



A WORLD BANK COUNTRY STUDY

19923

November 1999

Hungary

On the Road to the European Union



A WORLD BANK COUNTRY STUDY

Hungary

On the Road to the European Union

*The World Bank
Washington, D.C.*

Copyright © 1999
The International Bank for Reconstruction
and Development / THE WORLD BANK
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

All rights reserved
Manufactured in the United States of America
First printing November 1999

World Bank Country Studies are among the many reports originally prepared for internal use as part of the continuing analysis by the Bank of the economic and related conditions of its developing member countries and of its dialogues with the governments. Some of the reports are published in this series with the least possible delay for the use of governments and the academic, business and financial, and development communities. The typescript of this paper therefore has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The boundaries, colors, denominations, and other information shown on any map in this volume do not imply on the part of the World Bank Group any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. The World Bank encourages dissemination of its work and will normally grant permission promptly.

Permission to photocopy items for internal or personal use, for the internal or personal use of specific clients, or for educational classroom use, is granted by the World Bank provided that the appropriate fee is paid directly to Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, U.S.A., telephone 978-750-8400, fax 978-750-4470. Please contact Copyright Clearance Center prior to photocopying items.

For permission to reprint individual articles or chapters, please fax your request with complete information to the Republication Department, Copyright Clearance Center, fax 978-750-4470.

All other queries on rights and licenses should be addressed to the World Bank at the address above, or fax no. 202-522-2422.

ISBN: 0-8213-4618-0
ISSN: 0253-2123

Cover photo: *Széchenyi-Lánchíd* (Szechenyi Chain Bridge); courtesy of Csaba Rafael, Hungarian News Agency.

Library of Congress Cataloging-in-Publication Data has been applied for.

Contents

Abstract.....	ix
Currency and Equivalent Units.....	xi
Acronyms and Abbreviations	xi
Acknowledgments	xiii
Executive Summary.....	1
Chapter 1. Sustaining Growth and Gaining Membership in the European Union.....	19
Introduction.....	19
Stabilization and Recovery in the Second Half of the 1990s	19
Unsustainable Recovery in the First Half of the 1990s.....	19
Stabilization and Acceleration of Structural Reforms in the Mid-1990s.....	20
Impressive Performance in the Second Half of the 1990s.....	22
Recent Pressures on the External Accounts	24
Trade and Current Account Developments in 1998	24
Fighting the Turmoil in World Capital Markets.....	26
EU Membership and Income Convergence	27
The Process of Achieving EU Membership	27
Relationship Between EU Membership and Income Convergence.....	28
Hungary's Initial Conditions on the Eve of EU Accession	30
Ensuring the Conditions for Sustained Growth and Rapid Income Convergence	31
Main Elements of a Sustainable High-Growth Strategy	31
The Reform Scenario	32
The Objective and Structure of the Country Report.....	35
Chapter 2. A Fiscal Framework for Sustained Growth	37
An Overview of Hungary's Medium-Run Fiscal Framework.....	37
Fiscal Adjustment in the Mid-1990s	37
The Medium-Run Fiscal Program and Its Contribution to Savings and Growth	39
Sustainability of Fiscal Policy in the Longer Run.....	41
Pension Reform.....	42
Initial Conditions.....	42
Main Components of the Reform.....	43
Assessing the Long-Run Impact of the Reform	44
Pending Policy Issues.....	45
Guarantees on Second Pillar Returns	46
The Challenges in the Health Sector.....	48
Need for Reform in the Health Sector.....	48
Main Elements of Health Reform in Hungary	50
Fiscal Impact of a Reformed System	54
Local Government Finances in the Context of EU Accession	55
Local Government Finances in the First Half of the 1990s.....	55
Recent Efforts to Introduce Transparency and Discipline.....	56
Policy Options in the Light of EU Accession	57
Chapter 3. Foreign Trade and Contestability of Markets	59
Reorientation of Foreign Trade Toward Market-Driven Patterns.....	59
Integration into EU Markets: Export Performance	60
Expansion of Exports to the EU: Two Phases.....	60
Export Basket: The Shift toward Manufacturers.....	62
Change in Competitiveness in EU Markets	62
Factor Intensities of EU-Oriented Exports over 1989-96.....	63
Changes in the Level of Processing	64
Environmentally Dirty Products in Exports to the EU.....	65

