidiary role with respect to weaker municipalities. Given the current trend toward intergovernment results and performance agreements, departments could be strengthened for purposes of collecting data on and monitoring those agreements. This was the role departments were supposed to play under the “certification” system for the transfer of social responsibilities. However, most—relatively autonomous—departments did not adequately play that role. Under strengthened central government control, departments could be adequately strengthened not only to monitor intergovernment decentralization agreements but to play a subsidiary role when necessary.

The 1991 Constitution confirmed the special status of Bogotá as a special district that obeys a particular regime, different from the status and from the legal rules generally applicable to municipalities. The 1991 Constitution also created three other districts, primarily for political reasons (the district cities of Barranquilla, Cartagena, and Santa Marta, all of them on the Caribbean Coast of Colombia). Over 10 years after enactment of the Constitution, it has become evident that the country needs special fiscal arrangements (regarding both revenue and expenditure responsibilities) for larger metropolitan areas (such as Bogotá and Medellín) that qualify for more autonomous fiscal management on the basis of responsible fiscal management, strong tax administration performance, and efficient service delivery.

Like in other LAC countries, Colombia’s decentralization prompted some initial growth in the number of municipalities. Stimulated by the pursuit of central fiscal transfers, politicians and interested parties pushed for territorial fragmentation at the cost of minimum service scale and management capacity. Fortunately, the movement for proliferation of municipalities has been largely controlled during the last few years.

Domestic regional institutions (such as the Instituto para el Desarrollo de Antioquia in Antioquia), and international cooperation (such as German Technical Cooperation in Southwest Colombia) have stimulated the formation of municipal associations, either multipurpose or as single-purpose districts. Still, the development of municipal associations (or departmental associations for that matter) remains a voluntary subnational decision, with little or no incentive from the central government. In this regard Colombia differs from more advanced decentralization processes in unitary countries—such as Spain—that demand formation of municipal associations for transfer of certain resources and responsibilities.

b) Internal Conflict

Colombia’s internal conflict has added tensions and difficulties to the process of State decentralization. Although decentralization was conceived as, among other
things, a means to terminate the conflict, causality has operated the other way around. Rather than decentralization attenuating the conflict, the depth and extension of the conflict has put additional strain on the already difficult decentralization process. Mayors and members of the local council are under pressure to take sides in the conflict, rather than responding primarily to the local electorate. During the last 10 years Colombia has had more killings or kidnappings of mayors and councilpersons than any other country in the world. The central government fears possible misallocation of resources in municipalities that are largely controlled by guerrilla groups.

The internal conflict is likely to remain an increasingly influential force in the shaping of Colombia's decentralization, primarily because the internal conflict calls for recentralization of public expenditures to help finance the cost of the war. In addition, the three levels of government often compete for the responsibility of conflict management, thereby blurring the current division of responsibilities and adding confusion to the issue of which level is accountable for what. The more the conflict extends to the cities (as appears to be the case these days), the more strong local and regional governments will demand a say in handling either the conflict itself or revenues and services connected with it. Provision of services for the internally displaced is a case in point. The national level officially designated the Red Social, attached to the office of the President, as the agency responsible for attention to internally displaced people. However, prominent local governments such as the government of Bogotá, and a number of think tanks believe that the best way to serve the internally displaced population (estimated at more than 1 million people) is not to create a special category of poor people and yet another social protection network, but to include them as part of the regular poor and include them under the protection of pre-existing safety nets. If part of the regular safety nets, identification and attention of the internally displaced will be the responsibility of local governments.22

Colombia's internal conflict distorts decentralization policies in yet other invisible ways. Vertical and horizontal (compensation) balances are eroded by central government decisions to spend more in conflict-ridden regions—regardless of whether those regions are relatively rich or poor. The conflict itself is continuously eroding land tenure and investment location, thereby changing the relative fiscal capacity of municipalities and departments. The more the country takes ad hoc, conflict-related allocation decisions the more it is likely to deviate from institutionalized decentralization goals.

Local and regional governments that want either participate in or assume full responsibility for conflict management are also planting the seeds for the shape of the

22. Recently the Red Social, with the support of the World Bank, has been stimulating formation of multiparty local alliances for the immediate attention and reincorporation of the internally displaced population. Local and regional governments, civil society, and the Red itself are expected to integrate those alliances.
Colombia’s decentralization in the postconflict era. The more regional and local governments take into their own hands conflict-solving management, the more the country leans toward a more federalist (even confederation) arrangement. The reverse is also true: the more centralized the solution to the conflict is, the more centralized the country is likely to be at the end of the conflict.

**Economic Recession** There can be no doubt that fiscal pressure at all levels of government has been exacerbated by the slowdown (negative growth in 1999) of the Colombian economy during the last four years. Colombian authorities at all levels of government are used to doing budget planning and fiscal forecasting on the basis of sustained, moderate economic growth. Adjustment to new GNP trends takes some time and a good dose of political courage. Perhaps the best illustration of slow policy adjustment to the realities of negative or low economic growth was the constitutional reform of 2000. The reform intended to impose a ceiling on the rate of growth of fiscal transfers. However, the ceiling consisted of inflation plus 2 percentage points per year, which means that every time the economy grows at less than 2 percent (as happened, for instance, in 2001), fiscal transfers will grow more than they would have grown before the ceiling.

More important, recession adds pressure to reverse decentralization. Since decentralization has produced only meager improvements in service delivery, recession reinforces the argument for partial reversal of decentralization. When combined with the pro-centralization forces liberated by the internal conflict, it becomes evident that decentralization needs to demonstrate quickly tangible benefits, or else the movement to reverse it may keep growing in Colombia. The fact that the central government has begun to de facto postpone or reduce some of the transfers due to subnational governments23 may be one of the initial signals of a sustained trend toward partial reversal of public spending via subnational governments.

In the case of Colombia, real estate values were hit harder than most other sectors by the economic recession of the last few years. For this reason, property tax revenues and local fiscal balances were hit disproportionately when compared with other levels of government. Under normal circumstances, such a disproportionate hit on local finances would have been compensated by additional central government transfers. However, Colombia does not appear to be in the mood for intergovernmental compensation of unexpected losses by subnational government. Similar to the most likely effects of the internal conflict on decentralization, recession is changing decentralization policies in mostly invisible, hardly discussed ways.

c) Weak Governance at the Central Level

Political observers tend to agree that Colombia has suffered from weak governance during at least the two most recent administrations (1994–2002). Weak governance

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23. See account of Bogotá fiscal deficit above.
is also making it more difficult to reach the objectives of decentralization. Decentralization of education is a case in point. The national government has found it too difficult to negotiate with the teacher's union ways to substitute labor rigidities for performance and results-based incentives. Therefore, the announced transfer of education responsibilities has been little more than a change in the level of government that signs the payroll checks. More important, decentralization has not brought incentives for enhanced quality or higher efficiency in education.

In view of weak governance at the central level, the city of Bogotá and the department of Antioquia have taken initiatives to effectively manage the sector to improve delivery of education. This has meant incentives and supervision for teacher relocation and attendance controls, parent participation at the school level, outsourcing of school management, elimination of "phantom" (nonexistent) teachers from the payroll, application of standardized tests, and so forth.

Law 715 of 2001 (which superseded Law 60 of 1993) attempted to reestablish performance and results controls on the education sector primarily through two key instruments: automatic certification of capitals of departments and municipalities larger than 100,000 inhabitants, and per-student transfers for education after a transition period (two years) from today's supply-side transfer for education. Although the philosophy of the reform of 2001 can hardly be challenged, implementation of Law 715 is subject to at least two main risks: (a) municipalities that have not demanded transfer of education responsibility may not be prepared to adequately negotiate with the teachers the way Antioquia or Bogotá did, and (b) there is little to be gained if the per-student transfer for education is calculated on the basis of today's teacher payroll. As a matter of fact, the latter was precisely the way the transfer for education was calculated for Law 60 of 1993—and the result was the perpetuation of labor rigidities.

III. Pros and Cons of Main Policy Courses

The importance of forthcoming decisions on Colombia's decentralization for neighboring countries cannot be overestimated. In fact, Colombia's early frustration with decentralization is already engendering questions in countries that are getting ready to implement their own decentralization, such as the Dominican Republic, Ecuador, Paraguay, Peru, and most of the Central American countries. It may also reinforce the view of countries that have been rather reluctant to decentralize, such as Chile and Costa Rica. The proposed reforms come at the same time Argentina, Bolivia, Brazil, and Mexico are preparing or beginning to implement reforms geared to strengthen fiscal budget constraints at subnational levels. Even if adopted in the particular context of an internal conflict, the Colombian approach to assessing and redirecting decentralization will be closely monitored and compared with the new wave of fiscal responsibility reforms going on elsewhere in the region. Clarifying what went wrong in Colombia and how it can be corrected is therefore important,
not just for the country, but for the fate of the wave of decentralization that has rolled through LAC during the last two decades.

a) Option 1: Partial, Explicit Reversal of Decentralization

Distillation with decentralization design and implementation, coupled with a context characterized by civil conflict, economic recession, and weak governance appear to push for some degree of recentralization in the very short term. The demand for growing military expenditures will likely put pressure on fiscal transfers social expenditures and infrastructure investment currently in the hands of subnational governments. The more the conflict moves into urban areas, the more it becomes evident that the central government may perceive that it is better equipped to deal with issues normally restricted to local governments, such as land use, protection of water reservoirs, public lighting, intracity distribution of electricity, and telecommunications. Even the safety of mayors or members of local councils is now falling back into the hands of the central government.

Paradoxically, this possible course of action is not incompatible with deeper forms of decentralization—even federation or confederation—at the end of the conflict. If the partial reversal of decentralization is presented as a temporary measure—forced upon the country by the priority need to bring the internal war to an end—the country will be expecting a return to decentralization when the conflict is finally over. Countries that have gone through periods of internal war have often found that the long-term, most-sustainable solution consists of giving regions more autonomy to manage their own affairs in accordance with the political forces and economic potential those regions can identify at the end of the conflict.

The question of whether partial recentralization is a temporary or a more permanent policy decision should be assessed independently of the temporary context of internal conflict and economic slowdown. If by returning revenues and responsibilities to the central government the country can achieve an adequate investment climate, larger mobilization of resources, enhanced service delivery, and/or more fiscal responsibility than what subnational governments are currently achieving—or are likely to achieve after streamlining decentralization—then the benefits of recentralization would outweigh the benefits of reinforcing the decentralization path. For the time being, recentralization in Colombia could produce any of those types of benefits if and only if the central government is held clearly accountable for efficient delivery of social services and additional fiscal effort, and is subject to closer social scrutiny and more transparent accounting, budgeting, procurement, and disbursement. Since those conditions are not met, recentralization could only lead to a fiscally costly transition with no guarantees of improvements in service delivery. Under present conditions, reduction or elimination of some of the fiscal transfers and recentralization of presently decentralized responsibilities could be justified only on grounds other than decentralization per se—such as, for example, the financing needs of the central government to deal with the internal conflict.
b) Option 2: Streamlining and Reinvigorating Decentralization

This appears to be the option most experts would recommend on the basis of international experience. Indeed, if Colombia were to follow the example of more advanced decentralized countries, it would take at least 20 years for the country to mature its own model of State decentralization. However, Colombia needs to reconsider the current approach to decentralization reform if decentralization is to produce what Colombians expect from it.

The current approach to decentralization reform is one of piecemeal reform on the margin of the current decentralization framework. Since that framework is not conveying the necessary incentives to decentralization stakeholders (in terms of benefits and sanctions), decentralization is not producing higher efficiency in allocation of resources, more efficient service production, or enhanced accountability and representativeness.

For the last few years Colombia has tried to perfect its model of decentralization primarily through fiscal policy and sector management measures. Little or nothing has been done on the more fundamental dimensions of decentralization, including a clearer definition of the role, responsibilities, and resources of each level of government, formulation of explicit compensation policies, or a new map of government jurisdictions.

Following the precedent established since the country first enacted Law 60 for the distribution of revenues and responsibilities, the Pastrana Administration introduced further marginal reforms to the decentralization framework. Together with the Congress, the Administration revised the Constitution and decentralization laws to set lower limits on the transfers to territorial entities (departments, districts, and municipalities), and to encourage the territorial entities to undertake structural adjustments. The Administration proposed to enhance the subnational governments' own revenue-raising capacity. To motivate subnational governments with excess debt and bloated payrolls, the central government offered to subsidize bank loans. Potentially more important, the previous administration reformed Law 60 of 1993, transferred social responsibilities to larger cities, and proposed social subsidies to demand rather than supply.

Those reforms will not be enough. Imposing ceilings on fiscal transfers does not deal with the fundamental issues of clear accountability and higher efficiency via decentralized public expenditure. Parameters for subnational fiscal performance are as good as the central government capacity to monitor, enforce, and sanction compliance (or lack thereof) with those parameters. Demand-based transfer of education subsidies to municipalities can be good only if municipalities are prepared to negotiate with teachers stakeholder performance and output incentives. It is still necessary to test whether municipalities that do not have as high fiscal and management capacity as Bogotá are indeed equipped to monitor, control, and evaluate the most efficient ways to deliver education.

What Colombia has been doing during the last 10 years is accumulating decentralization reforms in a rather formal but disorganized way. The reform of laws is often paid more attention than implementation. Satisfaction of stakeholder interests
has often prevailed over actual change in stakeholder and bureaucratic behavior. By now there appears to be widespread consensus on what are the key problems with Colombia's decentralization. Reestablishing a clear division of responsibilities, accountability, and fiscal responsibility appears to be the immediate target to be pursued if decentralization is to result in more efficient public spending. The challenge now is to publicly identify those problems Colombian decentralization has lived with since enactment of the 1991 Constitution, propose reforms (even if gradual or incremental), and begin implementation in earnest. Further pursuing marginal, incremental decentralization reforms is bound to fail when the fundamentals for successful decentralization are not yet in place.

c) Option 3: Let Policies other than Decentralization Silently Operate the Reform of the Decentralization Process

In between those two explicitly defined—and most likely controversial—avenues of reform (recentralization or streamlined decentralization), the country appears to be tempted to opt for still a third avenue. This third avenue would consist of a silent, indirect reversal of decentralization through policymaking in other public sector areas. This implicit policy would operate by ignoring decentralization as a central policy issue, while letting those factors external to decentralization make a dent in the current decentralization framework.

This "nonpolicy" option may be attractive to governments because it appears to avoid controversy and political costs. However, it may add confusion to the decentralization panorama and fiscal costs to what is already an uncertain path. In the medium term, that third course of action is likely to charge a heavier political toll since stakeholders realize what the implicit policy is and react strongly in defense of their perceived interests.

In essence, if no new decentralization policy were enacted, the surrounding environment (or context, or factors exogenous to decentralization) would still impose changes on the current decentralization policy framework. This is what would happen if, for instance, the country decides to centralize public expenditures, with a view to centrally manage the internal conflict, with no explicit discussion on the temporary nature of decentralization or the time frame of decentralization measures. It could also happen if the central government decides to leave Law 715 to its own fate—even when it appears that some municipalities do not effectively assume newly transferred social responsibilities. If the latter happens, both departments and the central government will need to reassume, de facto, education responsibilities.

The nonpolicy-making option might be attractive for policymakers since it appears to involve the lowest political cost among all the options discussed. However, this is not necessarily so. Since, under this option, consensus building is not actively sought, sooner or later stakeholders and other political forces would demand an explicit decentralization policy. Therefore, medium- and long-term political costs would probably outweigh short-term political gains.
IV. Recommendations

The common thread running through the four groups of reforms recommended below is strengthening conditionality and submitting transfers of revenues and resources to contractual, tailor-made individual arrangements rather than to uniform rules generally applicable to all territorial entities.

a) Recommendations Regarding Fiscal Decentralization Issues

Read Law 715 in terms of results-conditioned transfers rather than automatic certification. Decentralization in Colombia does not appear to need additional fiscal transfers. As a matter of fact, the central government is already making a huge sacrifice of badly needed current revenue in order to keep subnational spending at one of the highest levels in LAC. Per capita expenditures in health and education have increased dramatically during the last decades. However, the increase in the share of social expenditures is not a consequence of decentralization, but of resource allocation decisions at the national level. What decentralization can do—indeed, is supposed to do—is elevate expenditure efficiency by increasing productivity or adding and combining resources.

What decentralization in Colombia needs is to do away with cost-based transfers that reproduce central government rigidities at the subnational level. The country needs to get rid of the idea that decentralization means guaranteed fiscal transfers that are at least equal to corresponding current expenditures by the national level. It is necessary that subnational governments and trade unions alike accept that the challenge of decentralization is to achieve better results with scarce resources. Demand-based subsidies convey the message of scarcity, while—as Colombia has already found the painful way—guaranteed payroll and cost structures lead to unlimited demand with little or no improvement (and even deterioration) of quality and coverage.

Decentralization can only have positive results when subnational governments are stimulated to develop (and are accountable for developing) their own creativity to allocate and combine resources in innovative ways, different from the way central government used to do. Intergovernment performance agreements—like those already signed between larger municipalities and the Ministry of Education—appear to be the most effective way to self-select municipalities willing to have full command of factors of production for creative ways of service delivery. Since Law 715 automatically certified more than 40 municipalities, the best the government can do is to supplement the law via intergovernment performance and results agreements. Since this may mean a slowdown in the transfer of social responsibilities to some of the larger municipalities, those intergovernment performance agreements should be supplemented with subsidiarity agreements by which higher levels of government are transitorily responsible for social services in those municipalities that are not prepared to effectively negotiate with teachers. Those agreements could be signed and tested during the two transitional years anticipated by Law 715. For the agreements to be
effective it is necessary that central government ministries (particularly Education and Health) develop the necessary capacity to monitor, enforce, and evaluate compliance with the agreements. Above all, the central government needs to prepare itself to discuss sector-specific targets municipality by municipality. Municipalities that do not meet the proposed results should be temporarily deprived of both corresponding revenues and service responsibilities until a new agreement is negotiated. The central government (or, by delegation, departmental governments) should be prepared to assume decentralized responsibilities on a subsidiary basis. More broadly, the central government needs to be prepared to either interpret or expand Law 715 to give the law teeth in cases of noncompliance or underperformance.

b) Proceed with Market-Oriented Regulations for Subnational Borrowing

The present regulatory framework for subnational borrowing is based on two pillars: the so-called Ley de Semáforos and Law 617 of 2000. Proper application of both laws requires a monitoring and information capacity that is not yet available in the country. Transferring the risk—and the heaviest share of information requirements—to credit rating agencies and bank creditors—subject to the control of the Superintendencia Bancaria—would create a more reliable, more doable, and more effective regulatory framework. Since only a handful of departments and municipalities would be prepared to meet the requirements of the new regime, the best thing to do is to proceed incrementally, beginning with a small number (but probably the largest in terms of population and fiscal capacity) of subnational governments, then gradually extend to the rest. In 1999 Mexico adopted a new, market-oriented regime along the lines proposed here. Therefore, the precedent of Mexico can be consulted, evaluated, and modified by the Colombian authorities.

i. Fully Develop Taxing Capacity of Metropolitan Areas and Largest Cities

Sign pilot tax-sharing arrangements between the Dirección de Impuestos Nacionales and Bogotá and Medellín. Tax sharing should make Bogotá and Medellín clearly responsible for certain taxpayer identification, fiscalization, and collection activities. The incentive for city participation should be in the form of additional tax rates or surcharges on the most dynamic national taxes. Simple but separate tax filing and reporting would be preferable to joint tax filing. Shifting the tax base for the income tax or the VAT would also provide the revenue substitute for gradual dismantling of the antitechnical Impuesto de Industria y Comercio. As such, the gradual elimination of this antitechnical tax could also be included in the intergovernment tax-sharing agreements.

ii. Intergovernment Performance Agreements as Incentives for Additional Fiscal Effort

Rather than offering additional transfers for fiscal effort (the way Law 60 did), the national government could include additional flexibility in resource allocation and production functions for those municipalities that demonstrate additional contributions of
their own for better social service (or other shared sector responsibilities between national and subnational governments). In this way, the incentive for additional tax effort would be linked to the demand (and the political credit) for better services.

c) Recommendations Regarding Administrative Decentralization Issues

i. Setting New Standards for Financial Management, Procurement, Disclosure, and Intergovernment Reporting
What the central government can do best to strengthen subnational management capacity is to present an intelligent demand for accounting, budgeting, reporting, and procurement systems. Rather than the top-down transfer of central government (often obsolete) standards and procedures, the national level should demand certain specific standards that are needed for monitoring and evaluating fiscal transfers. Preparation of and reporting on subnational budgets, for instance, should be more results oriented. Budget allocations should follow results and performance indicators identified in intergovernment contracts.

Intelligent requests from the national government will likely stimulate subnational demand for either technical assistance or outsourcing, depending on the choice of every territorial entity. Again, intergovernment performance agreements provide the opportunity to require subnational governments to meet those standards. The first step to take is to identify those requirements—under the criteria that, for intergovernment reporting, minimum is usually better than maximum.

ii. Strengthening Central Government Capacity for Monitoring, Supervising, Evaluating, and Sanctioning
Higher reliance on results- and performance-conditioned transfers will demand strengthening the capacity of the central government to monitor, supervise, evaluate, and effectively apply sanctions on underperforming subnational entities. Sector ministries have to be prepared to do planning and evaluation on a territorial basis. The superintendencias should be prepared to monitor and control subnational performance and results. Regulatory agencies need to establish the standards and criteria for subnational provision of services.

d) Recommendations Regarding Political Decentralization Issues

i. Redefine the Nature, Role, Revenues, and Responsibilities of Intermediate Level of Government
This Chapter does not recommend the creation of yet another intermediate level of government, as has been often discussed in Colombia. Nor does it recommend redrawing the current map of the intermediate level of government. Although those tasks may be advisable on purely technical grounds, changing deeply entrenched cul-
tural values and historical roots is a huge task that few countries can afford to undertake.24 Rather, this Chapter recommends introducing flexibility in the definition of the roles, revenues, and responsibilities of departments. Intergovernment performance and results arrangements may be the most expedient way to introduce flexibility—short of changing the Constitution and a number of laws. If properly done, intergovernment arrangements may redistribute responsibilities and resources so that Antioquia, for instance, enters into a departmental association with—and implicitly plays a subsidiary role vis-à-vis—Chocó, Córdoba, or certain municipalities of these two neighboring departments. Similarly, some departments could participate in and monitor national–municipal results agreements for the provision of social services.

ii. Comanagement of Some Fiscal Transfers During Conflict Years

Decentralization decisions, particularly those regarding elections for subnational governments and fiscal transfers, are hard to reverse. Whether governments like it or not, decentralization decisions end up establishing political precedents that nurture their own stakeholders and are gradually surrounded by traditions and protected by ideological walls that become guardians of the preestablished order. However, future Colombian governments might consider it necessary to reverse some of the constitutionally enshrined fiscal transfers for further supporting the transitory financial needs created by the internal conflict. If this is the case, reaching intergovernment agreements would probably be more feasible than changing the Constitution. Those agreements would give back part of the fiscal transfer to the national level in exchange for conflict-related expenditures in participating regions or municipalities of the country. This sort of arrangement would not only be politically more feasible than a constitutional reform, but would also commit subnational governments to paying for some of the expenditures connected with the internal war. It would also satisfy the growing demands of subnational governments for more say in the management of the conflict in their territory.

c) Recommendations Regarding Context Factors for Decentralization in Colombia

i. Flexible but Clear Division of Responsibilities and Accountability during the Conflict Years

As discussed above, the distribution of responsibilities in Colombia has been confusing since at least the current wave of decentralization began in 1986. Confusion in the division of labor among levels of government is likely to be compounded by the

24 Other unitary countries of the region have largely failed when trying to create an intermediate level that has not been part of the recent history of the country. Only Pinochet’s Chile appears to have succeeded with the creation of the country’s 13 regions. Still, Chilean regions are only a deconcentrated level of government, the primary function of which is to coordinate investment
day-to-day demands of management of the internal conflict. It is likely, for instance, that the central government may have to interfere in the local management of strategic public utilities such as water, electricity, or communications; likewise with schools, hospitals, and public transportation. Frequent interference of the national government in local or regional affairs may at times become inevitable. That interference should not be legally formalized because it will likely be both changing and transitory. However, it should be publicly known by all levels of government and users, and citizens at large. Regular disclosure of which level of government is responsible for what will prevent further weakening of accountability. As much as possible, the central government should try to negotiate with—rather than impose on—subnational governments those frequent rearrangements in the division of responsibilities. The creation of an emergency comité de competencias would facilitate both intergovernment arrangements and dissemination of ongoing arrangements.

The conflict-imposed flexibility in the distribution of responsibilities among levels of government may also be seen as an opportunity for the central government to stimulate—even establish by itself—municipal associations, departmental associations, or other forms of flexible partnership arrangements. Although subnational associations are often needed to reach minimum service scale, Colombia has made only limited use of this figure—much less than in other unitary countries such as Chile and Spain.

ii. Constructing (or Reconstructing) a Shared Vision

Confusing and frequently changing division of responsibilities not only leads to weak accountability, but also debilitates the already fragile intergovernment and social pacts that provide political legitimization to decentralization. More so than in other countries, the national level in Colombia should actively promote consensus building and participation around decentralization.
The Judiciary

_This Chapter was written by Felipe Saez._

### I. Background

Despite the significant cycles of violence that Colombia has experienced throughout the 20th and into the 21st century, it has maintained a stable democratic process.¹ The Colombian Judiciary enjoyed a relative degree of independence, despite assuming a passive role in the protection of individual rights and a formalistic constitutional control function that provided the political establishment ample room to maneuver. In the mid-1980s the Judiciary was the main target and victim of the growing political ambitions of the drug mafia. The killing in 1985 of most of the Supreme Court Justices by a joint guerrilla–mafia operation tragically displayed the risks and restrictions faced by the Judiciary in Colombia. By the early 1990s the Judiciary had limited its objections to a comprehensive constitutional change,² greatly strengthening the position of the sectors within the political establishment that had been pushing for further democratization. The result was the convening of a Constitutional Assembly in 1991 that concluded with the approval of a new Constitution.

A significant portion of the constitutional reform that was finally enacted was aimed at introducing far-reaching changes to the judicial system. These changes aimed at strengthening the standing of the Judicial Branch and providing it with

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¹ The National Front, established by the traditional Liberal and Conservative parties in 1958 and expected to last two decades, restricted the participation of other parties in presidential elections, and established the alternation of the parties in the presidency and the collaboration of both parties in future administrations.

² During the 1970s and 1980s comprehensive Constitutional reforms were also attempted, all proposing major reforms of the Judiciary. The Judiciary assumed a defensive posture in those cases and blocked the Constitutional reform initiatives (see Yepes 2001)
instruments and resources that would enable it to better perform its key governance and jurisdictional functions. The key changes introduced were:

- Establishment of a new constitutional jurisdiction that would promote an ambitious individual and social rights agenda and buttress the Judiciary's chronically subordinated position vis-à-vis the other branches of government.
- Creation of a new system of criminal justice headed by the Attorney General's Office (AGO), with the unequivocal role of reducing impunity.
- Establishment of the Superior Council of the Judiciary (SCJ) as the entity responsible for the administrative and disciplinary matters of the Judiciary. This was seen as a crucial first step toward combating the chronic problems of congestion, poor quality in the discharge of the judging function, and corruption that have affected the Judiciary.
- Establishment of a new jurisdiction of community justice called Justices for Peace.
- A substantial increase in fiscal resources to the Judiciary in the early 1990s in an effort to ensure the effective implementation of the constitutional changes.

These reforms generated great expectations: Colombia would regain an adequate balance of power among the various branches of government and effectively guarantee individual and social rights; it would squarely face the challenge of the criminal groups that made violence rampant and corruption and crime widespread; substantial improvements would be made in dealing with the problems of congestion, quality, and lack of integrity plaguing the judicial system through the newly established self-government process.

This Chapter assesses progress in the implementation of these reforms and the degree to which the desired objectives have been achieved. It identifies the key strategic issues that arise from the current level of reform implementation and makes policy recommendations based on the available options. In the preparation

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3 By the governance functions we mean the crucial prudential role of maintaining the constitutional boundaries on the majoritarian political powers and protecting individual and social rights (see Shaman). By the jurisdictional function we mean the performance by the Judiciary of its conflict resolution and criminal sanction responsibilities.

4 This Chapter will deal with what is considered the "formal" justice system. It will not cover the various forms of community justice that exist or are taking shape in Colombia. The Constitution established a Justices for Peace jurisdiction that is at a very incipient state of implementation.

5 This Chapter will not cover developments in this area in an in-depth manner, in part because the implementation of this new jurisdiction is at a very incipient stage.

6 From the outbreak of violence in 1949 until the approval of the 1991 Constitution, Colombia spent 32 of the 42 years under officially declared states of siege. This implied restrictions on individual freedoms and a predominant role for the Executive Branch in the conduct of state affairs.
of this Chapter we have reviewed recent literature. However, we have benefited principally from the analytical work that has been conducted in recent years by the Universidad Nacional and the Universidad de los Andes and by the main civil society organization in the sector, the Corporación Excelencia en la Justicia. We will be citing their publications.

II. Enhancing the Constitutional Framework

The establishment of the new constitutional jurisdiction has generated substantive and, on balance, positive changes in the governance environment in Colombia. The exercise of constitutional control, which had been hesitantly exercised by the Supreme Court, was assumed with passion by the newly established Constitutional Court. The activist role assumed by the new Court implied a far-reaching change in Colombia's governance structure and in the relations between the state and the citizenry. A highly influential former president, Alfonso López Michelsen, has argued that the real change brought about by the 1991 Constitution has been the work carried out by the Constitutional Court (see El Tiempo 2001).

There are many dimensions to this change. The Constitutional Court has dealt with an extraordinary demand for the adjudication of constitutional matters. In a period of nine years, the Constitutional Court decided 7,233 cases—more than 16 times the annual average of constitutional cases decided by the Supreme Court under the previous Constitution. This increased demand, in turn, has been the result of various factors.

- The great expectations awakened by the new constitutional jurisdiction as a viable avenue to seek relief for long-standing grievances through the exercise of the newly established Protection Action (Acción de Tutela). The possibility

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7 While the previous Constitution left the appointment of the justices to the Supreme Court to the Court itself (generating a close-knit judicial enclave), the 1991 Constitution sought stronger social and political responsiveness of the Constitutional Court by involving the political establishment in the appointment of its magistrates. The nine Magistrates of the Constitutional Court are appointed for an eight-year period by the Senate from shortlists submitted by the President of the Republic, the Supreme Court, and the State Council.

8 The key characteristics of the Action are (a) it can be exercised by any person without the assistance of counsel or formal submission in writing, (b) it protects a wide array of matters that affect the fundamental rights of the individual, (c) it can be presented before any justice of the Republic, (d) it has to be decided within an eight-day period and there are no formal requirements to be met in the process, and (e) the Action can be exercised against public authorities, and in some qualified circumstances, private agents. The Constitutional Court has the right to review all the decisions on protection generated by the system. This has allowed the Court to be a highly effective instrument to ensure the consistency and uniformity of decisions in this field.
of exercising this action before any judge in the land has created a highly accessible channel for the people.

- The Court generated strong empathy among the people from the start because of the highly progressive nature of its initial decisions. These decisions avoided the traditional formalistic approach and stressed its paramount objective of ensuring individuals and social groups effective protection of their constitutional rights.

- The extraordinary activist stance assumed by the Court. Pursuant to the Constitution, the Constitutional Court can self-regulate its demand since it has the authority to pick and choose the decisions by lower courts on Protection Actions it will review. Not surprisingly, the Court has used its prerogative extensively. Fully 67.5 percent of the 7,233 cases decided by the Court have derived from the Protection Action review process.

- The ample and progressive bill of rights that the new constitutional framework entrusted to the Court. While the Constitution of 1886 had 36 articles defining an individualistic and liberal rights agenda, the new Constitution has 101 articles defining a highly ambitious social agenda that has helped brand the new Colombian State a social state of rights (estado social de derecho).

The Protection Action has implied a revolutionary departure from the cumbersome and highly formalistic processes prevailing in the Colombian Judiciary, and has received an astounding response from the people. During 1992–2001 (February), the Protection Action grew at an annual rate of 130 percent, reaching 407,175 claims. This has implied that sectors of society that had been completely bypassed

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9. The Constitutional Court departed from the restrictive and formalistic approach at the early stages of its mandate. In its second decision in 1992, dealing with the scope of rights that would be eligible for protection under the Protection Action (Accion de Tutela), it decided against limiting the applicability of the Action to those rights that are explicitly defined as fundamental in the Constitution. Instead, it decided that a decision on whether fundamental rights were involved should be decided based on the merits of each case.

10. The social state of rights is seen as a 20th century evolution from the liberal and democratic state that prevailed in the 19th and earlier parts of the 20th centuries. It represents the convergence of socialist, liberal democratic, and Christian social ideas. It is based on the assumption that the mere recognition of liberty and equality may not be sufficient to ensure the welfare of people since they require certain material underpinnings to make them possible. It is the State's responsibility, under this new social dimension, to ensure that these underpinnings are adequately ensured for all. (See decision of the Plenary of the Constitutional Court C-1064 of 10 October 2001.)

11. According to data from the Constitutional Court. This number could be an underestimate because the Court counts only the cases that have been sent to it for review. This legal requirement may not have been strictly followed by the lower courts.
by the Judiciary have had an opportunity to seek redress before the courts to protect their fundamental rights. The Constitutional Court has consistently taken decisive action to ensure that the Protection Action is an effective instrument for the protection of fundamental rights.

The Constitutional Court has significantly altered the institutional balances prevailing prior to the 1991 Constitution. The traditional passive attitude of the Supreme Court gave way to a highly activist, progressive posture aimed at ensuring the prevalence of the constitutional principles in everyday life. The agenda of policy issues where the Court has introduced its own principled criteria is impressive. Matters ranging from individual freedom (abortion, drug consumption, homosexuality, and so forth) to economic policy (housing finance policy, minimum salary increases, the role of the monetary authority, and so forth) have all been the objects of highly controversial and groundbreaking decisions. The result has been a substantial realignment of the institutional powers, with the Judiciary recouping a substantial amount of influence in the policymaking process.

The proactive attitude of the Court has generated strong controversy. There appears to be growing concern that the Court may be becoming too authoritative in pushing ahead with its principled agenda while not sufficiently weighing the economic and social constraints that may be underpinning the status quo. There are broad and influential sectors arguing that the Court has transgressed its sphere of action and is subjecting society to a new form of judicial populism. Tipping the delicate balance between juridical adjudication and straightforward policymaking on unfamiliar grounds could prove very costly to the legitimacy of a Court that had a notable beginning. So far, the institutional framework has demonstrated its resilience and ability to accommodate this new and decisive actor on the political scene. There is a risk that some of those decisions may eventually generate a negative welfare impact on the population and erode the Court’s credibility and stand-

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12 A study conducted by Centro Interdisciplinario de la Justicia of the National University in 1995 found that 21.71 percent of those exercising the Protection Action were workers, 5 percent were representatives of minors that had grievances on educational or health services, and 4.44 percent were people of advanced age. The right of the individual to get a timely and adequate response from the authorities or private agents has been the main right protected by this Action (about 24 percent) or about 100,000 claims during 1992–2001. The right to work (16.32 percent), to due process (12.84 percent), to education (7.92 percent), and to social security (7.29 percent) follow among the priorities for protection sought by the population (see García Villegas and Rodríguez 2001).

13 The decision of the Court on the criteria applicable to fix the minimum salary levels for private and public sector employees constitutes one of the most controversial and bold interventions of the Court. This is an area that had traditionally been the exclusive realm of economic policymakers. The Court’s decision, which eventually implied a substantial increase in public expenditures, was presented by its critics as a clear case of fiscal irresponsibility, but was warmly welcomed by workers. (See decision by the Plenary of the Constitutional Court C-815 of 20 October 1999.)
ing. Ultimately, it will be through the political process that Colombians decide the degree of involvement and autonomy they expect from their constitutional authorities. A second cohort of constitutional magistrates has recently been appointed. It is premature to say whether they will continue to press like the first cohort, or seek a less proactive agenda. There is a clear risk that the Court’s perceived excursions beyond the realm of jurisdictional competence could endanger the extraordinary gains derived from its activism in establishing constitutional boundaries to the exercise of power and an effective protection of individual rights.

III. Issues Related to the New Constitutional Framework

There are three issues that need to be addressed with respect to the emergence of the separate constitutional jurisdiction in Colombia: (a) the increased juridical insecurity derived from the new legal paradigm promoted by the Constitutional Court, (b) the governance issue within the Judiciary, and (c) the increasing inefficiencies resulting from the success of the Protection Action.

a) Increased Juridical Insecurity

While the respective roles of the Constitutional and Supreme Courts have been established in the Constitution, there is a constant tension between the decisions of the two tribunals since, by and large, they represent different legal paradigms. It was clear that the Constitutional Court was the ultimate decisionmaker on constitutional matters, particularly with respect to decisions of Protection Actions, and therefore the Court could legitimately overturn decisions made by the Supreme Court in this field, as has regularly been the case. It had been expected, however, that the Supreme Court would have final authority in the decisions on civil and criminal matters brought to them through the normal jurisdictional channels.

As it turns out, the Constitutional Court has established its right to review Supreme Court decisions (acting in its ordinary capacity) whenever it feels that the judicial decision might have affected fundamental rights of the plaintiff. This has generated a high level of uncertainty regarding the real value of the decisions issued by the Supreme Court, and has de facto established an additional level of judicial contention for the parties. This is clearly an unwelcome outcome in view of the need on the part of the public for increased predictability and swiftness. The unification of judicial decisions in an ultimate authority is a basic requirement of any effective judiciary. This has been put in doubt under the present judicial arrangements and must be addressed.

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14 Decision T-231 of 13 May 1994 provides the basic reasoning behind this decision. Decisions in 1992 had given way to a more restricted role of the Constitutional jurisdiction in overturning regular Court decisions.
b) The Growing Governance Quagmire

The 1991 Constitution established a collective government of the Judiciary by granting a number of bodies equivalent stature and assigning to each of them discrete functions; that is, the Constitutional Court, the AGO, the Supreme Court, the SCJ, and the State Council.\(^{15}\) The implicit assumption may have been that the division of functions was sufficiently clear-cut to prevent any misunderstanding of the respective roles, and that a collegiate spirit would prevail among the various bodies to ensure effective coordination and a unified sense of purpose. Both assumptions seem to have been wrong.

On one hand, there is plenty of overlapping and interdependence among the various bodies, generating a high potential for conflict. The Constitution failed to establish effective conflict resolution mechanisms. The tension between the Constitutional Court and the Supreme Court is one example of tensions all across the branch. There is, for example, significant tension among the jurisdictional bodies and the SCJ regarding matters where the two collide or overlap; that is, can the SCJ promote procedural reforms without the backing (or encouragement) of the Supreme Court, which has the final word on the interpretation of procedural law?

On the other hand, the diverse approaches on judicial matters and an excess of institutional zeal have generated an environment that fosters conflict and stalemate over constructive resolution of issues. Unfortunately, the serious problems and challenges facing the Judiciary do not augur well for the future of the sector if this state of affairs were to persist indefinitely. As discussed below, the issues of impunity, congestion, and poor quality in justice administration require a deliberate and articulated response from all the authorities within the Judiciary. There is a clear sense among the population and in the political establishment that the current governance quagmire may be preventing the effective use of the instruments provided by the Constitution to improve the Judiciary’s performance. It would be expected that a solution to this sad state of affairs could be found among the judicial bodies to prevent external intervention.

c) Managing the Inefficiencies of Success: The Protection Action

Recent developments in labor justice reflect one dimension of the growing tensions within the Judiciary between the traditional and the emerging constitutional jurisdiction. Since 1997 there has been an approximately 20 percent decline in the demand ratio (per 100,000 inhabitants) in the ordinary labor jurisdiction (see Figure 1).

This decline, however, has been more than compensated for by a dramatic increase in the demand for constitutional protection in labor matters (see Figure 2). Thus, workers have chosen with their feet and have gradually abandoned the cum-

\(^{15}\) The State Council is the highest court dealing with administrative conflicts between the State and the citizen. It has an equal standing with the Supreme Court and is the head of the administrative jurisdiction.
Figure 1. Labor Justice Demand (1994–99)

Sources: DANE and CEJ calculations

Figure 2. Protection Actions on Labor Matters (1995–99)

Source: Constitutional Court of Colombia
bersome and time-consuming ordinary proceedings and sought protection under the speedier and principled constitutional jurisdiction.

Studies have shown that the median for the duration of an ordinary labor process is about one year, and that lately there has been a trend toward an increased delay in these types of proceedings (see Rodríguez 2001:643). There is therefore little room for competition between the ordinary versus the "constitutional" jurisdictions since the latter are usually resolved in a matter of days, with a legislative deadline of eight days.

The other dimension of the tension is reflected in the dissimilar criteria used by the Constitutional Court and the more formalistic and traditional Supreme Court and State Council in deciding Protection Actions. While the Constitutional Court has construed the eligibility requirements and the content of the rights protected—such as the right to petition—in an ample and inclusive manner, the two traditional courts have systematically decided cases by interpreting rights in a restrictive and by-the-book manner. The outcome is that during 1992–95 the Constitutional Court granted 38.7 percent of the Protection Actions. The Supreme Court granted only 6.37 percent and the State Council 8.44 percent of the Actions submitted to them.16

A final dimension of this tension is the fact that the Protection Action appeals have completely clogged the Supreme Court, preventing it from exercising its more traditional (and from the Justices' standpoint, more relevant) functions. Data for 1992–95 show that 53.44 percent of the Court's workload was consumed by these Actions. This is 6.5 times the Protection Actions workload the Constitutional Court had during the same period.

The state of affairs that has resulted within the Judiciary as a result of the growing success of the Protection Action is a clear reflection of the governance quagmire referred to above. On one hand, the Constitutional Court, as the champion of an inclusive and principled constitutional jurisdiction, has generated important benefits to the citizenry. At last people have a choice to opt for a more responsive justice. On the other hand, there are growing inefficiencies derived from the inability of the judicial leadership to deal with the schizophrenia that has emerged within the system. The impossible attempt to harmonize two incompatible systems of justice. Thus, the issue is how to resolve this growing incompatibility. The choice could be—as the more recalcitrant judges would propose—stuffing the protection genie back into the lamp. The other choice could consist of bringing the congested, delayed, ordinary jurisdiction closer to the procedural and philosophical principles of the Protection Action. This Chapter will argue for the need to deepen and mainstream the reform process unleashed by the Protection Action as the only viable alternative.

_**d) Reducing Impunity**_

Criminal justice reform was the second area where the 1991 Constitution sought major changes. Colombian society had become increasingly troubled with the ever-

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16 Based on a representative sample of cases (see García Villegas and Rodríguez 2001:423)
increasing levels of violence, corruption, narcotraffic, and ordinary crime that seemed to go unchecked because of an ineffective criminal system. Impunity levels—that is, the probability that a criminal offense may go unpunished—had been estimated by various sources to be above 95 percent. The establishment of the Attorney General's Office (AGO) was seen as an extraordinary opportunity to establish strong leadership and better coordination among the vast number of institutions responsible for fighting crime. The AGO was granted sweeping investigative and judicial powers and was endowed with a generous budget that by 1996 represented about one third of the branches' recurrent and investment resources (see Figure 3).

Another dimension of the strong backing provided to the AGO was the dramatic increase (over 170 percent) in personnel assigned to the criminal justice system (see Table 1). This increase left the criminal justice system with a workload per employee (number of cases per staff) 4.5 times lighter than that of the civil justice system.

Despite the extraordinary conditions granted to the AGO, a preliminary evaluation of this new experience over eight years shows some rather unimpressive results. Congestion remains pervasive in all stages of criminal prosecutions. The volume of new entries remained virtually constant during 1996–2000, at about

Figure 3. Budgetary Appropriations (1992–2000)

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17. Fernando Gaitán states that by 1990 the chances of being prosecuted for a crime were as low as 2.2 percent, and of being condemned, 2.6 percent. Rubio (2001) reports that during the 1960s the chances of being condemned for a crime were about 20 percent, down to 5 percent in 1971, and had been going down ever since.

18. Most of the results and conclusions presented reflect an evaluation of the AGO conducted by the Corporación de Excelencia de la Justicia.
Table 1. Judicial Human Resources (1985–95)

<table>
<thead>
<tr>
<th></th>
<th>1985</th>
<th>1990</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numero Funcionarios &amp; Empleados</strong></td>
<td>26,000</td>
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<td>Dr. Nat. &amp; Admin. Judicial</td>
<td>1,239</td>
<td>1,480</td>
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<td>Consejo Superior Judicatura</td>
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<td>654</td>
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<td>Juzgados y Admon. Tribunales</td>
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<td>17,740</td>
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<td>Corte Suprema</td>
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<td></td>
</tr>
<tr>
<td>Consejo de Estado</td>
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<td>251</td>
<td></td>
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<tr>
<td>Corte Constitucional</td>
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<td>115</td>
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<tr>
<td>Instruccion Criminal &amp; Otros</td>
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</tr>
<tr>
<td>Fiscalía Gral</td>
<td>0</td>
<td>0</td>
<td>19,880</td>
</tr>
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<td><strong>Distribución Segun Areas (%)</strong></td>
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</tr>
<tr>
<td>Penal</td>
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<td></td>
<td>67.5</td>
</tr>
<tr>
<td>Civil</td>
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<td></td>
<td>13.4</td>
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<tr>
<td>Laboral &amp; Otros</td>
<td></td>
<td></td>
<td>19.1</td>
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<tr>
<td><strong>Casos Según Areas (Millones)</strong></td>
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<td>3.5–3.8</td>
<td>4.0–5.0</td>
</tr>
<tr>
<td>Penal (%)</td>
<td></td>
<td></td>
<td>50.6</td>
</tr>
<tr>
<td>Civil (%)</td>
<td></td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Laboral &amp; Otros (%)</td>
<td></td>
<td></td>
<td>3.4</td>
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<td>Civil</td>
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<td>418.2</td>
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<tr>
<td>Laboral &amp; Otros</td>
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590,000, and the backlog at about 320,000, with very modest progress in reducing congestion. Actual investigative work conducted by the AGO is concentrated on only 35 percent of the cases that reach it. On average 377,000 cases are dismissed annually with virtually no investigative work (see Figure 4).