The Role of FDI in Restructuring and Export Performance.....	66
Conclusion: A Demonstrated Capacity to Withstand Competition in a Single Market	67
Contestability of Domestic Markets	67
Foreign Trade Policies	68
Reverse Discrimination in Imports: Higher Cost to Producers and Consumers.....	70
Trade Policies and Export Performance.....	71
Conclusions and Key Recommendations.....	73
Chapter 4. Financial Sector Development.....	74
Introduction.....	74
Development of the Banking Sector over the Past Decade.....	75
Background.....	75
Present Structure and Performance of the Banking System	77
Resource Mobilization and Allocation by the Banking System	79
Banking Supervision	81
The Insurance Sector	82
Capital Markets.....	83
Institutional Investors.....	85
Brokerage Firms.....	86
The Challenges Ahead.....	86
Risk Management	87
Credit Distribution	88
Housing Finance	89
Municipal Finance.....	90
EU and OECD Compatibility.....	92
Conclusion	93
Chapter 5. Enterprise Sector in Transition	94
Looking Back.....	94
The Political Backdrop.....	94
Creeping Privatization; Meandering Asset Sales	95
The Privatization Process	95
Privatization Scoreboard	96
Spending the Receipts	97
The Role of Foreign Direct Investment.....	97
Origins and Recipients of FDI	97
Benefits of FDI.....	99
Have Firms Restructured?.....	99
Loss Makers in Utilities	99
Small and Transitory Operating Cash Deficits in Manufacturing	100
Restructuring and Ownership.....	101
Tough Bankruptcy Laws Peripheral to Restructuring	104
Taking Stock.....	105
A Thumbnail Sketch	106
Population and Ownership of Enterprises	106
Enterprise Finance.....	107
Summary and Conclusions	107
Chapter 6. Preparing Infrastructure for EU Accession	110
Overview of Recent Reforms in the Electricity, Telecommunications, Gas, and	
Transportation Sectors	111
Electricity	111
Telecommunications	111
Natural Gas	112
Transportation	113
International Policy Developments.....	113
Current and Forthcoming Substantive Regulatory Issues	116

Tariff Rebalancing	117
Electricity	117
Telecommunications	118
Gas	119
Interconnection Policy	120
Competitively Neutral Mechanisms for Funding Universal Service	121
Competitive Pricing Flexibility	122
Overview of the Transport Sector	122
Toward EU Accession: Summary and Recommendations	123
Electricity	124
Telecommunications	125
Gas	126
Roads	126
Railways	127
Road Transport	128
Inland Navigation	128
Aviation	129
Urban Transport	129
Chapter 7. The Labor Market	130
Recent Trends	130
Employment, Labor Force Participation, and Unemployment	130
Education	133
Real Wages	133
To What Extent Has the Labor Market Adjusted?	133
Are Policies Adequate to Ensure an Efficient Allocation of Hungary's Human Capital?	135
Wage-Setting Mechanisms	135
Employment Legislation	136
Support to the Unemployed	137
Public Spending on Passive and Active Policies	139
Taxes and Social Security Contributions	140
Compliance with the Acquis Communautaire	141
Conclusions and Key Recommendations	143
Chapter 8. Public Administration	145
Government Employment and Remuneration: Efficiency Issues	145
Government Employment	145
Government Wage Bill Developments	147
Remuneration in the Civil Service and Public Service: Efficiency Issues	148
Differences in Public Service and Civil Service Wages	148
Differences in Public and Private Remuneration	149
New Measures for Civil Service Wage Flexibility	149
Civil Service Pay and Employment Issues for European Integration	149
Cost Implications of EU Accession for the Civil Service	150
Human Resource Management in the Civil Service	151
Institutional Framework	151
Merit Practices	152
Competency Exams	152
Performance Appraisal	153
Promotion	153
Training and Career Development	153
Managing EU Accession	154
Institutional Arrangements	155
Human Resource Issues	155
Policy Recommendations	156
Government Employment and Remuneration	156
Human Resource Management in the Civil Service	156