Even at the advanced stage of criminal investigation—the instruction phase—the system dismisses about 46 percent of the cases that went into formal investigation, and reaches formal indictment decisions in about 36 percent of cases. These figures seem to reflect limited investigative effectiveness by the AGO (see Figure 5).

A worrisome indicator of the rather mediocre performance of the AGO is that demand for its services per 100,000 people seems to be falling, a clear indication that people have been losing confidence in the system (see Figure 6).

The AGO success record in investigating homicides—a key impunity issue—has not improved over the years. Homicide rates declined during the 1990s, mostly due to efforts to improve the security of civilians by municipal authorities in the main urban centers (see Figure 7).

Despite the reduction in the homicide rate, recent surveys and calculations by academic centers (see Rubio 2001:541) show that the

19 Main reasons for dismissal of cases are the lack of sufficient evidence provided by claimants and lack of competence of the AGO.

20 Inseguridad y Convivencia en las Ciudades, Corporación de Excelencia en la Justicia, Análisis Coyuntural de la Justicia, Justicia y Desarrollo, Debates #9.
Figure 4. Workload of Preliminary Investigations

![Graph showing workload of preliminary investigations with bars for admissions and initial stock for years 1996 to 2000.]

Source: Fiscalía General de la Nación.

Figure 5. Output at the Criminal Instruction Phase

![Graph showing output at the criminal instruction phase with bars for years 1996 to 2000.]

Legend:
- □ (Indemnifications + desistances)
- ■ Preclusiones (antes de calificación o por falta de mérito)
- ■ Resoluciones de acusación
- ■ (Sentencias anticipadas + audiencias especiales + conciliaciones)

Source: Fiscalía General de la Nación.
Figure 6. Criminal Justice Demand

Source: Fiscalía General de la Nación

Figure 7. Evolution of the Homicide Rate in Colombia, 1993–99

Source: Cálculos Corporación de Excelencia en la Justicia Centro de Investigaciones Criminales Policia Nacional DANE Proyecciones de Población
probability of a homicide being investigated is about 18 percent, of the perpetrators being identified and detained about 12 percent, and of the perpetrator being convicted about 6 percent. With that low probability of effective sanction, AGO's contribution to the deterrence of crime is marginal at best, and clearly well below the contribution already made by improving the security of citizens in urban areas.

The AGO's response in dealing with homicides shows that the tougher the investigative challenge the lower the probability that the AGO will pursue the case to its final consequences. Homicides stemming from domestic conflicts have a 12 percent probability of punishment, while homicides linked to organized crime have only a 2 percent probability of sanction (see Rubio 2001:542–43). The risk-averse nature of the AGO's response is reflected across the criminal spectrum. While crimes against property constitute the greatest share of criminal offenses (about 90 percent), they constitute only 30 percent of the crimes that reach the instruction phase. On the other hand, failure to pay alimony—considered a crime prosecuted by the AGO—constitutes about 2 percent of total criminal offenses, but represents about 21 percent of the crimes reaching the instruction phase. The implicit priorities in the AGO's work seem to be driven by the need to meet processing targets. A review of the performance standards and incentives driving the AGO's work should be undertaken, as discussed below.

Issues Regarding Reducing Impunity. The poor results attained by the AGO in effectively punishing criminal offenses seems to be one of the obstacles confronting Colombia in reducing the levels of violence and other criminal activities. Despite progress achieved in reducing homicides, Colombia continues to show an abnormally high level of violence within the Region, as reflected in Figure 8. Thus, there continues to be a significant challenge, and meeting that challenge will require a more effectively functioning criminal justice system.

Some groups have attributed the difficulties faced by the AGO to the unorthodox division of labor between it and the proper Judiciary established by the 1991 Constitution. The overstepping of judicial territory by prosecutors has been deemed the main culprit of the system's deficiencies. This overstepping has, arguably, diverted the AGO from its purely prosecutorial functions. A bill reforming the 1991 Constitution to establish an orthodox accusatory system has been approved by the House but not the Senate, and all the efforts seem to be pointing toward such a system.

A more careful analysis of the AGO's performance indicates otherwise. This Chapter argues that the poor effectiveness of the AGO in reducing criminal activity of greatest social relevance, such as homicide, is mainly derived from a serious misinterpretation by the prosecutorial authorities of the nature of the challenge. The AGO has, at least implicitly, established as its key corporate objective the reduction of the levels of congestion and delay that have been inveterate in the criminal justice system. In fact, the impunity indicator used by the AGO assumes there is a reduction in impunity if there is timely compliance with the terms established under the procedural code for the various phases of a criminal investigation (see "Fiscalía General de
la Nación" 2001). While this may seem a worthwhile objective from an administrative standpoint, it completely overlooks the real challenge, for several reasons.

First, the levels of congestion and delay in Colombia are caused by problems of a structural nature. They are derived from a huge imbalance between the number of criminal actions that occur in real life—about 4,000criminal events per 100,000 inhabitants; the number of official claims that reach the police and judicial systems—about 1,300 criminal claims per 100,000 inhabitants; and the capacity of the criminal justice system to process criminal investigations—about 400 cases per 100,000 inhabitants. The increase in resources for criminal prosecution in the early 1990s might have been substantial, but is not nearly sufficient to close the gaps described above.

21 These ratios are derived from the Encuesta Nacional de Hogares 90 (ENH 90) and the Departamento Nacional de Estadísticas (DANE), and are presented in Rubió (2001:491).

22 It should be noted that an efficient criminal justice system is not intended to fully close the gaps. It is usually expected that the deterrence effect generated by the perception by citizens of the high probability that the criminal justice system will penalize criminal behavior is a highly persuasive incentive not to engage in that behavior. Unfortunately, in the case of the Colombian criminal justice system, a vicious circle has ensued in which the very low probability that the system will punish the offender implies that the deterrence effect is minimal. The objective should be to reach some level of penalization effectiveness in which the system would generate the opposite incentive—that is, a virtuous circle in which penalization effectiveness inhibits people from committing a crime.
Second, the attempt by the AGO to close the congestion and delay gaps seems to have established a strong risk-aversion bias; that is, it gives preference to cases that represent the least investigative risk. In picking and choosing the cases, the system is biased toward selecting those that would most probably allow them to meet corporate indicators, irrespective of the social relevance of the cases involved. This situation was illustrated above by showing the inordinate weight that alimony infractions have in the AGO’s workload. If this is the case, and there seems to be plenty of evidence pointing in that direction,23 a total redesign of the AGO’s corporate strategies and organizational structure should be considered.

The new AGO would start with a key strategic decision—derived from the acute structural imbalance between criminal activity and investigative resources—that in order to be socially relevant the criminal system needs to be highly selective. This implies that the criminal justice system should aim at dealing effectively with the crimes that are most disturbing to Colombian society; for example, it might strive to achieve a drastic reduction in the number of homicides by organized crime that go unchecked.

Corporate strategies should be designed to effectively reduce the incidence of criminal activity, the punishment of which is considered a priority. For example, if organized crime homicides have a very low report ratio due to the intimidation factor, the AGO would need to develop strategies aimed at overcoming such a constraint. This could imply increasing social participation in the fight against such crime. In that case, an increase in the rate of homicide reports would be actively sought by the AGO to supplant the prevailing passive attitude. This new strategy would likely lead to a reduction in the number of cases resolved or dealt with each year.

Finally, a total restructuring of AGO functions may be required, probably a structure in which units are organized around a special type of crime, in line with the new national units concept on corruption and human rights.

The traditional approach of framing the problem as a choice between an inquisitorial or accusatory system does not work. Adjustments could be made to the current structure, such as assigning judges a more decisive role in evaluating the facts and legal arguments of prosecutors at key stages in the investigative process. This would probably ensure a better balance between due process and investigative efficiency than the one prevailing today. It would even ensure that the AGO further mitigates the risks of political and personal favoritism. The challenge is, however, of a different nature, and a major restructuring would be in order to ensure that the AGO meets its social responsibilities.

23. The case made by Rubio (2001:491) and the implicit consequences derived from the Corporación de Excelencia en la Justicia’s evaluation would strongly point in that direction. However, more work could be done to refine the data and ensure that this is the case.
e) Increasing Efficiency, Quality, and Integrity

A serious grievance of the Judiciary over the years had been its dependency on the Executive Branch in the actual administration of the branch. In fact, prior to the 1991 Constitution, the Colombian Judiciary was living the paradox of being completely autonomous from the political establishment in the appointment and renovation of the judicial authorities, while being fully dependent in financing and administration. It was justifiably argued that they could not be accountable for the system's problems if most strategic and managerial decisions were made by the Executive Branch. The Constituent Assembly opted for a substantial strengthening of the Judiciary's independence by establishing the Superior Council of the Judiciary (SCJ) as the institution responsible for all administrative, personnel, and disciplinary functions within the Judiciary.

Departing from the international experience in this field, the appointment of SCJ magistrates in charge of administration was left to the Senate from shortlists submitted by the Supreme Court (2), the Constitutional Court (1), and the State Council (3). Reporting lines among the SCJ and the corporations—the Constitutional Court, the Supreme Court, the State Council, and the AGO—have not been defined. This makes the SCJ the fifth autonomous governing body within the Judicial Branch. This has generated some tensions and lack of intracorporate cohesion that will be discussed later.

There has been substantial controversy regarding the appropriateness of the management model designed for the Judiciary. Some criticism is derived from the choice of a collective management mechanism for what is ostensibly an executive management function. Recently the government initiated a constitutional reform aimed at, among other things, abolishing the SCJ. That initiative did not pass; however, the SCJ's standing remains vulnerable.

As reflected in Figures 9 and 10, recurrent expenditures for the jurisdictional sector sharply increased in 1993 (reflecting principally the establishment of the Constitutional Court, the SJC, and some personnel increases), and have remained relatively stable since then. Investment expenditures have also increased permanently over the years and peaked sharply in 1999. Overall, judicial expenditures show a high degree of inflexibility. Recurrent costs represent on average about 95 percent of total expenditures during the decade, with the bulk of these linked to salaries. On the investment side, most expenditures are linked to the construction of judicial

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24 The typical councils of the judiciary in Europe provide for a mixed composition between representatives of the judicial staff—usually selected through internal electoral procedures—and representatives of the outside world, selected by the executive and legislative branches. In the case of Colombia, the six administrative magistrates are not required to come from within the Judiciary and, while shortlisted by one of the superior courts, have shown very limited responsiveness to the interests and positions of their respective sponsors (see Guarneri and Pederzoli 1999)
buildings. The 1999 investment peak can be traced back to the construction of the Palace of Justice.

Colombia seems to face a privileged position in terms of resources, manpower, and institutional capacity when compared with the rest of the jurisdictions in the Region. The judicial system's installed capacity—measured in terms of judicial units and support staff—is three or four times that of its Andean neighbors (see Figure 11).

Figure 10. Investment Expenditures of the Judiciary, 1992–98
Figure 11. Institutional Capacity, 1998*

Part of this higher capacity can be explained because of the much higher demand faced by Colombia vis-à-vis most of the Andean countries (see Figure 12). However, Colombia shows clear productivity problems when compared with Chile, which presents a judicial demand ratio (cases per 100,000 inhabitants) that is 71.6 percent higher than Colombia, and only 27 percent of the support personnel used by Colombia. This is also reflected in the ratio of judges per 100,000 inhabitants. Colombia had a ratio of 17 judges and prosecutors per 100,000 inhabitants in 1994, which could be considered comparable to countries like Argentina, Costa Rica, and Uruguay (with ratios ranging from 11 to 15 per 100,000 inhabitants). However, the difference is dramatic when compared to Chile, which had a ratio of only 3 judges and prosecutors per 100,000 inhabitants (see Consejo Superior de la Judicatura 1994).

Colombia also has the highest budgetary allocation (in dollars) per capita among the Andean countries, including Chile (see Figure 13). It can be argued, therefore, that within the Andean Region, the Colombian Judiciary enjoys the most comfortable position in terms of financial, organizational, and personnel capacity. Moreover, relevant international comparisons would indicate that Colombia should have ample room for obtaining productivity improvements.

Despite this privileged position, Colombia provides very limited access to formal judicial services, and those having access to the services face serious problems. The Household Survey conducted in March 1997 included a special module on per-
Figure 12. Comparison of Caseloads in Andean Countries, 1992–98

Source: Cuadro 1C, Anexo C.

Figure 13. Judiciary’s Budgetary Allocations, 1998

Source: Cuadro 9C, Anexo C.
formance of the judiciary. Approximately 39 percent of households facing some form of conflict sought relief from the Judiciary. Of these, 8.4 percent were concluded with no service rendered, 55.3 percent were still awaiting results, and only 28 percent obtained results from the system. Of those that did not seek judicial relief (48 percent), lack of trust in the transparency and effectiveness of the system was cited as the main reason.

A crucial problem faced by the system is chronic congestion. There is no indication, however, that the new authorities have been able to make a significant dent in this phenomenon. Figure 14 shows that despite a modest improvement in the rate of case disposition, the stock of cases continued to grow—and hence the congestion—during 1996–99. Thus, the marginal productivity increase that has been generated has not been able to absorb the system’s demand growth and precludes a further increase in the stock. The result is that by end 1999, according to SCJ data, the Judiciary had been able to process and conclude 1.2 million cases and had a remaining inventory of about 3.3 million cases. There seems to be no end in sight to this situation.

Congestion levels are clearly one dimension of the problem, and quality and corruption seem to be other relevant dimensions. A key dimension of quality is related to the timeliness of the service. Figure 15 shows the average duration of a civil process in the civil jurisdiction. It seems paradoxical that ordinary procedures incor-

Figure 14. Workload Evolution Ordinary Jurisdiction, 1993–99

25 The survey includes 17,394 households that constitute a representative sample of the cities of Barranquilla, Bucaramanga, Cali, Manizales, Medellín, Pasto, and Santafé de Bogotá.

26 The remaining 13 percent sought relief from other official sources, such as the police
porating a conciliatory stage last almost twice as long as a procedure that has no attempt at conciliation. It reflects, however, the very limited effectiveness of Colombian judges in managing innovative techniques. In any case the range of duration of an ordinary procedure is between over 500 and over 1,000 days. The summary executive proceeding lasts more than 800 days if taken to completion.

A survey in Colombia that interviewed entrepreneurs and citizens about the issues affecting the quality of justice showed a remarkable consensus. Excess delay was the top choice for both segments of the survey, while the highly cumbersome legislative framework and the difficulties in executing judicial decisions were the second and third choices. The issues of credibility and professional quality of the judges did not seem to generate significant concerns (see Figures 16 and 17).

Another dimension of quality is responsiveness, that is, the extent to which the supply of judicial services meets the demand of clients. One segment of the judicial clientele is households. The cited 1997 survey of households shows that there is a

**Figure 15. Average Process Duration Civil Procedures**

![Diagram showing average process duration for civil procedures]

*Note: The date specified in the approval of the creditor costs' liquidation is taken as the date of conclusion of the procedure. These results are based on a survey conducted in 1997.*

*Source: Consejo Superior de la Judicatura*

27 The survey was conducted during February–April 2001 and the results were made public in 2002. It was sponsored by the World Bank Institute, the Vice-Presidency of the Republic of Colombia, and a group of academic and civil society organizations, and included a representative sample of 1,343 entrepreneurs and a structured sample of 3,493 citizens.
Figure 16. Critical Factors Affecting the Quality of Justice (Citizens)

Factors that Undermine the Quality of Justice. For you to tell how often you have experienced any of these factors (on a scale from 1 to 7 percent)

- Excessive delays in the procedure
- Difficulties in executing judicial decisions
- Highly cumbersome legislative framework
- Legal and non-legal costs for access to justice
- Access to adequate legal assistance
- Lack of credibility of the judges
- Lack of professional capacity/quality of judges

Respondents 3,493

- **Very often/often** (1, 2, 3)
- **Infrequently** (5, 6, 7)
- **Sometimes** (4)
- **Did not know/did not respond**

A significant mismatch between the needs of the population and the offer of the Judiciary (48 percent of households rejected the option of acceding to the system, and 8.5 percent of those that did accede were dismissed by the system itself). The inappropriateness of the offer is also reflected in the increased substitution of the traditional proceedings by those of the Protection Action (discussed above). In fact, there seems to be increasing evidence that the most suitable use that people can make of current Judicial services is money collection. During the last decade, pure money collection procedures (*juicio de ejecución*) averaged about 80 percent of total demand in the civil jurisdiction (Figure 18).
Figure 17. Critical Factors Affecting the Quality of Justice (Entrepreneurs)

Factors that Undermine the Quality of Justice. For you to tell how often you have experienced any of these factors (on a scale from 1 to 7 percent)

While there are many inferences that can be derived from these phenomena (including correlations with periods of economic crisis), people seem to derive only one clear implication: that the system is becoming increasingly regressive to the point that about two-thirds of the system’s conflict resolution capacity is an instrument for the private benefit of creditors, which are mostly financial institutions. The recent World Bank Institute and Vice-Presidency survey found surprising unanimity among entrepreneurs (70 percent) and citizens (77 percent) that the justice system is skewed against the poor (see Figures 19 and 20).

A strategic dimension of this increasing lack of responsiveness of the system is that the rationale for subsidizing judicial proceedings has become increasingly fragile. The case for charging the beneficiaries—at least those that are deriving mostly
private benefits—continues to be seen as an abhorrence by the judicial authorities, despite increasing evidence of the system’s regressive nature and the increasing international evidence in favor of using economic instruments to regulate judicial access (see Jolowicz 1983; Shavell 1997; Zuckerman 2000). This should be an area for serious strategic consideration as an instrument to improve access and efficiency in resource use.

The survey on the issue of corruption in the Judiciary presents mixed results. It seems that the Colombian Judiciary has been able to maintain adequate levels of integrity in the higher echelons of the system. This may be in part the result of the political establishment having had limited influence over judicial appointments in the last decades. The survey shows low consensus on the existence of systemic capture of the Judiciary by private groups. On the other hand, 74 percent of citizens indicate that bribes are frequently used as a way to ensure the timely resolution or outcome of a case.28

THE ISSUE OF IMPROVING PRODUCTIVITY. The performance of the SCJ in improving resource allocation and efficiency seems to be marginal at best. An effort was begun in 1997 to implement a new judicial map that would respond more closely to judicial needs. The impact of that exercise has not been evaluated. The implementation of the performance and evaluation system seems to have generated some improvements in productivity as reflected in a moderate increase in the aggregate

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28 The survey was sponsored by the World Bank Institute, the Vice-Presidency of the Republic of Colombia, and a group of academic and civil society organizations. It included a representative sample of 1,343 entrepreneurs and a structured sample of 3,493 citizens.
Figure 19. Public Perceptions on the Independence of the Judiciary (Citizens)

For you to tell me your opinion regarding usual appraisals of the Judiciary System (on a scale from 1 to 7 percent)

- Laws are only applied to the poor; the rich are above the law (as it is said the law is only for the common citizen)
- The judicial system is manipulated by economic pressure groups
- The judicial system is remarkably unjust
- The judicial system is totally dependent on the government
- The judicial system lacks the citizens’ confidence
- The judicial system is more corrupt than the government

Respondents 3,493

☐ Absolutely agree/agree (1,2,3)
☒ Disagree/absolutely disagree (5,6,7)
☐ Issue not significant for respondent (4)
☐ Do not know/did not respond

disposal rate. Several pilot programs have been initiated to aggregate administrative courts under a multicourt unit, but these are as yet too isolated and new.

The SCJ faces two distinct challenges. On one hand, the various challenges faced by the ordinary jurisdiction will probably need to be dealt with within the current resource envelope. The relatively generous increases that the State has been providing to its Judiciary over the years are already generating significant fiscal pressures on the economic authorities (see Figure 21). It seems highly unlikely that there is room...
Figure 20. Entrepreneur Perceptions on the Independence of the Judiciary (Entrepreneurs)

For you to tell me your opinion regarding usual appraisals of the Judiciary System (on a scale from 1 to 7 percent)

Laws are only applied to the poor; the rich are above the law (as it is said the law is only for the common citizen)

The judicial system is manipulated by economic pressure groups

The judicial system is not contributing in the resolution of conflicts

The judicial system is remarkably unjust

The judicial system is totally dependent on the government

The judicial system lacks the citizens’ confidence

The judicial system is more corrupt than the government

Respondents 1,343

☐ Absolutely agree/agree (1,2,3)

☒ Disagree/absolutely disagree (5,6,7)

☐ Issue not significant for respondent (4)

☐ Do not know/did not respond

for another substantial increase in the share for the Judiciary; hence the need to focus on productivity improvements.

The second challenge derives from the extraordinary rigidity of judicial expenditures. A system where about 90 percent of expenditures goes to salaries leaves the authorities very little room to maneuver. Moreover, the possibility of declaring massive staff redundancies may be neither feasible nor convenient. The judicial authorities face tough labor unions that would strongly oppose massive staff reductions.
On the other hand, the issue does not seem to be excess personnel, but improving the efficiency and competencies of the current labor force in order to improve productivity and quality. This means that instead of layoffs, the discussion should center on assigning staff new responsibilities and developing new competencies derived from the changes in judicial proceedings, organization, and work processes. A case in point: the traditional structure of the courts requires the presence of a secretary to play a mostly ancillary role that could be easily absorbed by other functions under an organizational restructuring of court functions. Secretaries—mostly lawyers—could then be assigned to perform more valuable functions and substantially improve productivity. Thus, the system could be facing a number of win–win opportunities that could substantially improve productivity.

**Improving the Quality of Judicial Services.** This analysis of the judicial system indicates very limited progress in resolving the serious issue of congestion that pervades the various operational jurisdictions (civil, criminal, labor, and family). Moreover, in the absence of decisive and extraordinary initiatives, the problem is here to stay, generating astonishing costs and waste of resources for the Colombian society. The same seems to be true for the quality issues—improving timeliness and responsiveness. The growing impatience with the lack of significant results has led many sectors of society to question the organizational arrangement. Initiatives aimed at terminating the SCJ have reached the Legislative Branch. The very limited results obtained would merit
reconsidering the strategies, or lack thereof, that have been applied in the sector, including the suitability of the present managerial arrangements.

This Chapter argues that a priority should be devising a viable strategy to make significant improvements in the inveterate problems of poor productivity, congestion, and poor quality in the discharge of the judging functions that plague the judiciary. Designing the suitable institutional arrangements for the implementation of such a task should be an important component of the strategy.

The adoption of a nationwide change strategy to improve productivity and quality and to alleviate congestion would imply a stronger coordination among the judicial leadership and a stronger adherence from the leadership to the objectives of change. Following is a proposal of what could constitute critical components of such strategy:

- **A drastic reorientation in investment priorities toward improving skills and competencies** The second investment priority would consist of implementing a computerized case management system and timely and reliable information systems. As discussed above, the most convenient route to dealing with the main problems confronting the system is through the conversion of staff to new ideas and techniques. This would imply a radical departure from the entrenched view that somehow the majesty of justice is closely related to the monumental quality of the buildings in which justice is meted out.

- **The convergence of all competency-building efforts toward overcoming the passive, formalistic, and rule-based paradigm that reigns in the Judiciary, and its replacement by modern schools of thought that emphasize proactivity, orthodoxy, principled reasoning, and the predominance of substance over process and form.** The second competence-building priority would be developing the skills derived from organizational restructuring.

- **The revision of current performance evaluation mechanisms to ensure that incentives are effectively aimed at generating prompt and quality results** There is a strong bias under the current performance mechanisms toward measuring process rather than results. As a consequence, operators have sometimes become experts in meeting targets without generating the results the system is looking for.

- **The reform of current information systems to ensure a more reliable accounting of judicial operations and as a critical input for a wholesome performance evaluation** Technological development should be made congruent with the overall organizational priorities. It will be crucial to develop information systems that produce the information required at the various levels of the organization for managerial, operational, and performance evaluation purposes.

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29 It is expected that the procedural and organizational reforms included in the strategy would substantially increase transparency in judicial operations and constitute an effective deterrent for corrupt practices.
• A major organizational restructuring effort aimed at bundling judicial and administrative activities and an adequate division of labor. A major focus of organizational change will consist of removing judges from handling administrative matters and ensuring that the jurisdictional functions are assigned to a strong and qualified team within the court under the judge's direct leadership. A key objective of this component is the pooling of administrative functions and their assignment to specialized units that will perform them using modern operational methods that maximize productivity.

IV. Conclusions and Recommendations

The Colombian Judiciary is facing serious challenges that affect its governance structure and effectiveness in performing the crucial social functions of punishing criminal offenses and resolving conflict within Colombian society. It is clear that the Judiciary has a restricted role in dealing with the full dimension of conflict and violence in Colombia. However, its contribution could go a long way toward reducing those forms of ordinary violence that constitute the bulk of the problem today, and providing an effective forum for the resolution of the various forms of conflict that affect Colombian society and to which the Judiciary is not responsive. Improving the Judiciary's social response would also have a substantial impact on improving the state's legitimacy and establishing the underpinnings of a more open and effective democracy.

The first dimension of the judiciary's challenge is located at its governance structure. The establishment of multiple leaderships with diverging objectives and judicial paradigms, and without adequate mechanisms or incentives for conflict resolution or coordination, is becoming increasingly costly to society. The following options were identified as optimum for dealing with the governance quagmire, alternative scenarios could be derived from the most-preferred option due to political economy considerations, since these proposals would of necessity entail constitutional reforms:

• The most radical and effective approach in dealing with the prevailing governance quagmire would consist of merging the three high courts—Constitutional, Supreme, and State Council—into one body that would have undisputed and sole leadership in all jurisdictions. This new Court should have a clear mandate to move decisively toward a new form of justice in keeping with the principles and policy objectives that have been pursued by the Constitutional Court in recent years: providing adequate access of the citizenry to quality, principled, and swift justice. The system of nomination of the justices should ensure an adequate balance between autonomy and responsiveness to society.
• The management of the sector would also call for some out-of-the-box proposals. The most suitable solution would be to replace the administrative board


of the SCJ that discharges executive functions with a sole executive judicial administrator—a senior manager with a strong profile in organizational management. The manager would report to a board that would set administrative policy for the Judiciary. Such a board would have strong participation from the new Court—say 50 percent—but would also have representatives from the Executive and Legislative Branches (to ensure adequate coordination), academia, and judicial associations.

- The disciplinary function of the sector would be left to an ethics board reporting to the High Court and comprised of both external and internal representatives.

The second dimension of the Judiciary’s challenge would consist of ensuring an orderly convergence of the regular and emerging protection jurisdictions into swift, oral, substantive procedures that would do away with the present congestion, delay, and corruption. This would imply a major legislative, organizational, and logistical exercise, and require superb management and strong cohesion and leadership from the judicial authorities. It would also imply a major competencies conversion exercise within the Judiciary and the buildup of an adequate information infrastructure base. Failure to act in this field or in the governance area would result in a further increase in inefficiencies and growing dysfunction of the system. The improvement of the regular conflict resolution services would eventually reduce the attractiveness of the Protection Action as a conflict resolution method and enable the Action to return to its origins as a tool for protection against individual rights abuses.

The final dimension of the Judiciary’s challenges consists of seeking a major restructuring of the AGO’s corporate strategies to ensure more focused and socially relevant results. The AGO has a substantial advantage over its peers, it has no structural governance deficiency, and the Attorney General could effectively decide to move the AGO toward a new set of priorities and objectives with very limited constraints. The key concept driving a restructuring of the AGO is the need for selectivity in the use of quite finite resources, thus, the need for a clear prioritization of the socially desirable goals that the AGO pursues in the future. The AGO should move away from current performance standards and incentives that give preference to the achievement of mostly bureaucratic targets of reducing congestion and delay and make the centerpiece of its strategy the reduction of impunity in key criminal offenses. This may also imply a significant organizational restructuring.

In dealing with this challenge this Chapter has identified major constraints and opportunities:

- In addressing the serious issues of governance within the Judiciary, it is crucial that an effort be made to reach a strong consensus, both among the political establishment and within the Judiciary, aimed at overcoming the current governance quagmire. The consensus within the Judiciary will be particularly critical to ensure ownership of the changes that would derive from the governance restructuring.
• Resources available to the Judiciary are relatively generous, there is plenty of room for productivity improvements, and society cannot afford further contributions. Expenditure rigidities and entrenched investment preconceptions will need to be addressed with ingenuity and decisiveness.

• The lack of a clear strategic focus of the actions promoted by the SCJ is failing to make a dent in the issues of congestion and quality of judicial services. It will be crucial to devise a strategy that would promise effective results based on productivity improvements. As part of this exercise, the authorities should assess whether the current rate of cases coming before the courts is the best use of the system, particularly those cases where society does not seem to be accruing significant benefits.

• The establishment of constitutional jurisdiction, both in its philosophical and instrumental dimensions, has embarked the branch on a process of irreversible and lasting change. The real issue is how to complete and ensure the coherence of the process across the Judiciary.

• The establishment of the AGO as the unquestionable leader in dealing with criminal policies and the generous resources with which it has been endowed constitute a giant step in the challenge to reduce impunity.

• The citizenry have become acutely aware of the benefits derived from a more open, responsive, effective justice system. The constituency for change has been steadily growing over the years.

• There is increasing improvement in the quality and quantity of analysis regarding the Judiciary. This increases accountability of the incumbents and provides a better analytical basis on which to formulate policy and reforms.

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Corruption, Institutional Performance, and Governance: Developing an Anticorruption Strategy for Colombia

This Chapter was written by Felipe Saez.

I. Background

The effects of corruption on governance in Colombia are unique to the region and present unique challenges. Colombia also has the most serious problem with political violence in the region. The influence of drug trafficking on its social, economic, and political life has been more significant than in any other country. Colombia has faced these challenges while maintaining its democratic institutions and while trying, to the extent possible, to achieve broad social consensus and satisfy social aspirations. There is undoubtedly a wide range of opinion as to the extent to which the current democratic system reflects social consensus, and this is intimately linked to perceptions of the integrity and legitimacy of the political system.

During the 1990s, Colombian democracy and political authorities moved toward greater competence, political openness, and accountability. The Constitution of 1991 was the foundation for a process that seeks to establish a new model for Colombian society and the Colombian State: the social state of law. More than a decade after beginning the process much has been achieved, but there have also been many frustrations in the attempt to establish this new model.

1. The social state of law is understood as having evolved in Western democracies in the mid-20th century, and as representing the convergence of liberal, social-democratic, and social-Christian ideas. It assumes that the mere recognition of individual freedoms and equality is not enough to guarantee the welfare of citizens; inasmuch as citizens require a certain level of material welfare to make use of their freedoms. In this new social context, the State is given the responsibility of reasonably guaranteeing this level for everyone (Decision of the Plenary Session of the Constitutional Court C-1064, 10 October 2001).
Since the early 1990s, Colombia's intense battle against corruption has been closely associated with the new Constitution, which increased the state's ability to sanction corrupt practices and established new rules for political activity. Various administrations have also implemented programs that simplify procedural steps and reduce the discretionary powers of public employees. However, despite these efforts, the general perception on the part of the people is that not enough headway has been made. Corruption appears to continue in broad areas of Colombian public life, with the resulting undermining of the legitimacy of public institutions, and taking a significant economic and social toll.

This Chapter presents an overview of the advances made in terms of corruption, institutional performance, and governance, based on the Bank's experience and on an empirical study recently done in collaboration with the government and civil society institutions. The report concludes by identifying some of the factors that must be taken into consideration when formulating anticorruption strategies in the country. It also contains some of the policy options that emerged from the study, and suggestions for possible actions that could be taken in the future to make further headway.

II. Main Conclusions of the Empirical Study

The state of corruption in Colombia is quite different from that in any other country in the region. While the various groups surveyed list corruption among the most serious problems facing Colombian society, they show that the Colombian


3. The establishment of the Office of the National Attorney General as the judicial body concentrating the powers of investigation and preliminary judgement is one of the main results of the 1991 Constitutional Reform in the fight against corruption. Since then, this office has played a leading role in the implementation of crime-related policy and the fight against corruption. (See the Management Report for 1997–2001 presented to the Supreme Court of Justice, May 2001, Bogotá, Colombia.)

4. Despite the clear intention of the 1991 Constitution to eliminate clientelismo—the practice of obtaining votes through promises of government posts—little headway was made in improving the system of political representation through reform of the political party system and the electoral system. On the other hand, the sanctions applied to politicians who make use of such practices were greatly increased (parliamentary immunity was eliminated and loss of investiture was established). The judicial system was given great responsibility for cleaning up the political system. The results of the survey show that the desired effects apparently have not been achieved (see Yepes 2001).

5. For a detailed description of the efforts made, see Cepeda (2000:78–81), and Suárez Melo (1994).

6. For the purposes of this Chapter, corruption is any abuse of a public post aimed at obtaining private benefit or profit, whether at the strictly private level (friends, family), or for political benefits, financial profit, or status.
panorama could be the most hopeful in terms of traditional indicators of integrity (bribes for purchases or licenses, the frequency of corruption in the public administration, and so forth). The other countries, meanwhile, are less convinced of the seriousness of the problem of corruption, but show higher levels of traditional forms of corruption (see Figure 1). Paradoxically, the country that is most aware of the seriousness of the problem of corruption presents the most hopeful picture in terms of traditional indicators of integrity.

a) State Capture and Governance

This Chapter maintains that the decisive factor explaining the particular seriousness of the phenomenon of corruption in Colombia is the high incidence of state capture* reported by the people surveyed. Furthermore, the incidence of this kind of corruption has an adverse effect on the governance of the country* to the extent that the authorities are perceived as responding preferentially to interest groups that do not represent the interests of the population in general. More than 70 percent of the entrepreneurs and public employees surveyed agreed that interest groups have the ability to use corrupt practices to influence the decisions of high-level government authorities. As Figure 2 shows, the incidence of capture of legislative, executive, and regional authorities in Colombia is higher than in any other country in the region.

The high incidence of State capture calls into question the ability of Colombian citizens to hold their authorities accountable either directly (through the electoral process) or indirectly (through institutional checks and balances). It also suggests that some of the issues involving corruption in Colombia fall within the realm of political institutions and are not simply administrative. The high degree of dishonesty that the three surveyed segments attribute to the National Congress as the focal point of the political system is a factor that reaffirms the doubts of those surveyed regarding the framework of governance, and the integrity of the political system in particular (see Figure 10).

The surveys do not contain information to enable a quantification of what State capture is costing Colombian society. There was a general consensus, however, regarding the kinds of interests that benefit from such capture (Figure 3).

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* As in traditional forms of corruption, state capture involves agents that wrongly use responsibilities deriving from a public function for their own benefit, whether financial or related to social status. The basic difference between this and other forms, however, is that these agents are at high levels of government decisionmaking, and their corrupt practices affect the rules that govern the relationships among interest groups and the State. This means that they go beyond involving specific transactions.

* We understand the framework of governance as the traditions and institutions through which authority is exercised in a country. This framework includes (a) the processes through which authorities are selected, evaluated, and replaced, (b) the ability of governments to effectively formulate and implement policies, and (c) the respect of citizens and state authorities for the regulations and institutions that govern social and economic interactions (see Kaufmann, Kraay, and Zoido-Lobatón, 1999a and 1999b).
Figure 1. Corruption: Comparison of Colombia, Ecuador, Honduras, and Peru

- % of users who consider corruption to be one of the most serious problems
- % of companies that report frequent use of bribes to obtain public contracts
- % of companies asked to pay a bribe when they tried to receive a service
- Corruption in Public Administration (% of public employees who reported that this is frequent)
- % of companies that report that state capture is a very serious problem
Figure 2. Level of State Capture/Undue Ability of Elites to Influence High-Level Decisions of Authorities in Colombia, Honduras, and Peru (according to companies, 2001)

* The surveys in Peru were done immediately after Fujimori’s departure
Figure 3. How Much Ability Do the Following Actors Have To Use Bribes To Influence the Decisions of High-Level State Authorities?

Furthermore, we have identified three ways in which political competence is limited and closely associated with forms of State capture:

- First, the private sector plays an important and practically unregulated role in the financing of political campaigns. Seventy-one percent of entrepreneurs agree that it is very common for companies to make contributions to political campaigns, and 55 percent estimate that it is very important for companies to make such contributions as a way of influencing the political decisions that affect them.9

- Second, the network of influences that affect the decisions of members of Congress and other State officials is not limited to the private sector. In the opinion of 74 percent of public employees and 81 percent of the entrepreneurs surveyed, the drug trade has had a significant influence on legislative decisionmaking (see Figure 3). The survey does not look more closely at this issue.10

9. The influence of large economic groups on the political system is much greater than that of private sector trade organizations, which are the normal channel through which this sector seeks to influence political decisionmaking.

10. The survey attributes great importance to the influence of forms of organized crime other than the drug trade on the decisions of state authorities. It is not clear from the survey exactly which groups these are. A hypothesis that would require further analysis is that guerrilla and paramilitary groups are increasingly influential, especially in certain regions. Unfortunately, the survey did not pose specific questions in this regard, though it did establish that capture levels of regional authorities in Yopal are extremely high.
Third, political competence is restricted by *clientelismo* (the practice of obtaining votes through promises of government posts) as a system for developing groups that wield political and bureaucratic power and that use corrupt acts to boost electoral support for important parliamentary sectors. The survey does not enable us to verify or confirm the existence of an established model for this practice. However, it does enable us to confirm the presence of certain kinds of administrative corruption that are both systematic and immune to bureaucratic controls and counterweights, leading to the conclusion that they are sponsored by entrenched political corruption.

The lack of a meritocracy\(^ {11} \) is closely related to the presence of corruption in institutions at the national level (represented by frequent budget diversions and irregularities in awarding contracts). The factor that most limits the independence of public institutions—and therefore, the possibility that a meritocracy could prevail—is the influence of politicians in the human resources area of public administration (see Figure 4).

Politicians are active and important participants in the distribution of bribes generated in competitive bidding processes, confirming the model of *clientelismo* to which we have referred above. Forty-three percent of entrepreneurs who make frequent contracts with the State indicate that bribes are very often used to finance political campaigns. Forty-five percent of the public employees surveyed indicate that quite often or very often bribes are shared with a politician or political party.

There is a strong correlation between the levels of politicization\(^ {12} \) demonstrated by public institutions and the presence of corruption (represented by the frequency of budget deviations and bribes in the contract-awarding process). It is particularly noteworthy that the institutions with the lowest levels of politicization are almost free of corruption (see Figure 5).

The figures show high levels of corruption in Colombia in the area of State purchases and budget deviations. This involves estimated costs of about US$480 million in the case of purchases and US$1.76 billion in budget deviations. These two areas together are equivalent to 2.6 percent of GDP, or 80 percent of Colombia’s fiscal deficit in 2001. Public employees responded that about 50 percent of contracts for State purchases involve some kind of bribe and that the average bribe is about

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\(^ {11} \) The concept of meritocracy was developed on the basis of three questions contained in the survey of public employees. These asked whether personnel-related decisions were made based on specific criteria, based on professional experience/merit/performance, and based on educational level. The public employees responded to these questions on a scale of 1 to 7, depending on whether they strongly disagreed or strongly agreed with the respective affirmations.

\(^ {12} \) The concept of politicization was based on three questions public employees were asked to what degree the decisions involving personnel, budgets, and contracting within institutions were based on political links, political affiliation, or political pressures. The public employees responded to these questions on a scale of 1 to 7, depending on whether they strongly disagreed or strongly agreed with the respective affirmations.
Figure 4. Meritocracy versus Presence of Corruption (Central Level)

Central Level regression equation

\[ y = 0.8 - 0.24x \]

\[ r = 0.47^{**} \]

High

Low
Figure 5. Level of Politicization versus Presence of Corruption

\[ y = 0.083 + 0.72x \]

\[ r = 0.83 \]
19 percent of the value of the contract itself. The perception of the public employees is corroborated by entrepreneurs, 62 percent of whom agree that companies always or almost always make unofficial payments to win competitive bidding processes or public tenders.

The high level of corruption in public contracting seems to have seriously distorted the structure necessary for the fair and open competition that is essential to the tendering process. Seventy-five percent of the entrepreneurs stated that they had not made a bid for a State contract in the past two years. Among those who had participated, 61 percent withdrew due to the lack of an impartial competitive framework (see Figure 6). The existence of contractors that hold monopolies is the most frequently mentioned irregularity in the tendering process. The indirect costs derived from the different restrictions on competition for public contracts could significantly increase the estimated cost of bribes.

The situation is similar with budget deviations. The survey enabled us to determine that on average there is an 11.4 percent deviation of budget resources among public institutions as a whole. This average, however, varies significantly among public institutions. There is a significant correlation between the level of transparency of the national institutions as a group and the level of budget deviation they report.

Figure 6. Restrictions on Competition for Public Contracts

Have you withdrawn from other tendering or competitive bidding processes in which you would otherwise have considered taking part?

- YES. Withdrew
- NO. Did not withdraw

Base: 335

Lack of an impartial competitive framework
The complexity of the process
Unofficial payments
Cost of the process
Did not have direct contacts
Could obtain contracts without competing

Why did you withdraw?

Base: 203
institutions with the greatest problems of deviation are those that have evident deficiencies in various aspects of institutional integrity, and that are highly politicized.

b) Moderate Incidence of Administrative Corruption

The efforts made to reduce administrative bribes and improve services to citizens seem to have had positive results. From the responses of users and entrepreneurs, we can conclude that there are no serious or generalized problems with bribes or other forms of corruption aimed at obtaining services, permits, or licenses from public institutions. Users paid bribes in only 3.6 percent of the cases in which they requested a service, permit, or license, and access to these was denied in only 8.4 percent of cases.

Both groups surveyed were reasonably satisfied with the quality of services, the ease with which procedural requirements can be followed, and the quality of procedural requirements in public institutions. The low incidence of this kind of corruption may be related to the efforts of various governments at the national and regional levels to simplify procedural requirements and to eliminate the discretionary power of public employees. However, the survey identifies certain areas where corruption is common and service is deficient, such as the health services and pensions provided by the Social Security Institute and the procedures for motor vehicle inspection and registration.

Figures 7 and 8 show the experiences of entrepreneurs and users with administrative corruption (first bar for each procedure) and the degree to which users and entrepreneurs are satisfied with the administration (second bar).

c) The Purchase of Public Administration Posts

The public employees surveyed responded that the “purchase” of posts is a relatively frequent practice within the public administration. This perception is significant (about 30 percent of those surveyed) at the professional and administrative levels of government. However, when public employees are asked about the existence of this practice within their own institutions, this perception is much less common: only about 10 percent of public employees state that this is a frequent practice.

d) The Perception of Institutional Performance

The three groups surveyed have a poor opinion of the honesty of their public institutions. Only three institutions of a total of 30 are considered honest by about 50 percent of those surveyed: the Servicio Nacional de Aprendizaje (National Training

13 Another interpretation would be that, rather than actually receiving high-quality services or procedural treatment, users are simply very tolerant of bad quality and delays in the procedures and services provided by the public administration. This was suggested by a survey of 2,000 people in five cities aimed at evaluating Government Order 2150 (1995) on the elimination of procedural requirements (see Cortés and Esperanza 1997)
Figure 7. Quality and Presence of Corruption in Public Services

ENTREPRENEURS

- In terms of treatment, speed, professionalism, good preparation and efficiency, how would you rate this service’s quality?
- High quality service 5,6,7

- Public employees often request payments or else your company feels obliged to make them. Did this happen when you requested/received this service?
- Always or almost always 1,2,3

State bank loans
Munic./district tax procedures
Vehicle registration
National tax procedures
Technical inspection motor vehicles
Export/import procedures
Water-related procedures
Environmental licenses
Health licenses
Telephone installation
Electrical hook-up
Property register/leins certificate
Opinion of fire services
Trade register/certificate of legal representation

(On a scale of 1 to 7)
Percent

Base 1,343

Service, SENA, the Instituto Colombiano de Bienestar Familiar (Colombian Family Welfare Institute, ICBF), and the Defensoría del Pueblo (Public Ombudsman’s Office) (see Figure 9). The next seven institutions considered the most honest were indicated by between 42 percent and 36 percent of those surveyed. These are quite low levels considering that they reflect the belief of citizens in the integrity of their
Figure 8. Quality and Presence of Corruption in Public Services

most important institutions. The public's lack of knowledge of the role and performance of certain institutions seems to be a factor that contributes significantly to the lack of consensus regarding their honesty.

The various groups surveyed are more categorical about the public institutions they perceive as the least honest. Two institutions stand out: the national Con-
Figure 9. The Ten Most-Honest Public Institutions: How Dishonest/Honest Is Each of the Following Institutions?

[Diagram showing the honesty ratings of various institutions.]

Note: Average percent of answers from entrepreneurs, public employees, and users.

gress (71 percent of those surveyed consider it to be completely dishonest), and the Social Security system (65 percent of those surveyed consider it to be completely dishonest). They are less categorical about the next least-honest institutions. These, however, include sectors and institutions with critical responsibilities (see Figure 10).

e) Institutional Performance

Colombian public institutions as a group demonstrate fair institutional performance in terms of transparency, internal controls, and institutional independence,
Figure 10. The Ten Least-Honest Public Institutions: How Dishonest/Honest Is Each of the Following Institutions?