Managing EU Accession.....	157
Chapter 9. The Agriculture and Food Sector.....	158
Overview of Recent Structural Changes.....	158
Support to Agriculture: A Limited Program in Need of Revision.....	160
Direct Budgetary Support.....	160
Tax Privileges.....	162
Registration of Farmers and Tax Evasion.....	162
The National Reserves System.....	162
Preparation for Accession to the European Union.....	162
Consistency with Ongoing Agreements with WTO and CEFTA.....	163
Proposed Adjustment of the Common Agricultural Policy (CAP).....	163
Hungary's Transition toward a Hypothetical New CAP: Support Prices and Surplus.....	164
Hungary's Transition toward a Hypothetical New CAP: Policy Instrument and Institutions.....	164
Other Consequences for Hungary of Full Accession.....	165
Financing of Structural Changes and Investment.....	166
Rural or Regional Development: A Policy Still to be Finalized and Strengthened.....	166
Remaining Constraints to Long-Term Efficiency and Innovation.....	167
Factor Markets.....	167
Product Markets: Instruments and Participation.....	169
The Role of State Agencies in Promoting Efficiency and Enforcing the EU Legal Framework.....	171
Development of New Marketing Strategies.....	173
Conclusions and Key Recommendations.....	173
Chapter 10. Environment.....	175
Overview and Cost Estimates.....	175
Directive Costs Falling Exclusively on the Public Sector.....	177
Directive Costs Falling Predominantly on the Private Sector.....	177
The Internal Market.....	177
Industrial Pollution.....	177
Long-Range Air Pollution.....	178
Urban Air Quality.....	178
Directive Costs Falling on Both Public and Private Sector Bodies.....	179
Wastewater Collection and Treatment.....	179
Drinking Water.....	181
Waste Management.....	182
Implications of the Investment Requirements.....	183
Implications for the Public Sector.....	183
Implications for Utility Tariffs.....	184
Recommendations for an Implementation Strategy.....	186
References.....	188
Statistical Appendix.....	192