0 10 20 30 40 50 60 70 80 90 100
Average percent of answers from entrepreneurs, public employees

☐ Completely dishonest/dishonest (1,2,3)  ■ Don't know

according to the evaluations made by employees of these institutions. The survey provides a preliminary map of the levels of institutional performance of 166 institutions (106 at the national level, 31 at the departmental level, and 29 at the municipal level). Only two of these demonstrate excellence—Interconexión Eléctrica S.A. (the national power transmission company, ISA) and the Central Bank—while other institutions reveal institutional deficiencies: the national Congress, the Social Security system, CAPRECOM, the Caja Nacional de Previsión Social (Government Employees Pension Fund, CAJANAL), INVIAS, and the Empresa Colombiana de Recursos para la Salud (ECOSALUD). The politicization of these institutions appears to be a determining factor for the presence of corruption and poor
institutional performance. Relatively high-quality institutional performance seems to coincide with popular opinion regarding the quality of service, and is also associated with a low incidence of administrative bribes. Cases of deficient performance, such as the Social Security system, coincide with the poor opinion users have of these institutions. Table 1 summarizes the relative strengths and weaknesses of the institutions as a group.

f) Presence of Corruption at the Regional Level

The highest rates of corruption can be seen in municipal bodies, particularly in personnel administration and budget administration (see Table 2). The comparative analysis of institutional performance variables revealed that municipal bodies are significantly more politicized and less transparent than national and departmental institutions. A clear hypothesis that can be derived from this comparative analysis is that *clientelismo* is a stronger force in municipal institutions. This is not the case at the departmental level, where institutional performance is more in line with that of the central government.

g) Judicial Power and Corruption

Judicial Power in Colombia appears to be at the epicenter of the problem of corruption, despite its key role in protecting the interests of citizens. The role of the justice administration is considered extremely deficient. First, judicial decisions are clearly biased and are applied differently to the rich and the poor (70 percent of entrepreneurs and 77 percent of users believe that justice is not exercised impartially). Second, the quality of judicial services is low. Both entrepreneurs (81 percent) and users (80 percent) agree that the factor that most affects the quality of justice is the excessive time it takes to go through a court trial. Finally, 74 percent of users believe that the payment of bribes is very common in the judicial area in order to speed up and guarantee the outcome of trials (see Figure 11).

The governance of justice, in particular the independence of the Judicial Authority, is also called into question. Only 28 percent of entrepreneurs and 21 percent of

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Great conviction and satisfaction on the part of personnel</td>
<td>• Little incentive to generate quality services</td>
</tr>
<tr>
<td>• Clear institutional goals and strategies</td>
<td>• Administrative decisions on personnel</td>
</tr>
<tr>
<td>• Satisfactory physical installations</td>
<td>• Frequently changed</td>
</tr>
<tr>
<td>• Well-qualified personnel</td>
<td>• Low operating budgets</td>
</tr>
<tr>
<td>• Solid accounting controls</td>
<td>• Little technical content in decisions</td>
</tr>
<tr>
<td>• Solid regulatory framework</td>
<td>• Weak external controls</td>
</tr>
<tr>
<td></td>
<td>• Deficient public information systems</td>
</tr>
</tbody>
</table>
users agreed that the Judicial Authority was entirely independent of the government. The results of the survey present a worrisome scenario as regards credibility, independence, efficiency, and integrity of a public sector that is fundamental for generating institutional checks and balances to prevent abuses and corruption of State power. The perception that the Judicial Authority is not independent at the institutional level, combined with the sense that its decisions are imporptune and partial, are all critical challenges it must overcome.

Figure 11. Evaluation of the Judicial Sector

<table>
<thead>
<tr>
<th>Variable</th>
<th>Central Average</th>
<th>Department Average</th>
<th>Municipal Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate rate of corruption</td>
<td>46.0</td>
<td>48.2</td>
<td>50.7</td>
</tr>
<tr>
<td>Rate of state capture</td>
<td>67.2</td>
<td>70.0</td>
<td>71.6</td>
</tr>
<tr>
<td>Rate of public sector corruption</td>
<td>45.7</td>
<td>46.3</td>
<td>47.0</td>
</tr>
<tr>
<td>Rate of corruption in personnel administration</td>
<td>25.5</td>
<td>27.6</td>
<td>33.0</td>
</tr>
<tr>
<td>Rate of corruption in budget administration</td>
<td>20.0</td>
<td>23.4</td>
<td>25.6</td>
</tr>
</tbody>
</table>
h) Greater Impact of Administrative Corruption on the Poor

Bribes are a significant regressive "tax" on users of public services. An important conclusion drawn from the responses of entrepreneurs and users is that corruption is not the most serious problem. The respondents said that the very difficult access to services combined with their poor quality have a greater impact on the user than corruption itself. This situation is 135 percent more frequent than bribes and costs 5.3 times more than the extra costs resulting from corruption. The surveys establish the unequal impact of bribes on users of different income levels. In the case of the poorest sectors, though bribe payments are smaller in absolute terms than those paid by wealthier groups, they represent 14 percent of their income, on average.

III. An International Comparison of Governance

The difficulties with governance that can be inferred from the survey appear to be confirmed when governance of Colombia is compared at the international level. According to the Aggregate Governance Indicator\(^{14}\) prepared by the World Bank Institute on the basis of expert panels and worldwide surveys, Colombia is below the international average in four of six variables that attempt to measure levels of governance (see Figure 12).

Colombia's performance is below the international average for 170 countries in two key aspects of governance: (a) mechanisms for choosing and replacing authorities (included in the variables on say and accountability and political stability and violence), and (b) the degree of respect that citizens and authorities claim to have for the regulations that govern them (included in the variables on state of law and control of corruption). Guerilla and paramilitary violence would appear to be the most influential factor in the poor grade received by Colombia for its political stability. The country's relative position in terms of say and accountability is not as low at the international level, but the previously mentioned issues of State capture and restrictions on political competence do come to bear.

The areas in which Colombia's performance is better than that of 50 percent of the world's countries are those involving the government's ability to implement plans (included in the variables on the quality of regulatory frameworks and governmental effectiveness). This is consistent with the results of the survey, which rank Colombia as average in terms of institutional integrity.

Figure 12. Indicators of Governance in Colombia: 1998–2001
(based on more than 175 countries)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1998</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control of the Corruption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State of Right</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of the Laws</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness of the Government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political stability and Violence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice and Yield of Accounts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent of countries that have a smaller rank to the one of this country

Source: Kaufmann, Kraay, and Zoido (2002)

It is particularly revealing that when the change in these various indicators is compared with indicators for 1998–2001, the corruption control variable shows improvement. This means that the efforts being made in Colombia to attack corruption were having positive results. However, this improvement occurred in a context of deteriorating conditions of general governance. This deterioration is closely linked to the process of guerilla and paramilitary violence—despite the significant peace efforts that the current Administration is making—and to an eventual deterioration in the integrity of the political system.

Figure 13 shows a comparison of some of the critical variables of governance for all the countries in the region. Colombia’s performance is low among the countries selected, except once again in the area of corruption control, where its performance is average for these countries. This reaffirms how the efforts made by Colombia in this area have not been in vain, despite the fact that the population continues to consider the phenomenon extremely serious.
Figure 13. Governance Indicators for 2001 (based on a study of 175 countries)

Percent of Country Ranking (0–100%)

- Venezuela
- Colombia
- Brazil
- Ecuador
- Chile
- Argentina

Source: Kaufmann, Kraay, and Zoido (KKZ), 2002. Governance Matters II: Updated Governance Indicators for 2000-01

IV. A Strategy for Integrity

The survey provides us with an overview of the climate of governance and integrity in Colombia, and some elements to keep in mind when developing a national strategy for integrity and governance. This enables us to make some very preliminary proposals for policy options in different fields. In most cases, however, further analyses, both empirical and strictly technical, will be necessary in order to learn more about the characteristics and forms of the various types of corruption, and their impact on institutional performance and development of more finished strategies and policies. The following are various strategic factors suggested by the survey. These include the analytical work done to date.
• Developing an anticorruption strategy in Colombia will require closely coordinating conventional administrative reforms with an effort to eliminate the impact of clientelismo on the administrative apparatus. The prevailing technocratic focus has not been very effective. Although it worked for institutional reform through the administrative apparatus, this focus does not take into account the connections to the political system. It is not reasonable to consider establishing meritocratic systems within the administration if political sectors continue to have a decisive role in decisions on personnel, contracts, or budgets. This is why strategies that tend to strengthen mechanisms for selecting government agents and evaluating their performance must be accompanied by reforms to government systems that will allow for reasonable levels of independence and professionalism in the public administration. One possible way of getting this process under way and making a complete break with the clientelismo of the past would be for the new administration to hire at the top levels of public administration (except for ministers and vice-ministers) on the basis of public competitions where the determining selection criteria are the qualifications and competencies of the applicants, while allowing the participation of outside entities in the selection process. The administration would have a decisive role in preparing the list of applicants for each position. To guarantee its commitment to the process, the administration would agree to keep those selected in their posts as long as they demonstrate their ability to meet goals, and as long as they remain committed to the objectives and goals established for the institution. This must be reinforced by a legislative framework for the evaluation and performance of the public institutions that includes, among other elements, the obligation of the government to define a priori the institution’s objectives and goals, for which the management team would be responsible, while establishing reliable mechanisms for evaluating results and incentives. This would be a great advance in preventing top public employees from caving in to the interests of political groups. It would also change incentives so that government employees could concentrate on obtaining specific results, and would establish a clearer framework of governance for public managers, including a transparent description of their discretionary powers.

• Special emphasis must be placed on issues of governance that arise from the high incidence of State capture and the political system’s integrity problems. Although the schemes mentioned above can be applied to make great advances toward breaking chains of clientelismo that tie down the public administration, this type of process will be sustainable only if parallel advances are made in significantly changing the Colombian political system. Issues such as the regulation of electoral financing, the strengthening of political parties, and the consolidation of the role of Congress as auditor of the public administration must be priorities on the reform agenda in this area. At the same time, an effective penal definition of clientelismo and its effects on per-
sonnel, contracts, and budget management in the public administration would act as an important barrier against the undue influence of politics on bureaucracy. A medium-term goal on the road to establishing real boundaries between the various State authorities must be to establish effective institutional checks and balances that better reflect the general interests of the population. Another medium-term goal must be to guarantee the independence and professionalism of auditing and regulatory agencies.

- An especially active role is needed for civil society and regulatory agencies. The survey leads us to conclude that there is no clear leadership to direct the fight against corruption in Colombia. Both public employees and users are highly skeptical regarding the leadership and credibility needed to carry out an effective fight against corruption. This is a major challenge to authorities that want to lead the struggle for integrity. The most viable alternative for developing a significant process of this kind is an alliance led by the Executive but with the broadly based participation of state authorities (including regulatory agencies), civil society, the private sector, and all other interested groups. The various groups surveyed agree that regulatory agencies and citizen oversight committees must play an important role in any alliance against corruption.

- There must be incentives for citizens to report cases of corruption and demand accountability. Seventy-eight percent of users and 82 percent of public employees indicate that the main reason for not reporting corruption is fear of reprisals. The implications of this are very disturbing. Public employees feel that, above all, public authorities lack a real commitment to stopping corruption and that they do not make it a priority. There is also a feeling that politicians and their interests are behind the corruption (51 percent of public employees believe that the processes for reporting corruption directly threaten the interests of politicians). To eliminate the fear of reprisals, a clear and decisive effort is required of top state managers. Clear rules must be established with definitions of what constitutes corruption at institutions and agencies at all levels. Also, simple and reliable procedures must be established—possibly under the direction of public employees elected by their colleagues on the basis of their integrity—for reporting corruption. These two considerations, combined with clear leadership and a good example set by top State managers, would be important steps toward generating greater confidence and credibility in the fight against corruption.

- Increased ability to investigate and punish corruption. A second reason for not reporting corruption is the perception that public institutions are incapable of investigating and punishing those responsible. This sense of impotence in the face of generalized impunity in cases of corruption indicates a challenge of the greatest importance in the sense that it implies deficient performance on the part of the authorities that prosecute and judge these cases. Many of these deficiencies have been entrenched in these institutions for decades and are very dif-
difficult to eradicate without a very strong will and desire for change. An efficient mechanism for investigating and sanctioning corruption is a key factor in the effectiveness of an anticorruption policy. Such a mechanism does not exist in Colombia at the present time, where there are too many agencies with overlapping powers (Solicitor General, Attorney General, Comptroller General, Accountant General, and Auditor General) and very little effectiveness. A key factor in a credible anticorruption policy would be institutional reform that could rationalize the current system of investigation and monitoring, speed up procedures, and guarantee a more effective and active fight against corruption. Among institutional alternatives, consideration must be given to the establishment of a completely independent high-level agency for fighting corruption. This would be independent of political and administrative authorities and would report directly to the President. It would require a highly professional staff with great integrity, broad powers of investigation, and a highly credible institutional counterbalance that could deal with any complaints that may arise regarding the agency. This independent agency would also require a generous budget to properly carry out its duties. An initiative for institutional reform must also include a process for rationalizing and eventually closing agencies that lack an effective role in this field.

- An ambitious initiative is needed to break the vicious circle of corruption in the public contracting and budget processes. Initiatives to date that have worked toward combating irregularities in contracting and budgets have sought changes without introducing qualitative changes in the institutional framework in which these systems operate. In the case of contracting, emphasis has almost exclusively been placed on increasing the regulations that govern the tendering process in an effort to reduce opportunities for bribes and collusion. This has led to an increasingly legalistic approach to the management of public contracts that puts more emphasis on the formal aspects of the process than on the goals of economy, efficiency, and transparency—which should be the principal bases on which public agencies award contracts. In the case of the budget system, attempts have been made to improve financial information systems and to improve the coordination of macroeconomic planning, budget planning and implementation, and public treasury management. The survey has revealed certain new factors that may lead to new approaches to dealing with these forms of corruption. First, there is the clear impact of clientelismo on these key administrative functions. Action planned in this respect ought to contribute to mitigating this factor. Two initiatives would contribute significantly to reducing corruption in contracting: (a) the establishment of a highly technically specialized regulatory body with broad powers to make policies and monitor and evaluate tendering processes at the national and regional levels. This agency should work toward a new contracting model that seeks a balance between the goals of transparency, economy, and efficiency in the results obtained. It must abandon the current tendency
to put undue emphasis on the formal aspects of the tendering process since this is clearly the main factor that opens the door to corruption; and (b) the development of initiatives aimed at reducing the high level of collusion existing in contracting procedures. This should include the preparation of an Internet-based system to provide broad dissemination of contract opportunities, tendering documents, and information on contracts awarded. Payment mechanisms for public contracts must also be developed to guarantee that the State correctly meets its contractual obligations. Regarding budgets, two initiatives would contribute to significantly reducing corruption: (c) linking budget allocations to the effective achievement of results, which would be regularly evaluated by the pertinent agencies. The result of the evaluations would be an important factor in the process of evaluating the performance of top public managers; and (d) establishing specific functions for citizen oversight committees and other forms of citizen participation in the budget implementation process, including resources for training personnel.

- The high level of discontent demonstrated by the various groups surveyed regarding the integrity of Colombian public institutions indicates the need to restructure the institutional apparatus. Until now, administrative restructuring has been carried out mainly to eliminate overlapping functions among institutions and to eliminate agencies in areas where the State no longer has a role to play. This has led to modest results, but has not gotten to the root of the most critical problem of Colombian institutions: institutional overpopulation and a high degree of confusion regarding the functions of different agencies at the sectoral, intergovernmental, and national levels. Sectors such as energy, transport, and health operate in a very complex institutional context in which various agencies share parallel functions of policymaking, regulation, supervision, and implementation. This leads to great potential for conflict, paralysis, and a lack of institutional responsibility. On the national level, the clearest examples are the justice system and auditing and regulatory agencies. One option would be to begin a process of institutional realignment to define and specialize roles for making, regulating, and implementing policies at the sectoral, intergovernmental, and national levels, eliminating the overlapping of functions among institutions, and functional incompatibility within agencies. This would lead to greater institutional responsibility, more effective counterbalances, and greater effectiveness in each institution. These institutional reforms would be based on the institutional reality of each sector and would seek to rationalize the interinstitutional level before tackling the intrainstitutional level. To guarantee the legitimacy and validity of the changes to the institutional map, highly participatory processes would have to be developed at the sectoral and intrainstitutional levels. To do this, clear guidelines would be needed to determine goals and expected results. Leaders would have to take an active and decisive role in dealing with the controversies that may arise throughout the decisionmaking process.
References


Reform of Public Administration and of the State in Colombia

This Chapter was written by Fernando Rojas.

I. Background to Current Challenges

Colombia's public sector structure, procedures, and organizational culture are still dominated by the thorough reforms of 1958–60 and 1968–70.¹ Those were the days of the welfare state and high state interventionism. Following the French reforms of the Fifth Republic, Colombia adopted a strong presidential regime, developed sophisticated central planning capacity, and put together a cohesive pyramidal organization. Today's public sector chart, integrated by ministries, administrative departments, regulatory agencies, superintendencies, and autonomous agencies goes back to the years of the so-called Frente Nacional. Only the Kemmerer reforms of 1923 (Central Bank, Bank Superintendency, Comptroller General) surpassed the depth and lasting impact of the reforms of the late 1950s and 1960s.

The subsequent public sector reform of 1982–83 was perhaps the first attempt to limit government growth via reform of the administration. Ever since, reforms have been primarily oriented by the need to adjust and downsize the Leviathan of the 1960s to the new realities of market enforcement, provision of safety nets, and continuing assessment of public expenditure efficiency. Radical steps toward state decentralization have been taken since 1986. Regulatory agencies and additional superintendencies were introduced in the early 1990s, this time inspired by the British institutions of the 1980s. Concerns about human rights and the impunity from punishment of government officers who infringe on the human rights of

¹ The first draft of this Chapter was enriched by a dialogue held between the government-elect of Colombia and a World Bank mission led by Marcelo Guagale, Bogotá July 12 and 13, 2002. The dialogue dealt with international experience on public sector reform and initial cooperation agreements with the World Bank in this area.
others led to significant enlargement of the autonomy and resources of the judiciary in the Constitution of 1991. Similarly, the Constitution of 1991 reinforced participatory approaches and public-private partnerships of all sorts. However, neither the Constitution nor the subsequent 1993 decentralization of the social sector and education reforms accomplished fiscal restraint. With the exception of better management in a handful of cities and one or two departments, the reforms of 1991–93 did not enhance public sector responsiveness, accountability, or efficiency. In spite of the electoral reforms of the 1990s, the legislature is generally perceived to be the most corrupt, ineffective, and inefficient branch of the State.

During the last decade Colombia attempted three reforms of the public sector, with varying degrees of comprehensiveness. First, during 1992–94, the government adopted a public sector modernization strategy that covered most central government agencies and a few decentralized ones. Following the spirit of the Constitution of 1991, that reform was not focused on expenditure containment or fiscal sustainability. The main purpose of the reform of 1992–94 was the updating of public organizations and procedures in terms of better definition of mission and objectives and procedural simplification. The reform of 1999 was primarily targeted to fiscal rationalization through streamlining and downsizing the central government public sector. The scope and impact of the latter reform were drastically reduced when the Constitutional Court declared that some of the key reform decrees violated Colombia’s Constitution. The purpose and the spirit of the reform of 1999 were revived after the end of 2000. The 2000–2001 reform measures were not announced as an ambitious, comprehensive package, but as a piecemeal set of interrelated decisions put together under a fiscal rationalization umbrella. The unifying trend of the 2000–2001 reforms (including centrally imposed reforms at subnational levels) was the need to tighten the government expenditure belt and ensure fiscal sustainability as a necessary precondition for more ambitious reforms of the public sector. The main impact of the reform appears to be the outsourcing of many ancillary services and some reductions in payroll and other current expenditures, particularly in large cities and regional governments. This explains why the ministers of finance have been the champions of reform, from the influential Bird-Wiesner report of 1980 through the report of the Comisión de Racionalización del Gasto Público and the public sector reforms of 1992–94, 1999, and 2000–01. The recent government announcement (in 2002) of a comprehensive public sector reform is no exception.

As the most immediate precedent to the current situation, the reforms of 1999 and 2000–01 deserve special consideration. The exceptional path followed by the public sector reforms of 1999 and 2000–01 reflects a high degree of uncertainty about rules and institutional channels. The Colombian Constitution of 1991

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2. The Red Social created in 1994 and the Fondo para la Reconstrucción y el Desarrollo Social del Eje Cafetero (FOREC), the organizational scheme for emergency relief and reconstruction of the coffee zone after the earthquake of 1999, are among the most salient examples of this new form of state protection and safety nets.
granted the government the capacity to reform itself. Following best contemporary practices, the State was to flexibly and quickly adjust to new demands or changing policies, the way modular architecture or virtual organizations do. Nevertheless, uncertainties about the exact interpretation of the Constitution of 1991 led the government to request special congressional authority to enact the public sector reform of 1999. Paradoxically, it was the very law by which Congress anointed government with special authority that was declared unconstitutional—due to procedural flaws during discussion and approval of the law. Only a few of the reform proposals of 1999 were therefore sustained. Since the achievements of the reform of 1999 were very limited, the government initiated a new reform push at the end of 2000.

The public sector reform of 2000–2001 had to be framed within the government’s plan to rationalize public expenditures. This plan consisted of an array of legal and constitutional amendments, including (a) the constitutional reform of 2001 that put a ceiling on fiscal transfers to subnational governments, (b) Law 617 of 2000 that reduced current expenditures at all levels of government and adjustment programs for overindebted territorial entities or subnational entities that cannot meet expenditure targets, (c) the creation of a special reserve fund (Fondo de Pensiones Territoriales, National Fund for Regional Pensions, FONPET) to ensure adequate reserves for future subnational pension debt, (d) Law 715 of 2001 that superseded Law 60 of 1993 on distribution of revenues and expenditure responsibilities between levels of government, (e) the proposed tax reform for subnational entities, and (f) proposed reforms for the education and pension sectors.

Law 617 of 2000 requires all levels of government to reduce current expenditures in both personnel and goods and services. The adjustment effort by the national government is highly significant in view of the fact that the largest and fastest-growing categories of current government spending (other than debt service) could not be touched due to constitutional or policy restrictions. Expenditure categories that the government deemed highly rigid and politically sensitive included transfers to subnational entities (constitutional restriction), military and police spending (policy restriction due to internal conflict), and allocations to the legislative and the judicial branches (due to autonomy of separate branches of the Colombian State).4

The government also appeared to be aware of the need to strengthen and otherwise modernize budget, control, regulation, and supervision functions. However, no significant effort—other than the ongoing reforms of the Comptroller and Integrated System of Financial Information (SIIF)—was effectively launched.