Tables

Table 1.1	Inflation and Growth in Selected CEE Countries, 1993-98	20
Table 1.2	Selected Economic Indicators, 1993-98.....	21
Table 1.3	Ratio of Profit Remittances to the Stock of FDI in Selected Countries, 1993-97	25
Table 1.4	Income Convergence with the EU of Ireland, Greece, Spain, and Portugal	29
Table 1.5	Years to Close Income Gap with the EU Under Different Scenarios	30
Table 1.6	Illustrative Medium-Term Framework	34
Table 2.1	An Overview of the General Government Budget (% of GDP), 1993-98	37
Table 2.2	General Revenues, 1994-98 (% of GDP).....	38
Table 2.3	General Expenditures, 1994-98 (% of GDP)	39
Table 2.4	Hungary's Medium-Run Fiscal Program, 1998-2001 (% of GDP).....	40
Table 2.5	Replacement Ratios and Internal Returns under Conservative Assumptions	47
Table 2.6	Replacement Ratios and Internal Returns if Guarantee is Triggered	47
Table 2.7	Health Expenditures, Total and Public Sector, 1991-98	49
Table 2.8	Local Government Accounts, 1993-98	56
Table 3.1	Two phases of Hungarian Export Expansion.....	61
Table 3.2	Hungarian Exports to the EU in a Comparative Perspective, 1992-97	61
Table 3.3	Significance of Hungarian Exports into the EU in 1989, 1993, and 1997	63
Table 3.4	Composition of Hungarian Exports to the EU, by Factor Intensity, 1989-97	64
Table 3.5	Changes in Hungary's Exports to the EU by Stage of Processing, 1989-97	65
Table 3.6	Selected Features of Hungary's Dirty Exports to the EU, 1989-97	65
Table 3.7	Cumulative FDI Inflows in Terms of Per Capita and in Relation to GDP	66
Table 4.1	Assets of Financial Institutions and Market Capitalization, 1990-98	74
Table 4.2	Present Foreign Ownership in Largest Banks	77
Table 4.3	Market Capitalization and Turnover Ratios, 1990-98	84
Table 4.4	Annual trade volume by ownership of brokerages.....	86
Table 5.1	Ownership of Manufacturing Firms.....	95
Table 5.2	FDI Ownership in Manufacturing Firms, 1992 and 1996	98
Table 5.3	Enterprise Losses in Hungary	100
Table 5.4	Manufacturing Firms' Adjacent Year Cash Flows.....	101
Table 5.5	Forward-looking set, 1992-1997	102
Table 5.6	Backward-looking set, 1992-1997	102
Table 5.7	Registered firms, 1992-1997.....	106
Table 6.1	Welfare Gains from Deregulation in the United States in 1990.....	115
Table 7.1	Duration of Unemployment Spells, 1992-97	132
Table 7.2	Distribution of Employment by Sectors, 1980-1997.....	133
Table 7.3	Job Losses and Gains in the Manufacturing Sector, 1992-97	134
Table 7.4	Real Value Added per Employee in Manufacturing, by Types of Firm Ownership, 1992-97	135
Table 7.5	Percentage of Unemployed Receiving Benefits, 1992-97.....	138
Table 7.6	Spending on Active and Passive Labor Market Measures, 1992-97.....	139
Table 7.7	Spending on Active and Passive Policies in Hungary and EU Countries, 1996	140
Table 7.8	Income Tax Rates by Income Bracket, 1998-1999	140
Table 7.9	Social Security Contribution Rates as of Percentage of Gross Wage, 1995-2002	141
Table 8.1	Government Employment in Selected Countries	146
Table 8.2	Wage Bill in the Consolidated General Government, 1993-97.....	147

Table 10.1	Costs of EU Environmental Directives for Hungary.....	176
Table 10.2	Water Coverage of 81 Largest Companies in Hungary, 1997.....	180
Table 10.3	Investment Costs to Secure Wastewater Collection and Treatment.....	180
Table 10.4	Household Utility Bills Under Alternative Investment Scenarios.....	185

Figures

Figure 1.1	Selected Economic Indicators.....	23
Figure 1.2	External Developments, 1993-98.....	25
Figure 1.3	Impact of the 1998 International Crisis on the Financial Market.....	26
Figure 2.1	Pay As You Go Balance Under Three Different Scenarios.....	43
Figure 2.2	Pay As You Go Balances, Private Flows and National Savings.....	45
Figure 2.3	Comparative Disease Burden, (mortality per 100,000 population).....	49
Figure 2.4	Projections for the Health System.....	54
Figure 3.1	Machinery and Transport Equipment against other EU-Destined Exports.....	62
Figure 3.2	Real Effective Exchange Rate and Developments in Foreign Trade, 1989-97.....	72
Figure 4.1	Market Shares by Bank Size.....	78
Figure 4.2	Market Concentration – Herfindhall Indexes.....	78
Figure 4.3	Return on Equity.....	79
Figure 4.4	Assets per Employees.....	79
Figure 4.5	Money, Credit, Interest Rates, and Spreads.....	80
Figure 4.6	Insurance Sector Profit/Loss.....	82
Figure 4.7	Change in Composition of the Life Insurance Market Gross Premium of Largest Companies.....	83
Figure 4.8	Trading of Securities in 1997 HUF bn.....	84
Figure 4.9	Corporate Leverage – Debt/Equity Ratio.....	87
Figure 4.10	Housing Finance.....	90
Figure 5.1	Bankruptcies in Hungary.....	105
Figure 5.2	Liquidations in Hungary.....	105
Figure 7.1	Employment Trends in CEE Countries.....	131
Figure 7.2	Unemployment Trends in CEE Countries.....	131
Figure 7.3	Wage Ratio, Higher Education versus Eight Years of Schooling, 1986-1996.....	134
Figure 9.1	Shares of Agriculture in GDP and in Employment.....	159
Figure 9.2	Labor Productivity in Agriculture in Selected EU Countries and Hungary, 1996.....	159
Figure 9.3	Producer Subsidy Equivalents for Selected Countries.....	161
Figure 9.4	Consumer Subsidy Equivalents for Selected Countries.....	161