The inertia of the state structure and functioning since the 1960s, combined with the numerous patchy attempts to adjust to new trends or transitory needs seem

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3 The so-called facultades extraordinarias by which Congress temporarily delegates its own legislative capacity to the government

4 The whole area of government control (Comptroller, Attorney General, and other smaller agencies) was recently reformed and there seems to be no need for further reform at this time.
to account for the eclectic nature of today’s Colombian public sector. Agencies and staff that provide services typically assumed by the private sector (important services such as data processing or external auditing, and many other less important ancillary services) coexist with modern regulatory agencies, privatization processes, client-oriented organizations, and demand-driven financing of public services. The culture of state enlargement, rigid supply functions, political patronage, and other forms of state capture competes with the culture of streamlining and efficiency seeking in allocation and production. In recent years, bureaucratic dualism has been compounded by political party fragmentation, internal conflict, corruption that occurs at mid-to-high levels of government, and exceptionally high crime indexes to weaken the country’s governance. On top of that, legitimate zeal for the protection of human rights has often led to misguided state intervention and debilitated accountability in macroeconomic policymaking, and has further complicated economic policy and market signals.

Colombia seems to face many more challenges to public sector reform than most other countries. Besides the usual demands of adjustment to increasingly globalized rules and institutions, Colombia needs to cope with the demands of internal conflict expenditures and postconflict institutions. Decentralization of resources and responsibilities, for instance, battle with the centralizing forces of military spending. Market signals and policy incentives compete with the need to reinforce the protection of human rights for minorities and the internally displaced population during conflict years. The high degree of subnational government autonomy envisioned by the Constitution of 1991 had to be restricted by the need to centrally define social policies and investment priorities and enforce both of them through earmarking and matching grants. Reinventing government through client-oriented services, performance agreements, and results evaluations—as repeatedly proclaimed by Colombian reform leaders since the Constitution of 1991—has yielded to budget inertia and emergency procedures.

Under the pressure of increasingly conflicting demands, public sector reform has to be comprehensive, multipurpose, and transparent. Above all, reform should prioritize fiscal sustainability and efficient use of scarce resources for the provision of public goods. It does not seem necessary to wait for peace to reform the Colombian State. Indeed the president elected in 2002 appears to be persuaded that efficiency, mobilization of private sector resources, and containment of public expenditures growth are all possible while the country is still facing the internal conflict.

5. Autonomous or semiautonomous public agencies are responsible for provisions of many ancillary services, particularly under the Ministries of Agriculture and Defense.
6. The safety nets created since the mid-1980s do not include—not could they anticipate—the more than 1 million internally displaced people.
7. Civil service reform has been enacted several times in the past. However, implementation of civil service reform has been only partial. As a result, it has not produced its intended effects and is no longer a priority in the reform agenda.
II. Government Proposal for a New Public Sector Reform

The remainder of this Chapter elaborates on the reform proposed by then President-Elect Uribe since the days of his presidential campaign. Since the new government is just beginning to formulate the reform, it is timely to discuss the scope needed (in terms of goals and means), and the most suitable ways to implement it.

a) Strategic Options

Governments that propose to undertake a substantial reform of the public administration and of the State as a whole are faced with strategic dilemmas that other countries have already faced. These dilemmas are discussed below, along with the lessons learned in the international arena and the options that the Colombian government appears to be choosing to deal with these difficulties.

i. Reform as an End in Itself, or Reform to Solve Priority Sector Problems

International experience and theory recommend directing the reform to achieve goals desired by the population. The reforms proposing specific sectoral goals can be sustained by a new pact between the government and the citizens, in which the government commits itself to improving services within a preestablished period of time, and the citizens take "ownership" of the reforms and help with them. Undertaking the reform with sectoral goals requires intersectoral coordination; the monitoring and evaluation process must be done jointly between the unit responsible for the reforms and the ministers or sectors involved. Goal-based reform eases and stimulates public oversight and demands greater accountability and responsiveness on the part of the government promoting the reform. This type of reform aims for results noticeable to the citizenry; "self-referential" reforms privilege the supply side of the State and strengthen the administrative apparatus as an end in itself.

Between 1958 and 1990 Colombia enacted fundamentally self-referential public administration reforms. The Constitution of 1991, the sectoral and decentralization laws, and the administrative reforms of 1992–93 introduced some goals and, above all, initiated the change to an administration oriented in terms of specific missions by agency or sectoral goals. The reforms of 1998–99 and 2001 consisted principally of fiscal adjustment measures that did not change the behavior of the administration nor deepen the incipient path of modernization started by the reforms at the beginning of the decade.

The government-elect appears to be inclining toward an administrative reform committed to goals or results of immediate interest to the public. The starting point is problems or deficiencies in the results of the administration, and from this state-

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8 Particularly important was the Constitutional reform and the laws of 1957–60 and 1968–70. These last laws still have a strong influence on the organizational culture of the Colombian State.
gies to address the problems are developed. Since the points of departure are problems identified by the government and felt by the public, one could say the reform is motivated by demand. The reform criteria are pragmatic or managerial. Changes in the apparatus and functioning of the administration are selected and ranked according to their contribution to a solution to the problem, not as a function of a preestablished normative logic.

**ii. Political Reform, Administrative Reform, or Both Simultaneously**

Contemporary administrative reforms are intimately linked to broader reforms covering other parts of the State, including the legislative, judicial, and enforcement branches, and the relations between them and the public. Taken as a whole, these reforms seek to reestablish the ability of the State to develop and enact fiscally sustainable policies. Reforms of the State join with fiscal reforms to overcome the crisis of the State undertaking the reforms, which is simultaneously a fiscal, governability, and public administration crisis. The solution to this integrated crisis is found in the changing role of the State, tributary reforms, strengthening the State to assure results, the reduction of the State, and the increased flexibility of public production functions. The new State makes transparency, the search for efficiency, responsiveness, accountability, and fiscal sustainability essential components of democracy.

As with most countries, Colombia combined modern state reform concepts with concepts inherited from previous constitutions in the Constitution of 1991. Colombia needs to harmonize tax code reform with spending and public administration reforms, and with the reforms of other branches of government, known in Colombia as "political reform." The government elected in May 2002 is proposing a constitutional reform that strengthens political legitimacy, the judicial branch, control of the public sector, and decentralization. The announced reform includes Congress, political campaigns and political parties, participatory democracy, land administration, judicial administration, and fiscal control. The government also proposes to develop a public administration reform that allows the application of the "communitarian state" concept called for by then President-Elect Uribe during his election campaign.

The concepts that drive political and administrative reform are compatible and, in general terms, represent a step forward in the modernization of the Colombian State. The questions raised by undertaking both reforms simultaneously are not conceptual; rather, they are practical. The issue is that each of these reforms has its own risks, and if they are combined, than the success of the public sector reform will depend on the approval of the constitutional reform, or the constitutional reform will depend on the public sector reform: the risks of each reform will multiply. It is advisable to keep them separate, and all the more so considering that the roles of the government and of the agency responsible for the reform are distinct in each case. In the case of political reform, the government is merely the promoter, while in public administration reform the government is often exclusively responsible for decision-making. Many possible administrative reform actions can be adopted by the government itself, and only a few of the actions would require legal or constitutional
reform. In the same sense, the capacity to project and control the costs of reform is greater in the case of an administrative reform than a political reform.  

iii. Comprehensive and Integral Reform, Selective Reform, or Mixed; Simultaneous or Sequential Reform

Contemporary public sector reform should be comprehensive and integral. The aim is to change organizational culture. If one sector or agency is subject to the signals or incentives of the past, those affected by its behavior will demand that it change or be eliminated. However, it is practically impossible to reform the entire public administration from one day to the next. Unlike administrative reforms in the past, contemporary reform requires the constant evaluation and identification of who is in the best position to offer the respective services for each sector or each region. It is a permanent reform process that adjusts responsibilities in a manner similar to the way markets redirect the preferences of clients. Because the process operates with oversight, consultation, measuring, evaluation, and adjustment, contemporary administrative reform is not fundamentally a normative reform; the legal or constitutional framework merely eases the implementation of the instruments needed to make the reform happen. The more difficult work is to defeat the resistance to change—that is, to eliminate rigidities.

Colombia should identify the best way to reconcile the integral nature of reform with the necessity to reform gradually, selectively, and permanently. For this, the government must prepare and announce a reform strategy that develops the concept that it has sketched out. This reform strategy should include the following elements: (a) developing the concept or vision of the reform as a reference point that orients the process; (b) identifying selective entrance points that can produce demonstrative and multiplicative effects; (c) drawing up and announcing partial or intermediate goals that allow advances or shortcomings to be measured as the process proceeds; (d) adjusting goals and instruments to the available resources, both fiscal and technical; (e) introducing evaluation mechanisms for the administrative reform, including participative evaluations on the part of users or interested parties, and disseminating the results with transparency and indicating responsibility; and (f) agreeing on the mechanisms to adjust and correct the process.

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9 In theory it would also be advisable to separate the two reforms in time. It is difficult for a government to simultaneously deal with the necessities of two demanding reform programs. Thus, to avoid fragmenting the limited energies of a government, it is advisable to promote first one reform, and then the other. Nevertheless, the government has judged it to be an opportune time to take advantage of the Colombian political situation to undertake both reforms at once. Because a favorable political situation is a sine qua non for the success of this type of reform, the political judgment of the government should prevail over considerations of limited resources and limited public attention span.

10 These were principally rational–formal reforms, or reforms regulated by laws and rules governing the reorganization of the state apparatus and the functions of each of the public sector entities.
iv. Top-Down, Bottom-Up, or Mixed

Countries with a civil code, especially those using the Napoleonic Code like Colombia, more than countries using common-law-based legal systems, have a tradition of reform imposed by law or decree. These reforms do not consult the preferences of the users, do not make the elector the principal agent, and do not make reform administrators responsible for public satisfaction. However, it is also crucial to understand the limits of user consultation and the expression of elector interest. As the Plan Macro reform of the Brazilian public administration in the 1990s showed, the mandate of an elector or interested party cannot go so far as indicating—much less imposing—the way services should be produced. Just as consumers guide the market, expressing their preferences, but without the ability to indicate the best way to produce a good or service, public consultations can only indicate greater or lesser satisfaction or preference for one service or another. Expecting more from public consultation is to invite the capture of the State by groups interested in monopolizing the way public services are produced, and extracting rents from their monopoly position. When the private sector or individuals are invited to produce a service, by themselves or in alliance with others, it should be done in a condition of permanent competition with other forms of producing the same service. Consequently, the administration needs to impede possible conflicts of interest between users and producers, consulting the former and placing the latter under evaluation and control similar to market conditions.

Colombia has a long tradition of state capture by political parties and disorganized political actors, and by corporations and powerful interest groups. The Constitution of 1991 ordered the increase in mechanisms for public participation in the political process. The constitutional mandate of participation still has not fully evolved, and when it has been applied, it has not always been able to avoid participation turning into another route for state capture on the part of interest groups claiming to represent the common interest. Considering this background, it is vitally important that those who take reform decisions and those responsible for their application are made to respond to external controls and, in the last instance, the electorate, not to interest groups, be they organized lobbys or nongovernmental organizations. It is also necessary, as the challenge of pension reform and the conservation of public resources have shown, that those responsible for the reform encourage the public to distinguish between the short-term interests of voters and the medium- and long-term interests of the society. The public must be convinced to stay loyal to the latter.

b) Concept of Reform

A reform such as that proposed by the Colombian government presupposes a deep transformation in bureaucratic behavior and in the relations between civil society and the State. A unifying concept of the reform will help administration personnel and civil society understand the final vision of the public administration after the reform, accept that it is a medium- and long-term process, and collaborate constructively with the direction of reform. The unifying concept is thus an essential tool to gain the acceptance and commitment on the part of those who have potential interest in the reform.

A unifying concept is needed to ensure the compatibility among distinct objectives. Such a concept helps to disseminate the reform and to offer it as a product in and of itself, not just a patchwork of wishes the unity and sense of which are difficult to perceive. Because of this, major reforms intended to reorient the administration toward results and responsibility have defined a directing concept. The so-called "reinventing government" of Columbia University and the Clinton–Gore administration captured the image of a government guided by the preferences of the user. Subcontracting, "making public," or reducing the size of government by mobilizing private sector resources brings to mind the guiding criteria of the reforms of Australia, New Zealand, and the United Kingdom. The twin goals of a State capable of generating savings to finance public services and implanting a managerial (as opposed to bureaucratic) public administration have been the guiding criteria of the two Cardoso Administrations in Brazil. Transparency and anticorruption are the unifying concepts of reform for the Fox Administration in Mexico.

Other countries (and authors) have tried to capture the sense of contemporary reforms with ideas of a reduced, efficient, and sustainable State. But these concepts are very vague and do not fully reflect the emphasis of reform in each country. The same occurs with ideas of a state driven by competition. It is necessary to transmit the idea that the administration is promoting innovation in an open economy, undertaking social policy through the flexibilization of the market and the ways services are produced, with attention to the requirements of the international context. It would be appropriate to allude to internal (within the administration) and external "contractualization" as a way to introduce the rules of the market to public organization.

In Colombia's case, the new government has coined the concept of a "communitarian state." The concept itself speaks of a state that puts into action the resources of the entire society. It appears to be a state that mobilizes the productive forces of the country through competition among various options for providing services and attention to public responsibilities. The "communitarian state" is neither a social–bureaucratic state (which was never completely reached in Colombia, and which went through a crisis in the 1970s and 1980s), nor the so-called neoliberal state. As it has been proposed, the communitarian state is a state that continues to protect social rights (equality of access) and to promote economic development, using more market controls and fewer administrative controls, promoting human capital and technologi-
cal development so that the country's companies (from the micro to the largest), are more innovative and competitive on an international level.\textsuperscript{12} It would now be appropriate to complement this concept with a managerial vision of the State that the government hopes to imprint on the administration. In this way the ideal of the State will be more closely linked to the objectives of public administration reform. It would also be appropriate to stage the reform as a medium- and long-term process that transcends one administration, for example, defining the reform over the course of a decade. In any case, the concept proposed by the government is not circumscribed by the resolution of the internal conflict, nor is its timing dependent on it.

If, as the new government intends, Colombia were to adopt a new constitutional reform, it would be a good idea to take the opportunity to include in it the new concept of public administration. But this is not an indispensible requirement to the reform, because the current Constitution already permits this orientation. More urgent is to implant the concept in government programs and in the public dissemination program for the reform.

c) Objectives, Strategy, and Goals of the Reform Agenda

A reform aimed at solving problems and obtaining precise results requires distinguishing between two types of objectives. The first group consists of administration and policy objectives, together with the objective of fiscal sustainability of services. This first group of objectives is an essential prerequisite to improve services. But it does not produce benefits that satisfy the demands of the population. In this sense, these are intermediate objectives and goals, the final evaluation of which will depend on the sectoral results achieved. For this, the reform oriented toward a managerial administration of the State increases the flexibility of the public administration and enforces hard budget constraints in order to achieve the overall objective of satisfying citizen demands on an efficient and sustainable basis. The second group is made up of sectoral objectives and the results expected by end users.

As they have appeared in the communitarian state vision proposed by the President-Elect, and defined within a global vision of managerial public administration, the aims of the reform appear to be the following:

- Containment or reduction of public spending to ensure efficiency in the assigning and sustainability of services
- Managerial administration, with information, budgeting, and control oriented toward results
- Equity, understood as meaning equal access to basic services
- Efficiency in services provided directly by public administration or by quasi-public organizations

\textsuperscript{12} These concepts were also proposed by the 1997 World Bank report, "Reconstructing the State."
• Strengthening governability
• Anticorruption
• Sustainability of reforms and the reform process in the medium and long term.

Formulated in this way, these objectives require greater specificity to arrive at a matrix of goals and commitments by the government. Following are proposals for developing a more specific content to the reform objectives:

• **Spending Reduction and Fiscal Sustainability.** Considering resistance to and feasibility of the reform, it would be useful to define precisely which are the initial, demonstration-effect objectives, and which are the major reforms hoped for by the administration by the end of the process. For this it is necessary to separate the bulk of budget spending (for education, defense, and the judicial and enforcement branches), where the greatest resistance and rigidities are found, and a fiscally smaller package (the rest of the State) where immediately achievable objectives could be increasing productivity and improving efficiency, leaving for later more fundamental measures on reducing spending. In addition, contingent debts (pensions and other labor contingencies, for example) and the package of intergovernmental fiscal transfers should be treated separately to guarantee fiscal sustainability and increased efficiency.

• **Increased Efficiency.** This objective can be made specific with subobjectives of administrative reform such as administration and accountability by individual results. The difficulty of this objective should not be underestimated. Results-based administration presupposes a deep understanding of the administration of each agency, and the gradual implementation of a culture of contractual responsibility, where noncompletion results in sanctions. Familiarity with each agency is indispensable to decide on goals that mesh with the strategic plan and the institutional development of each part of government. The public budget should reflect these goals such that the evaluation of their completion or noncompletion has budgetary consequences. It is necessary to standardize information and reports so that the central administration can properly monitor and evaluate the information it receives.

Table 1 illustrates the way to combine the objectives of the reform of the State, particularly the objectives of modernizing the public administration, with reform goals. Note that some of these goals correspond to intermediate objectives of transforming public administration or of fiscal sustainability; others are objectives of satisfying user needs.

**d) Choice of Instruments, Risks, and Costs**

A multipurpose and integral reform like the one proposed by the Colombian government requires instruments capable of conciliating the various objectives, that is,
Table 1. Examples of Objective and Goal Definition

<table>
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<th>Objective</th>
<th>Goal</th>
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| MANAGERIAL STATE (define in terms of management, information, budget, control) | Types of intermediate goals for the objective of a Managerial State:  
- Creating new mechanisms of individual responsibility through market incentives  
- Competition among different service providers  
- Reorganizing the state apparatus to allow internal competition, incentives, and sanctions  
- Information strategies for transparency, evaluation, real-time decisionmaking  
- Focusing on results. |
| Some concrete examples of defining intermediate goals to achieve the Managerial State | Competition among service providers: Five pilot entities/sectors (among the most important in the administration) have identified priority problems, have chosen the best way to deal with them, (two of them) have reached agreement with their stakeholders regarding their own institutional development, (three of them) have chosen an information strategy according to their global strategy to solve priority problems, including the extension of e-government, (all of them) have established quasi-market mechanisms for the control and evaluation of strategic development (intra-administration contracts, subcontracts, consultations, monitoring of stakeholders, information to the public on completing goals and finding solutions, and so forth), and have adopted and evaluated the new statute on transparent contracting and mapping out areas at risk.  
Contractualization: Municipalities representing 40 percent of the student population have signed agreements on management and result goals with the Ministry of Education and with civil society. Goals include participatory census of teachers in all the large cities, payment in the presence of students and parents, and so forth. Three municipalities have committed to goals with parents, unions, and private companies, with special stimuli for training and payment to schools/teachers.  
Information strategies: 5 government agencies have developed an information and technology (IT) strategy following the institutional development view of the agencies. These IT strategies respond to priority problems identified by the agencies.  
Focusing on results: Move ahead with the phase of coexistence between the budget with formal control and the budget based on results, with a flexibility in production functions.  
Control: Pilot programs of temporary coexistence (and competition or emulation) between bureaucratic—traditional control, market control, representational control, managerial control, and participatory/social control. Identification of the comparative advantages of each form of control. |
| EFFICIENCY IN SERVICES | Results agreements commit each municipality responsible for education to achieve certain goals, and offer corresponding sanctions or incentives for the noncompletion or completion of these goals. Goals include, for example, a standardized test used in all municipalities. If the results showed that, for example, 90 percent of the schools improved in at least 20 percent of academic areas, then these schools are offered special teacher training programs, expanded classrooms, and so forth. The remaining 10 percent of schools would be subject to a coadministration arrangement or subcontracting, under the Education Ministry. |
| EQUITY = EQUAL ACCESS TO BASIC SERVICES | Eighty percent of municipalities participating in education results agreements achieved coverage goals in rural and urban areas, 5 percent have adopted new coverage mechanisms (contractual sanction) under the management of the community or by parents (accompanied by a corresponding subsidy to the community), 10 percent chose administration by private companies specialized in education services with new contractual goals agreed on with the Ministry. The Ministry will define strategies to increase education coverage in the remaining 5 percent of municipalities. |
| STRENGTHENING GOVERNABILITY (understood as the capacity of the State for representation and intermediation among diverse interests) | This is an intermediate objective, not a final objective. Examples of goals include:  
• Internal contracting within the administration, demands for results, and sanctions for noncompletion have increased by at the rate of one-tenth of the total number of government agencies per year.  
• Subcontracting to private specialized companies for public services has increased by 20 percent in two years  
• Mechanisms for public oversight have been introduced in 30 government agencies. |
| ANTICORRUPTION | 5 departments have identified risk areas or personnel at risk, 3 have consulted users about cases of corruption, and 3 have held focus groups on the issue. |
| CONTAINMENT OR REDUCTION OF SPENDING | As with the goal of strengthening governability, this is an intermediate objective. It is important to define the extent of the objective to highlight that a strong state is sought to take care of functions for which it has a comparative advantage. The growth of nonstate organizations involved in production and control (public, market) is a growth in the public sector and strengthens the State. Based on this principal, it is possible to identify productivity, efficiency, and spending reduction goals. Examples: Productivity: 20 percent of courts are subject to management indicators (management strengthening programs, not the quality of rulings) administered among the courts, professional organizations, and local and central government. The indicators are used to apply sanctions or incentives. Efficiency: the FOREC model of service delivery has been extended to catastrophe management and other emergency situations. |
multipurpose instruments. In addition, a managerial-style administrative reform demands tools for management more than structural or organizational reforms. These latter reforms, like those announced by the government regarding the fusion of ministries or the elimination of some offices, can serve as a signal of the commitment of the government to the imminent reform, but they do not communicate the message of the reform's true depth.

The primary tool in the reform proposed by Colombia is the "contractualization" of goals. The goals are necessarily changeable and a mere rigid distribution of functions does not stimulate a dynamic of goals. On the contrary, the simple distribution of functions, in the manner of the central administration reforms of 1968–70 (and also of Law 12 in 1986 and Law 60 in 1993 that divided up decentralized responsibilities) tends to create power fiefs that justify their existence independent of demands made on them. "Contractualization," on the other hand, acts like a quasi-market mechanism that renders more flexible internal administration relations, individualizes responsibilities, and focuses incentives. In addition, contractualization of internal administration relations highlights the fact that some of these intra-administration contracts could also be given to a third party. In this way contractualization acclimatizes the administration to the idea of competition between the administration and third parties, and that entities outside itself can take on certain tasks with greater efficiency.

Contractualization presupposes identifying results or, at least, individualized products that the contractor should supply in return for other services or resource transfers. As has been shown in the recent case of the Social Security Institute (ISS), goals should be the results expected from administrative action, not the inputs needed for producing services. In the case of ISS, the Finance Ministry had identified fiscal or financial goals that should be reached for the ISS to receive a transfer of resources. When it became clear that the ISS could not achieve these goals, the fiscal/financial goals were substituted for a goal of improved management, that is, for an objective of means rather than ends. In fact, one of the greatest difficulties faced by the Finance Ministry in identifying the goals that ISS should reach is the traditional lack of transparency in ISS accounting, and in the fact that this lack of transparency requires a major effort to establish trustworthy and significant indicators.\(^\text{13}\)

A program like the Sistema Nacional de Evaluación de Resultados (SINERGIA) has the potential to turn into a powerful instrument for evaluating results. However, the program must be made viable through "comptabilizing" the various sources of information and reporting that supply it. Also, it will be necessary to extend it to the departments in such a way that it helps evaluate decentralized spending.

The completion or noncompletion of contracted goals has to lead to incentives and sanctions. Perhaps the principal source of incentives and sanctions is the public

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\(^{13}\) What is said about the ISS could also be said about the failed scheme of certifications for the transfer of social responsibilities to departments and municipalities
Thus, what is needed is a budget of results, or a budget that conditions giving resources on the achievement of certain goals. It will be necessary to link the evaluation programs, like SINERGIA, to the budget, such that the evaluations have an affect.

The "contractualization" of administrative relations and the reforms of the evaluatory and budgetary systems, which are compatible, are a powerful multipurpose tool, offering the possibility to contribute to each objective proposed as part of the new public administration reform in Colombia. But other instruments can also contribute to identifying individual responsibilities, increasing transparency, or preventing and sanctioning corruption. Tools such as deregulation and procedural simplification, or "participatory process maps" to identify risk areas, or electronic tracking to identify high-risk personnel, will reinforce the information and abilities of the administration management.\textsuperscript{14} \textit{Integrated Systems of Financial Administration}, like the SIIF being developed in Colombia, are also multipurpose supplementary tools. If SIIF is completely linked to a budgetary reform (which it still is not), the integral financial administration will have to contribute not only to the interlinking and prudent management of the budget and treasury, but also to the defining of responsibilities, the search for efficiency, and reducing corruption. Fine-tuning salary policy, until this is a true tool for rewarding, punishing, and professionalizing similar to market signals, is an essential supplement to the other multipurpose instruments cited above. Advances in electronic government generally produce positive effects, but electronic developments must be used to solve specific problems. Otherwise, there is no way to stop e-government from becoming an end in itself, free of control and a source of additional excessive spending.

The statute for contracts and its practical application is, next to the contractualization, the principal multipurpose tool that should reinforce and fine-tune the government, making it a true tool for administrative efficiency and a stimulant for flexibility and competition. Colombia is behind in developing transparent contracting systems, such as those that have been applied in Brazil, Chile, and Mexico. In fact, public bidding has such a bad reputation in some sectors of government (including the subnational level), that potential contractors have lost interest in buying even the bidding packages. Even transparent systems such as those in the countries mentioned have gaps that permit state capture, be it at the moment of specifying the terms of reference or at the moment of evaluating bids.

In terms of controls, the reform of the Comptroller General should continue, but it should be noted that the current reform principally reinforces formal budgetary control, not the control of results. To improve results control, the Comptroller should wait until the budget is registered and report expected results of annual or multianual administrative actions. Along with deepening the reform of the Comptroller, the office in charge of reform should put into competition and seek comparative advantages from other means of control that the reform will expand and

\textsuperscript{14} Deregulation is not always favorable. Each case must be evaluated to see, for example, if a situation of state capture is due to excess regulation or a lack thereof.
make more robust, including market controls, "contractualization," administrative evaluation, and public oversight.

The above list of interlinked instruments illustrates the complexity of the job faced by the Colombian government. This complexity raises the risks for reform. To minimize the risks, the reform should be gradual, with pilot programs in different departments or sectors to permit the administration to familiarize itself more with the use of the multipurpose instrument of contractualization of services. Having a map of the linked reforms required over time will help eliminate one of the major risks for the reform, which is to introduce a number of new tools, many of which are not efficient and are never properly developed. The reform office must also have the capacity to technically evaluate the instruments used, identify their place in the reform strategy, quantify their costs, and oversee their development. Reforms like Law 617 of 2000 or the Fiscal Responsibility Law currently under consideration in Congress, for example, have undeniable merits in restricting deficit spending and overindebtedness. But they also bring with them administrative costs and high risks due to the difficulty of monitoring and the limitations of existing information. It should also be noted that regulations aimed at containing spending do not by themselves modify the quality of service nor exploit the potential for market control, which is generally less expensive and more efficient than detailed regulation.

The costs of the transition from the current style of management (rational–formal) to a more entrepreneurial style should be calculated beforehand. Any transition adds extra costs to the ordinary functioning of the administration, and these costs are only justifiable if the projected net present value of their benefits are greater than the transition costs. In addition, Finance Ministry authorities should anticipate where those additional resources required by the transition will come from for the transition from the current administration to the new one during, for example, the next four years. As can be seen, costing of the reform is a technically complex exercise requiring the training of specialized personnel, or their subcontracting. In any case, it cannot be assumed that public administration reform is a zero-sum game or that it does not have an additional fiscal cost in the short term.

Colombia is not starting from scratch regarding modern administrative instruments. Table 2 presents some of the instruments which have been developed with international cooperation and which now need to be deepened and refined to help with the integral administrative reform.

As additional support for the definition of strategies, the following actions would give greater rationality and transparency to the budget process:

- Improve the process of estimating budgetary income. Historically, estimates have been very optimistic, which leads to imbalances when the budget is used.

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15. Voluntary retirement packages are just one of the more obvious examples of the costs of an administrative reform aimed at reducing public spending in the medium and long term. Many other less-evident costs also exist, and they should be accounted for.
Table 2. Tools, Projects, and Actions Regarding the Transversal Reforms of the Colombian Public Administration (with multilateral financing)

<table>
<thead>
<tr>
<th>Transversal Reform</th>
<th>Actions</th>
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<tbody>
<tr>
<td>Information Systems</td>
<td>In the area of public finances:</td>
</tr>
<tr>
<td></td>
<td>• SIIF – Nation in process of consolidation and expansion (financing World Bank [WB])</td>
</tr>
<tr>
<td></td>
<td>• SUIFP (Integrated Public Investment System) in DNP (Department of National Planning) in development (financing WB)</td>
</tr>
<tr>
<td></td>
<td>• FOSIT (Territorial Financial Information System) in development (financing WB)</td>
</tr>
<tr>
<td></td>
<td>• SINERGIA (Evaluation System for Public Management), the application of which is being reviewed by DNP (financing WB)</td>
</tr>
<tr>
<td>Contracting Systems</td>
<td>• Development consultations in DNP for the design of a new contracting system, which will generate a CONPES (Comisión Nacional de Política Económica y Social) document including themes such as online contracting, the creation of an oversight body, and the review of existing norms (financing WB)</td>
</tr>
<tr>
<td>New Budget System</td>
<td>• DNP review of the institutional arrangements of the budget system and presentation of a new proposal for integral reform currently in the process of compiling the relevant norms and regulations (financing WB)</td>
</tr>
<tr>
<td></td>
<td>• Strengthening and expanding the SINERGIA system by DNP (financing WB)</td>
</tr>
<tr>
<td></td>
<td>• Strengthening the macrofiscal analysis capacity of the Budget Office of the Finance Ministry (financing WB)</td>
</tr>
<tr>
<td>Control Organisms</td>
<td>• Program to strengthen the Comptroller, including, among other themes, the development of new oversight techniques and the promotion of public oversight (financing Inter-American Development Bank [IDB])</td>
</tr>
<tr>
<td></td>
<td>• Support Program to Strengthen the Attorney General’s Office (financing IDB, not yet approved)</td>
</tr>
<tr>
<td>Anticorruption</td>
<td>• Methodology of risk maps developed and technical guides created (financing WB)</td>
</tr>
<tr>
<td></td>
<td>• National Survey on Corruption and related reports completed (partial financing WB)</td>
</tr>
<tr>
<td></td>
<td>• Application of risk map methodology in National Tax and Customs Administration (DIAN) (financing WB)</td>
</tr>
</tbody>
</table>

as an authorization of spending rather than a maximum spending limit depending on income.

• Strengthen public oversight of the budget, giving Congress access to SIIF data online and promoting the creation of financial systems and norms of transparency on the subnational level.
e) Stages of Reform

Public administration reform, as with the reform of the State as a whole, is normally
the work of several administrations. Continuity is essential. The government that
launches the reform should ensure the existence of the indispensable political con-
sensus and public “ownership” of the reform to be sure of its continuity. The most
important requirement to achieve reform sustainability is for the country (gov-
ernment and civil society) to understand and share a vision or concept of the admin-
istration and state reforms underway. It is also necessary for the governments and cit-
izens to understand that the reform strategy should be flexible, allowing periodic
adjustments of goals and reform tools. Adjustment and correction are not defects,
but virtues, in the reform process.

Colombia is taking the first steps toward an administrative reform sought by the
government-elect. The new government team is preparing detailed plans for this
policy, in developing the concept of “communitarian state” sketched out by then
President-Elect and in a series of reforms announced by him. The government and
public must accept that in this first stage of reform, it is only possible to draw up
the objectives, instruments, and goals of the administrative reform. Precise sectoral
goals need to be added slowly, allowing some sectors to proceed more quickly than
others. The government team is simultaneously going ahead with the configuration
of a reform team.

Because no reform can from the start anticipate all its sectoral goals, the appro-
priate strategy is to agree on the path by which these goals will be chosen and the
instruments to make them happen. This path needs to be traveled repeatedly, in the
manner of four concentric circles that are ever closer. In the first round of policy-
making, the reform considers all the resources at its disposal, be they public or pri-
ivate, external or internal, financial or of other types, to define the public production
possibilities frontier, which is greater than the state production possibilities frontier.
In this first round, the only restriction is available resources. In the second round of
policymaking, restrictions on finances and free factor movement are incorporated,
and a more realistic production possibilities frontier is drawn up, along with costs
and risks of the new production function. In the third round, successive stages are
proposed to reach the vision of a new State and a transformed public administra-
tion. In the fourth and last round, a critical path for each stage of the reform is
drawn up, and financing sources are identified.

The entire reform process should be planned in successive stages that, added
together, take not less than 5 and not more than 10 years. During the first stages
intermediate results are paramount. Entrance points should be carefully selected that
have a demonstration effect and stimulate the mobilization of parties interested in
the reform. Since the reform is aimed at resolving problems and satisfying the needs
and demands of the population, the cutoffs between one phase and another should
coincide with the times when the government as a whole is informing the public of
its actions, such as during the annual presidential speech.
f) Formulation Unit and Management Unit for the Reform

The Colombian government is currently preparing a team to coordinate reform policy and its implementation strategy. The new Head of State has already offered to give whatever help and leadership is necessary to make the reform a success. The Department of National Planning (DNP), in the person of its director, has been designated to coordinate the reform policy. These two decisions are signs of the transcendent importance the government attributes to the reform, and of the government's commitment to a fundamental and multisectoral public administration reform. International experience indicates that in intersectoral issues, such as the integral reform of the administration or the decentralization of the State, a presidential system requires that the president and his principal ministers lead the way and take on the innumerable points of resistance to a process of this type. In fact, one of the virtues of the 1968–70 reform was that President Lleras Restrepo assumed the leadership of the reform process himself, and directed it through his closest collaborators.

In dealing with a public administration reform, as with all administrative issues, it is indispensable to divide the work with clear indication of responsibilities and to avoid conflicts of interest. Good practice suggests separating the following principal functions:

- Defining policy in terms of objectives, goals, and time frame should be the work of the president and a core group of ministers and close presidential collaborators, who can in turn organize other sectors and the rest of the cabinet. This team acts as a directive group for the reform, presided over by the president and with the technical office of the DNP. By virtue of its technical capacity to establish sectoral and intersectoral goals, the DNP is in the best position to coordinate and offer technical help to the reform.

- The DNP director, in turn, delegates responsibilities of the technical office among:
  - A legal director or coordinator, who should be a specialist in administrative law, with a deep understanding of the administration, with a teleological orientation in the management of norms and with the formation of a managerial, modern public administration.
  - A director or coordinator of reform policy, responsible for preparing and negotiating specific goals, keeping track of the map of reform progress, proposing policy adjustments, and preparing presentations for the directive group. This should be a person with demonstrated managerial reform vision and recognized ability in both the private and public sectors, both nationally and internationally. They should have demonstrated ability for cultural and institutional analysis. The person should be able to manipulate the institutional economy, particularly the design and management of behavior incentives. Given Colombia's relative inexperience with business-style public administration reforms, the person should have international...
experience, or domestic experience with organizational reforms in the private sector. Further, this person should hire an international advisor who has the combined qualities of academia and direct experience with large-scale administrative reforms. This person would be the principal technical advisor on the reform.

- A director or coordinator for the application, development, or implementation of the reform. This person is responsible for preparing the schedule of implementation, overseeing its completion, anticipating and minimizing risks and resistances, proposing adjustments to the schedule, pointing out the incompatibilities between policy and practical action, and farming out responsibility, both within and outside the administration, for the actions of the reform process. This can be an individual or a legal entity, as there are firms specialized in the implementation of reforms. A deep understanding of the Colombian situation and a demonstrated executive ability to coordinate highly complex programs is a prerequisite. They should also be familiar with techniques to distribute responsibilities, strengthen accountability, and contract for results. Demonstrated experience in the public and private sectors, and respect and credibility among the more important areas of the administration (where collaboration will be needed) are also important attributes.

- Responsibility for the execution of the reform is shared, in the respective sectors or areas, by each one of the ministers, chiefs, managers, superintendents, or other types of directors of the public entities involved.

- The monitoring, evaluation, and control should be shared between the public and private sectors. An agency external to the DNP, like the Comptroller General (through a specialized team the profile of which should be satisfactory to the government) should undertake official monitoring. In the process, this will strengthen the capacity of the Comptroller in this area. The government should also contract a specialized auditing firm and undertake regular surveys of public perception on the content and process of the reform.

- The coordination of information should be in the hands of the president's office, preferably through a single spokesperson. This office should prepare a public dissemination strategy previously discussed with the DNP.

g) Monitoring, Evaluation, Dissemination

The reform aims to strengthen the tracking of the performance and, above all, results of public services. And the reform itself should act as an example of submitting public policy to tracking and evaluation of the advances and shortcomings in formulating and applying policy. This public administration reform also seeks to regularly inform the public of the results of public services so that users can express their evaluation and demand satisfaction. Again, the reform itself needs to disseminate its goals and results to stimulate debate, consensus, and "ownership" of the
reform by the public to help sustain the process in the medium and long term. This is also indispensable to help creatively mobilize factors outside the direct control of the administration and to reduce resistance to reform and rigidities in the current production functions.

The construction of adequate indicators is the spine of monitoring and evaluating policy and the process of applying it. In this case it is useful to distinguish between policy indicators (internal coherence, adequacy of instruments to the result sought, and so forth) and indicators of the advancement of the reform process. Distinguishing between indicators specific to a sector and indicators common to all sectors, such as the reduction of public spending, would also be useful. Indicators of administrative improvement are distinct from indicators showing the impact of the reform on user services. Obviously, the latter are those most interesting to the public and will be the final proof of the success or failure of the reform.

A reform of the type sought by the Colombian government is equivalent to a new basic social pact. In fact, it is the only type of social pact that can ensure legitimacy and governability in advanced societies. The intention is to change the style and tools of government, from a state that mandates to a state that serves and is responsible to its citizens. The dissemination of the reform concept and progress indicators should reflect whether the following processes are happening:

- A new public–private interaction, where citizens are now principal agents. The redefinition of the way the State intervenes in the social and economic arenas.
- A new state balance. Stronger in delivering results, but smaller compared to network of public–private institutional arrangements offering services. Now the State regulates, facilitates, and provides funds so that others can take actions.
- The regular consideration of the various options for delivering public services. As many governments have demonstrated by asking citizens to decide on how to assign part of the budget between different possibilities, this practice can also help efficiency in resource allocation. This has worked, for example, with the so-called "participatory budget."
- Tracking, evaluation, and storage of data on the management of behavior incentives.

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16. The literature on public policy in Latin America offers many examples of reforms that, though apparently coherent on paper, failed in practice due to lack of support—or, better put, decided opposition—from crucial stakeholders.
17. Ideas taken from the 1997 World Bank report, "Reconstructing the State."
18. The study by Judith Tendler, Good Government in the Tropics, which reviews public sector performance in the state of Ceará, Brazil at the beginning of the 1990s, has excellent analyses of the management of incentives and results. The study analyzes, among other things, the effects of performance evaluation by users and the dissemination of results in community assemblies. User participation, public oversight, and publication of results combined to break the clientelistic, corporatist links and improve services.
Building a base of indicators is a specialized, technical job. The capacity for diagnosis, problem identification, or process adjustments depends on the quality of indicators. The capacity to transmit advances in this complex area to the average citizen and inspire confidence in the commitment of the administration to adjust and correct when necessary also depends on them. Because of this, it would be a good idea for specialized agencies external to the government to participate in developing indicators. This consideration has led some countries to open the work of generating indicators to bidding rounds with the participation of both private companies and government agencies. Bidding proposals have been published, and a mixed public–private committee has chosen the best proposal. In any case, it would be useful to integrate distinct teams for distinct types of indicators, especially sectoral indicators, which demand specialized knowledge of the respective service. If bidding is used, different groups of indicators should be bid out separately.

The functions of monitoring and controlling the reform should be shared between the agency responsible for the reform and the users. Throughout the world the participation of the private sector or civil society is ever more common in monitoring and evaluating public sector reforms. A consortium of universities from around the country, for example, would guarantee quality and neutrality in the evaluation. The participation of professional organizations in evaluating the design and application of tools like contracting systems will commit them to the new rules of neutrality and competition.

Considering that the objective is to create a state that fulfills all the responsibilities conferred upon it by the citizens, it is essential to inform the public that the State can act as an instrument of, and not an obstacle to, the satisfaction of their needs. Be it regarding education, health, training, or public works, the most dramatic advances and examples of reform deserve to be presented to the public, not just by the State itself, but through the opinions of users and external evaluations.

When a dependency or agent of the State does not fulfill its responsibilities, this should be made public without distortions and with an indication of the responsibility and the corresponding sanctions. The other side of the coin is even more important. The public and professional recognition of officials and offices that do fulfill their responsibilities in a timely fashion or accelerate the reform process is a positive incentive that should be widely used to gain the support of the public and defeat resistance to reform.

The mobilization of support for good performance, and the condemning of nonfulfillment, works not only as a disincentive to negligence and to those who commit abuses, but it also supports those who fulfill their responsibilities and animates those seeking better performance in other areas of public activity. And, on a more strategic level—of enormous importance considering that a global reform of public services requires at least a decade of firm commitment—publicity permits the construction and nourishing of support by the electorate for the efforts of the
government. Apart from its political attraction in the short and medium term, in the medium and long term, mobilizing public opinion through publicity increases the disposition of the citizenry to support a break with the tradition of clientelism and other rent-seeking behaviors which can only be achieved with public support.

III. Synthesis of Recommendations

The following is a synthesis of the recommendations elaborated in each of the subsections of the policy recommendations section:

Strategic Options

- Comprehensive reform of the public administration
- Public administration reform linked to a political reform that is enacted at the same time, but the two reforms are kept separate in terms of management, evaluation, indicators, and dissemination
- Reform directed at solving problems and producing tangible results for the public, and controlled by the public. Multisectoral reform, with objectives within the reform itself (intermediate objectives) and with end objectives benefiting users
- Medium- or long-term reforms, with intermediate goals and with a distinction between measures requiring legal or constitutional reforms, and those that do not

Concept

- Reform inspired by a vision of the State anchored in a unifying concept
- The unifying concept articulates the "communitarian state" concept formulated by the president.

Objectives, Strategy, and Goals of the Reform Agenda

- Containment or reduction of public spending to ensure efficiency in the allocation and sustainability of services
- Business-style administration, the information, budget, and control of which are oriented toward results
- Equity, understood as equal access to basic services
- Efficiency in services provided directly by the administration or by quasi-public organizations
- Strengthening governability
- Anticorruption
- Sustainability of the reforms and the reform process in the medium and long term
- Multipurpose instruments capable of reconciling the various objectives of the reform.
Choice of Instruments, Risks, and Costs
The principal instruments recommended, each with their prerequisites and their own design and implementation risks, are:

- Internal (intra-administration) and external "contractualization" of result goals
- Budget, accounting, reports, evaluations, and sanctions or incentives as a function of results
- Deregulation and procedure simplification
- Participative process map to identify risk areas
- Electronic tracking to identify at-risk personnel and acts of corruption
- Integrated financial administration systems
- Salary policy, and in general, modern human resources policies
- E-government
- Contract regulations.

Calculating costs and predicting financing is necessary at each step of the reform. Having a cost–benefit analysis as a supplementary criterion for the selection of goals and instruments would be useful.

Various proposed instruments have been partially introduced or are in the process of being introduced in the Colombian public administration. These must be refined and deepened to be of use in this reform.

Stages of the Reform

- Goals or annual reports for the reform as a whole
- Initial identification of the method with which sectoral goals and corresponding instruments will be chosen.

Reform Management

- Directive committee on the ministerial level, presided over by the president, with the technical office of the DNP
- Three coordinators or directors below the DNP leader: one legal, one administrative–technical, and one in charge of reform application
- An international advisor for choosing goals and technical instruments, and for their implementation in the administration.

Monitoring, Evaluation, Dissemination

- With the participation of the public and private sectors
- Process indicators and results indicators
- Combination of control tools, including internal results evaluation and public oversight.
Budgetary Institutions

This Chapter was written by Mario F. Sanginés and Eduardo Fernández.

I. Introduction

Analysis of budgetary institutions used to be limited to their effect on the efficiency and effectiveness of the use of public resources in the delivery of public goods and services. Later, the recognition of the role of citizen oversight over the use of tax dollars pushed the issue of transparency onto the agenda, and the participation of civil society in the budgetary process is increasingly seen as welcome and necessary. With the publication of research linking budgetary institutions and fiscal outcomes (Alesina and others 1999, Ayala and Perotti 2000), the strength of budgetary institutions has recently become an item of serious discussion in the context of macroeconomic stability, especially in Latin America. Governments should therefore pay close attention to the institutions, processes, and interrelations that make up the budgetary cycle as important factors affecting medium- and long-term fiscal sustainability.

Colombia has earned a reputation of having a solid and well-staffed public sector, especially in matters macroeconomic and fiscal. In addition, it is undergoing a process of modernization of the tax and public expenditure institutions. Important outcomes have been achieved since then, such as the development of an integrated financial management system and the implementation of the single account (Cuenta Única del Tesoro), which has dramatically increased the Ministry of Finance and Public Credit’s (MOFPC’s) capacity to monitor the flow of public expenditures.