Boxes

Box 4.1	Bank Restructuring Challenges and Responses.....	76
Box 5.1	Hungarian Taxation and Its Effects.....	107
Box 6.1	Market Liberalization and Regulatory Reform in the European Union.....	116
Box 7.1	Hungary's Labor Market and the Acquis Communautaire.....	142
Box 8.1	The Legacy of Earlier Reforms.....	147
Box 8.2	Strategy for Accession.....	154
Box 9.1	Guidelines for a National Program of Harmonization with the EU Legal Framework.....	172

Abstract

The objective of this country study is to assess the transformation of the Hungarian economy given the country's intention to join the European Union (EU) during the early years of the next century. To this end, it analyzes economic developments in Hungary in recent years, in particular since 1997, and describes institutional improvements and structural reforms implemented during this same time period. The report is based on the findings of several missions that visited Hungary in 1998 and early 1999.

The report's main conclusion is that Hungary is one of the top performers among the Central European transition countries and is well placed to accede the EU. Hungary's achievements in constructing the elements of a market economy are impressive. The enterprise and financial sectors are now mostly private, with strong foreign participation, and increasingly robust and efficient. Labor markets have facilitated fundamental restructuring of the economy while maintaining low levels of unemployment by European standards. Significant progress has also been made in privatizing key enterprises in the infrastructure sectors and setting up modern regulatory systems for these sectors. Hungary is also proving to be competitive in international markets, in particular, most importantly, in the EU market; today, three-quarters of Hungary's exports are to the EU. Export performance, especially since 1996, has been strong, specifically in high-technology intensive and human capital intensive products. While Hungary benefited from good initial conditions compared to other transition economies, its strong performance is mainly the result of the successful stabilization program implemented in the mid-1990's, and of deep structural reforms that began earlier in the decade and accelerated in subsequent years.

The report also concludes that the challenge facing Hungary today is to consolidate stabilization gains and finalize the structural reforms to ensure that the economy remains competitive and that income is placed on a rapid and sustainable convergence path with the EU average. In the macroeconomic arena, in order to maintain the ongoing investment expansion while at the same time avoiding the emergence of external imbalances, the authorities should strengthen over the medium-term their fiscal adjustment effort. In the structural and institutional area, a three prong approach is required. First, policymakers should design and implement reform programs for the health sector, local government, and in infrastructure. While some of these new reform programs are not directly related to the legislation that Hungary needs to adopt with EU membership, they are, however, essential to maintain growth and/or macro stability over the medium-term. Second, the authorities should complete the successful structural reform efforts already underway in key markets and sectors such as pensions, the financial sector, the labor market and external trade. Finally, policymakers need to refine and strengthen the institutional framework in public administration, environment and agriculture to improve compliance with EU directives, and ensure a smooth and successful negotiation and entry into the EU's single market.

The report is composed of two parts. *Part 1* is the summary report with the main findings and conclusions. *Part 2* is the main report that provides, against the backdrop of prospective membership in the EU, an analysis and assessment of the macroeconomic framework, the medium-term fiscal stance, and selected sectors and markets of the Hungarian economy.