However, the emphasis on developing systems and techniques for public expenditure management was counterbalanced by a lack of emphasis on other "big picture" issues, such as the relationship between the MOFPC and other entities, like the Departamento Nacional de Planeación (Department of National Planning,
DNP), in the budget process; the reporting and accountability to Congress and civil society; the actual processes and controls involved in budgetary implementation; and the inter-temporal sustainability of the budget. This Chapter addresses a few of these issues and presents specific recommendations.

II. Budgets and Fiscal Balance

a) The Issue

The Colombian planning and budgetary process is a highly complex interplay of various entities operating under a multitude of rules and procedures. This process produces a number of budgetary documents—the National Development Plan, the Financial Plan, the National Investment Plan, the Annual Investment Operative Plan, and the Budget—which are in theory fully consistent with one another. The budget itself is a complex document that resists thorough analysis except by those deeply familiar with Colombian financial management, a fact that is further exacerbated by the nonstandard accounting definitions it uses, such as the budget deficit itself.1

This process is of course part of broader macroeconomic planning that subjects the budget to fiscal, monetary, and exchange rate consistency tests. The final budget ought to be fully funded and part of a sustainable medium-term fiscal outlook. This notion is further strengthened by the fact that the Congress may not increase expenditures without written consent from the Ministry of Finance.

However, ex-post analysis shows a worrisome inter-temporal effect that suggests that not all is fully under control. Arrears (see Table 1) were over 2.4 percent of gross

<table>
<thead>
<tr>
<th>Period</th>
<th>Percent of GDP</th>
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<tbody>
<tr>
<td>1990–91</td>
<td>1.3</td>
</tr>
<tr>
<td>1991–92</td>
<td>1.2</td>
</tr>
<tr>
<td>1992–93</td>
<td>2.5</td>
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<tr>
<td>1993–94</td>
<td>1.0</td>
</tr>
<tr>
<td>1994–95</td>
<td>0.6</td>
</tr>
<tr>
<td>1995–96</td>
<td>1.3</td>
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</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996–97</td>
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<tr>
<td>1997–98</td>
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</tr>
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<td>2001–02</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance and Public Credit

1. According to Ayala and Perotti (2000), the budget includes gross borrowing and privatization receipts "over the line" as capital revenues, making the construction of a deficit figure compatible with internationally accepted definitions, a daunting arithmetic exercise. Fortunately, the Financial Plan has recently incorporated International Monetary Fund methodologies for macrofiscal analysis.
domestic product (GDP) from 2000 to 2001, of which 1.6 percent was current expenditure arrears and the rest was investment. The natural explanation is that budget law figures are actual appropriations instead of limits for expenditure, thus enabling entities to commit resources up to and above the Plan Anual de Caja (PAC), which more often than not winds up being lower than the budget. The simple conclusion is that, despite its technical complexity, the Colombian budget process does not produce reliable revenue estimates, and perhaps the complexity itself hides other potential fiscal risks from immediate view.

b) Ongoing Actions

The government has presented a Law of Fiscal Responsibility (LFR) for Congressional approval, which is meant to provide a basis for aggregate fiscal discipline through ex-ante constraints and agreements. This draft Law has been approved by the Lower House and is currently up for consideration by the Senate. The LFR’s main elements, at present, would:

- Establish a primary balance goal for the aggregate non-financial public sector in the Financial Plan
- Reorganize the budget system, providing a leading role for the Financial Plan
- Reinforce fiscal discipline and transparency through inclusion in the budget of contingencies, tax expenditures, and limits for forward budgeting, ensure that unpaid commitments are included in the following year’s budget, and arrange for payment of arrears
- Regulate local government indebtedness.

c) Recommendations

The LFR is certainly a step in the right direction. Similar efforts have produced good results in other countries, such as Brazil. However, there are some elements that would increase the probability of success of the LFR, which could be incorporated during the discussion by the Senate:

- Review the international experience regarding the establishment of sanctions for non-compliance with the principles of such a Law, and introduce such elements in the Law which have proven successful elsewhere in order to promote accountability where appropriate.
- Ensuring realistic revenue projections through a broader, public discussion of the Financial Plan, especially in Congress. Realistic projections can be enforced by budgeting only those revenues that are certain, leaving other projected revenues (such as uncertain capital revenues or expected additional revenue from future tax reforms) to be included in a complementary budget once
they become effective. At a minimum, revenue estimates should be discussed and analyzed independently.

- The Minister of Finance should give the Congress quarterly reports on the progress of revenues, expenditures, and the size and structure of the public debt. These reports would provide the basis for budgetary adjustments, if needed. One alternative is to introduce a mechanism for automatic reduction of the budget in the event of a shortfall in revenues, as has become customary in Mexico.

III. Control of the Budget

a) The Issue

The decentralization and de-concentration of the budgetary process has brought about some benefits, because it is widely seen that resources should be managed as close to the actual service delivery site as possible. However, this process has also caused the loss of an integrated, "holistic" vision of the budget, and the results of its implementation are difficult to visualize in the aggregate. It is acknowledged that modern budgetary control should be based fundamentally on results, but the current institutional and procedural arrangements make this task difficult.

The weakness (or nonexistence) of political, technical, fiscal, and social controls of budget outcomes has left the budget system without effective "checks." In Colombia, the fundamental problem with control is that it is process oriented, making it virtually impossible to keep track of fiscal outcomes (stability, effectiveness, and efficiency). Political control, for example, is exerted by the Congress; however, it is ineffective in the "big picture" partly because electoral interests place its members on the "demand" side for, for example, pork-barrel expenditures, but also because it lacks the necessary technical capacity to analyze information and advance well-structured debates. There is no formal equivalent in the Colombian Congress of, say, the United States Congressional Budget Office, or the Venezuelan Unit of Macroeconomic Analysis.

Traditional fiscal control has not been able to surpass legal and numeric types of audits, and is limited to the enforcement of budgetary and accounting norms. Though there are some experiences with product and outcome evaluation, they are yet far away from forming a well-established "control" system. Finally, social control, which was taken for granted when the decentralization process was initiated, has not materialized as expected, affecting efficiency and accountability, especially at the local level.

Many factors help explain the overall weakness of social control; some even attribute it to an "excess of participation." Whatever the explanation may be, the lack of useful and meaningful information and incentives and assistance to the community to exert adequate control over budgetary outcomes should be noted. This
generalized tendency has become a concern because the instruments for political, technical, and fiscal control—supposedly to strengthen oversight by civil society—were not in place as expected.

b) Ongoing Actions

There are no significant actions to improve political control, however, there are some promising developments in technical control and there are some actions that may improve social control over time.

The Comptroller General’s Office is improving its capacity to conduct thorough financial audits and exercise macro fiscal control. It is currently receiving substantial financial support from the Inter-American Development Bank (IDB) through the Program for Strengthening the Offices of the Comptroller General (CGR) and the Auditor General. The CGR is expected to become a true and effective agent for change by exercising efficient and proactive fiscal control, with modernized procedures and techniques. Furthermore, it is also expected to play an important role in developing social control mechanisms through a specific component of its modernization plan.

The DNP is implementing the Sistema Nacional de Evaluación de Resultados (SINERGIA), a "scoreboard" system to evaluate the national administration’s ability to execute and fulfill goals according to established strategies and tasks. The DNP is also working on a system to provide the Investment Project Bank with the technical capability to follow up projects and evaluate impact according to pre-established goals. Finally, there are some efforts to move fiscal control forward into outcome evaluation, one such effort is the GESTIONE 2000 system. This system is meant to provide reliable information on expenditures, particularly for the wage bill of the education sector.

c) Recommendations

Establishing effective budgetary controls necessarily involves promoting ongoing actions and initiating new ones. Our recommendations are to:

- Enable the Congress to exert political control by providing it with useful, reliable, and timely information, and with technical and institutional instruments to analyze fiscal issues and outcomes. This could be done by improving the quality and frequency of reports on budget implementation, connecting the Congress online to information systems (such as the Sistema Integrado de Información Financiera [SIIF] and future fiscal data warehouses), and promoting the creation of a permanent, nonpartisan technical unit with expertise in fiscal and macroeconomic analysis. This unit should not only support routine budget analysis, but should also provide a technical backstop to draft legislation by quantifying its fiscal impact.
• Continue the institutionalization and implementation of the performance evaluation system (SINERGIA), and eventually use it to evaluate each entity's budget and outcome results and provide effective feedback for the budgetary preparation process. There should be a quarterly report widely published and made accessible to the public through the Internet. Additionally, the DNP should strengthen its institutional capability to monitor and evaluate projects, products, and outcomes.
• Accelerate the support to departments and municipalities in the implementation of information management systems, analogous to the SIIF in the largest entities, and possibly simpler systems in smaller ones. This would not only improve local accounting, but would also increase the overall quality of aggregate fiscal figures and improve conditions for enforcing fiscal stability, and for providing useful information on fiscal issues for local citizens to take an active role in fiscal control.

IV. The Planning and Budgetary Process

a) The Issue

The four-year National Development Plan is the starting point for the planning and budgetary process. This document seeks to bring together the development priorities of different segments of the population and articulate them in a multiyear investment framework. While the relevance of multiyear public sector development plans in the context of market economies has been questioned and many Latin American countries have discontinued this practice, Colombia has not only maintained it but has made the plan a legally binding agreement between civil society and the government.

This consensus-building instrument raises expectations across all sectors and encourages arguing for a place in the budget. Furthermore, the difficulty of upholding budgetary constraints throughout this participatory exercise has transformed the National Development Plan into a wish list, where final decisions paradoxically fall into the hands of the central bureaucracy. Consequently, well-established prioritizing mechanisms such as the Investment Project Bank are losing credibility, leading people to believe that there are other informal, non-technical ways to access budget resources. Moreover, as decentralization becomes a reality that channels most of the resources for investment to departments and municipalities, the National Development Plan and the DNP are facing the considerable challenge of coordinating sectoral objectives while avoiding duplication and waste.

Starting with a budget containing overestimated revenues necessarily leads to an adjustment during the implementation phase. This is done through a cash management process that is viewed as highly discretionary, which reduces transparency and promotes the accumulation of arrears (see Table 1). A more transparent and techni-
ally sound budget implementation process is further prevented by the myriad of micro-processes and controls, and deficiencies in the budgetary classification structure (for example, the classification of expenditure items includes names of institutions as well, such as ministries).

b) Ongoing Actions

The Colombian government is well aware of the complexities of the budgetary process and is developing a project that will eventually lead to its complete overhaul, in particular of the part related to current and investment appropriations and their implementation. The DNP is gathering and organizing all legal arrangements related to budget execution and other related documentation, and in the near future it expects to introduce a document proposing a unified and streamlined budget system.

The Ministry of Finance is implementing the Sistema Integrado de Información Financiera (SIIF), an integrated financial management system that has significantly improved budgetary management. Currently, it covers nearly 86 percent of the national budget, and is expected to cover up to 96 percent in the near future. Unfortunately, implementation of the SIIF was not accompanied by the reengineering of budgetary processes and procedures, which is a pending task for Colombian financial managers. Despite these efforts to modernize the process, cash management is still the nucleus of budgetary control, and it is there that the system is regulated to allow the formal fulfillment of macro stability goals.

c) Recommendations

Regarding the planning stage, it is clear that the legally binding nature of the National Development Plan and its potential inconsistency with what the public sector can truly afford constitute a serious fiscal risk. Thus, we recommend that the norm that regulates the National Development Plan be modified to either:

- Transform it into a strategic, indicative roadmap for public investments, but without a legally binding character; or
- Ensure that the elements it contains are appropriately prioritized with the participation of civil society, and that its actual implementation will depend on the resources available for the fiscal year.

Most of the budget implementation problems will disappear with appropriately quantified revenues and balanced budgets. However, the complex processes that have been developed have already introduced distortions and have affected decision-making by implementing entities. It is important for the system to gradually regain credibility and legitimacy by reducing uncertainty over allocated resources. To achieve this we recommend:
Reviewing budget classifications and adopting international standards for public sector income, expenses, and debt. Two important actions are to review the economic and functional classifications according to international standards and in accordance with integrated accounting principles, and to review the definition of public investment, which is clearly too broad and allows for creative accounting. There are international standards such as the International Monetary Fund’s (IMF’s) Government Finance Statistics Manual, which will help to solve current problems.

Compiling and evaluating the countless procedures and mechanisms that have been established (in some cases just to slow down payments), and standardizing them considering an adequate flow of resources. This reengineering could be done gradually as user confidence is regained. The streamlined processes should be incorporated into the SIIIF.

V. Budgetary Inflexibility

a) The Issue

Over the years, economic, social, and political agents have successfully circumvented the regular budgetary allocation process. Instead of participating in the yearly discussions over the budget, many have successfully lobbied for permanent entitlements or earmarks of certain revenue items to circumvent the resource constraint and to reduce discretionary bureaucratic power. This abundance of legally mandated entitlements reduces the room for fiscal policy, especially for new programs requiring capital expenditures.

Furthermore, Colombian budgetary law allows for vigencias futuras, an authorization to make a commitment extending into the following fiscal year. This means that each year the budget is prepared, commitments made into the budgeted year from the previous year are automatically “alive” and reduce the net resource availability for budgeting. This is in principle a good idea to ensure the completion of projects that span over more than one year; however, it is often the case that these are unproductive but have effectively created a multi-year entitlement, or even that a vigencia futura has been used to secure operating expenditures for future years.

When these elements are combined with other inflexible expenditures, such as funds or subsidies, new investment decisions were eventually confined to six percent of the budget for 2002 (from 14 percent in 1997). Table 2 illustrates this situation.

b) Ongoing Actions

The draft Law of Fiscal Responsibility has several articles that deal with budget inflexibility. There is an explicit provision to eliminate arrears by requiring full budget execution during the corresponding fiscal year. Otherwise, unpaid but con-
Table 2. Budgetary Inflexibilities

<table>
<thead>
<tr>
<th>Legally Mandated</th>
<th>Percent of Budget</th>
<th>Customary</th>
<th>Percent of Budget</th>
<th>Available for Assignment</th>
<th>Percent of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Funds</td>
<td></td>
<td>Sectoral Operation and Maintenance</td>
<td></td>
<td>Government Priorities</td>
<td></td>
</tr>
<tr>
<td>Fondo de Solidaridad y Garantía (FOSYGA), Pensions, Royalties, etc.</td>
<td>13</td>
<td>Defense, Transport, Agriculture, Finance, etc</td>
<td>22</td>
<td>Health, Red de Solidaridad, etc.</td>
<td>6</td>
</tr>
<tr>
<td>Other Funds</td>
<td></td>
<td>Credits and Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity Subsidies, Housing Law, Universities, etc</td>
<td>3</td>
<td>Counterpart Funds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward Budgeting Finance, Presidency–Red de Apoyo Social, Transport, Agriculture, Defense, etc</td>
<td></td>
<td>Red de Apoyo, Presidency, Defense, etc</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>58</td>
<td></td>
<td>36</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance and Public Credit

Tracted expenditures must be paid against next year’s budget. The use of *ingenias futuras* is to be regulated to avoid the unnecessary extension of projects over several years only to secure future budgetary allocations.

As part of its study on public budgeting practices and its upcoming recommendations on restructuring the process, the DNP is also analyzing budgetary rigidities and will devise a strategy to reduce them.

c) Recommendations

The efforts contained in the LFR are well intentioned, but tackle only one part of the problem: rigidities that arise from inter-temporal entitlements, which are a product of the budgetary process itself. The LFR does not propose a mechanism to reduce or restrict legally entitled expenses and earmarked revenues. A strategy to ensure an effective budgeting process begins with a better understanding by civil society of the outcomes associated with mandatory expenses. This may help create a movement to promote institutional changes and to further advance outcome evaluation. Otherwise, there may not be sufficient social and political consensus to implement bold reforms.
In this context, we recommend establishing a task force as soon as possible with a mandate to (a) identify and quantify legal entitlements and earmarks; (b) analyze the social, political, or economic interests that drive them; (c) carry out a social cost–benefit analysis of the entitlement; (d) present an alternative solution to those that are socially reasonable, such as a temporary focalized expenditure entitlement in lieu of a permanent revenue earmark; (e) prepare a report with recommendations; and (f) present the report to the Congress and make it easily available to civil society. This task force should include, at least, the DNP and the Ministry of Finance.

VI. Organizational Adjustment

a) The Issue

When we speak of the Colombian budget, we essentially mean two distinct budgets: Operation and Investment. The Operation budget is the product of a process led by the Ministry of Finance, which is based upon analyzing recurrent expenditures for each of the spending agencies, in coordination with the agencies themselves. The Investment budget, on the other hand, is prepared by the DNP and is the yearly translation of the National Development Plan.

Much has been written about the inefficiencies that arise from the dual leadership of the budgetary preparation phase. Ayala and Perotti (2000) state that this division undermines the very reason for centralizing the budget preparation in one entity, namely ensuring that someone can internalize the whole budget. This challenges both the effectiveness of the Ministry of Finance by failing to put it squarely in the driver’s seat of fiscal policy, and its sustainability over time. The IMF has also expressed concerns over the inter-temporal implications of this divided budget, since investment projects may not have adequate maintenance allocations in the operational budgets or may be unsustainable in the medium or long term.

Fundamentally, the issue pertains to the need to take a long, hard look at the costs of maintaining the formulation of the Operation and Investment budgets under different roofs. There is, and will continue to be, a strong institutional resistance to unify the process because doing so obviously entails that either the DNP or the Ministry of Finance will have to relinquish their role in budget preparation. In our opinion, however, that is an issue worth discussing openly and candidly.

b) Ongoing Actions

The only ongoing action regarding the analysis and reassignment of institutional responsibilities in the budget process is the current DNP project, mentioned earlier,
that will redefine and/or clarify the roles of the institutions involved in budgetary preparation and implementation, and the revision and adjustment of norms and procedures. The DNP is completing the analysis of the legal background, and will soon present a draft of this report.

c) Recommendations

Although the initiative taken by the DNP is a welcome step in the right direction, it is clear that a final decision on rearranging institutional roles and responsibilities between the DNP and the Ministry of Finance must come from a source higher than the entities themselves. It is widely recognized that although there is significant coordination and collaboration between them at the technical level, there is also an underlying institutional tension that drives them apart.

Regardless of the determination, we recommend the discussion be within the following framework:

- First, it should be acknowledged that there is a cost to maintaining budget preparation divided between two entities, and that this cost is higher than the institutional interests of any one entity.
- Second, in modern public administration, entities are increasingly more specialized in their areas of comparative advantage, and in budget management it is the Ministry of Finance that holds the comparative advantage.
- Third, with respect to specialization, the DNP holds a strong comparative advantage in other areas related to the budgetary process, such as multyear investment planning, investment project review and appraisal, and concurrent and ex-post results evaluation.

Unification of the budget preparation will promote macro consistency, the sustainability of investment projects, and the enhanced capacity of each entity in its areas of comparative advantage. One of the consequences of the fragmented budgetary process is the inconsistency between the disbursement schedules of multilateral investment projects agreed to with the creditors and the actual budgetary appropriations the projects receive. Budgets are generally lower and apparently defined without consideration of the actual rhythm of implementation as established in the project loan agreements. This is a major issue affecting project development and prevents the country from reaping the full benefits of its public investment program.

The government should reach a decision regarding the reorganization of the budgetary institutions after a thorough analysis of the structure and functions of both the DNP and the Ministry of Finance, and should promote the approval of a Comisión Nacional de Política, Económica y Social (National Commission for Economic and Social policy, CONPES) document initially, and subsequently the necessary legislation, to achieve the agreed upon reforms.
VII. Information Management and Use

a) The Issue

Decision-making by government authorities, control by the Congress, oversight by civil society, and any other kind of substantive scrutiny of public policy cannot happen without the right kind of information. Budgetary and financial information is the key, and in this respect Colombia has some areas that need improvement.

In the past, budgetary information was relatively easy to come by due to the high degree of centralization of the budgetary process in the Ministry of Finance. The decentralization of spending authority to other entities and the transfer of most social and investment responsibilities to departments and municipalities have effectively caused a crisis in the availability of timely and consistent aggregate public sector data. The SIIF has come a long way in integrating the central government entities and has the capacity to produce timely and complete information on this sub-sector; however, the SIIF is still seen as an operational system, and its potential to provide managerial information has still not been exploited. Entities that fall outside its scope—territorial entities, public establishments, and others—still remain somewhat outside the radar screen, and obtaining timely information from them has proven a challenge.

Furthermore, there is a notorious overlap of information-generating responsibilities among central government entities. For example, there are at least three different public entities that produce aggregate public sector cash-flow reports—the DNP, the Ministry of Finance, and the Banco de la República. Another example is budget data from the municipalities, which are obtained directly by the Accountant General’s Department, the Financiera de Desarrollo Territorial (FINDETER), the Ministry of Finance, Banco de la República, and the DNP. It seems that the general practice is that when information is needed, institutions prefer to create their own information-generating capacity rather than looking where it might already exist. This is not only inefficient, but also leaves the door open for marked differences in what is reported by different entities for the same items.

This presents an interesting paradox: while there is a lack of uniform, reliable, and complete information on public sector finances for decision-making, there is a proliferation of individual information systems in the entities themselves, many of which produce the same information.

b) Ongoing Actions

The government is making important efforts to improve information management for public sector finances. Some of the main actions are:

- **Sistema Integrado de Información Financiera (SIIF).** With support of the World Bank, the SIIF is expanding its institutional coverage and modernizing its technological platform.
• Programa Para el Fortalecimiento del Sistema de Información Financiera Territorial (FOSIT). This IDB-financed project seeks to strengthen information flows between municipalities and the central government, and eventually to implement SIIF-like systems in territorial entities.

• Sistema Unificado de Inversión y Finanzas Públicas (SUIFP). With World Bank support, the DNP is implementing a modern public investment system that will integrate several scattered systems and databases.

• Accountant General’s Department. Over the last few years, the Accountant General’s Department has dramatically improved its accounting information, and now has nearly 100 percent coverage of the public sector revenues and expenditures for its year-end financial and accounting statements.

c) Recommendations

These recommendations seek to strengthen the quality and availability of information for various purposes, while making the overall process as efficient as possible. In this light, we recommend that:

• The public sector’s information generation be regulated. There should be only one official entity in charge of producing certain types of information. Multiple sources for the same information generate uncertainty and confusion, and open the door for selective reporting.

• The SIIF’s capacities to generate information for managerial decision-making should be quickly upgraded. This could be done through a data warehouse that is connected with entities such as the Programa Para el Fortalecimiento del Sistema de Información Financiera Territorial (FOSIT) to increase institutional coverage. Every minister and certainly every senior official in the Ministry of Finance should have an online connection to the SIIF’s Management Information Systems (MISs) in their offices by mid-2003. The Congress should also have access to SIIF’s online information.

• Simplify budgetary information to make it easier to understand and more available for public use. Civil society’s participation is critical to ensure adequate outputs and outcomes. Furthermore, it is an obligation of the government to explain to society, in understandable language, what is being done with the taxpayers’ pesos. This proposal goes hand in hand with the government’s initiatives to launch a website with comprehensive public sector information

References