Part 2 has 10 chapters and is structured as follows. *Chapter 1* provides an overview of recent economic developments, and analyzes prospects for growth and income convergence with the EU. In particular, it discusses the medium-term macro framework that, based on additional fiscal adjustment over the medium-term, would both maintain external balances and achieve

faster income convergence with the EU. *Chapter 2* elaborates on the medium-term fiscal framework and to this end analyzes reforms required in pension, health and intergovernmental finance systems. *Chapter 3* focuses on foreign trade policies, and identifies additional measures to be implemented during the pre-accession period that would improve further the competitiveness of Hungarian enterprises. *Chapter 4* provides an assessment of the Hungarian financial sector and discusses how to complete the transition in the sector and ensure full compliance with EU directives. *Chapter 5* analyzes the transition and restructuring of Hungarian enterprises and makes some recommendations to ensure continued flows of FDI. *Chapter 6* looks at the infrastructure sector, and discusses several options for further competitive restructuring and regulatory reform to prepare the sector for competition in EU markets. *Chapter 7* explores how labor markets have contributed to the transition process, and suggests a number of measures to enhance labor market flexibility, employment, and labor productivity. *Chapter 8* looks at institutional reforms in public administration that are critical for building an efficient and professional civil service capable of negotiating and leading the accession into the EU. *Chapter 9* recommends institutional and policy measures directed at inducing greater productivity and growth in agriculture, and at preparing the sector for the implementation of the EU policies and directives in this sector. Finally, *chapter 10* focuses on the problem of meeting EU environmental standards at minimum cost.

CURRENCY AND EQUIVALENT UNITS

1 ECU = 259 HUF

US\$1 = HUF 242

WEIGHTS AND MEASURES

Metric System

FISCAL YEAR

January 1 to December 31

ACRONYMS AND ABBREVIATIONS

AB	<i>Allami Biztosító</i> (the national insurance company)	EAGGF	European Agricultural Guarantee and Guidance Fund
ALOS	Average Length of Stay	ERDF	European Regional Development Fund
APEH	Tax and Financial Audit Office	ESF	European Social Fund
APTF	Banking and Capital Market supervision Agency	ESOP	Employee Stock Ownership Plan
AVRt	State Holding Company	EU	European Union
AVU	State Property Agency	EUROSTAT	European Statistical Office
BB	Budapest Bank	FDI	Foreign Direct Investment
BCE	Budapest Commodity Exchange	FHB	Land and Mortgage Credit Bank
BDC	Bank and Debtor Conciliation	FSU	Former Soviet Union
BIS	Bank for International Settlements	GATT	General Agreement on Tariffs and Trade
BKV	Budapest Urban Transport Company	GDC	Gas Distribution Company
BSE	Budapest Stock Exchange	GDP	Gross Domestic Product
BUX	Budapest Stock Exchange Index	GDR	Global Depository Receipt
CAD	Capital Adequacy Directive (EU)	HIF	Health Insurance Fund
CAP	Common Agricultural Policy	HIPA	Hungarian Institute of Public Administration
CAR	Capital Adequacy Ratio	HR	Human Resources
CBI	Central Budgetary Institution	HUF	Hungarian Forint
CDC	County Development Council	IAS	International Accounting Standards
CEE	Central and Eastern Europe	IFI	International Financial Institution
CEEC	Central and Eastern European Countries	IFO	Institut für Wirtschaftsforschung
CEFTA	Central European Free Trade Association	IFS	International Financial Statistics (IMF publication)
CIB	Central European Investment Bank	IPPC	Integrated Pollution Prevention and Control (EU directive)
CMEA	Council for Mutual Economic Assistance	IRC	Interest Reconciliation Council
CSE	Consumer Subsidy Equivalents	ISPA	Infrastructure EU pre-accession fund
CPI	Consumer Price Index	K&H	Commercial and Credit Bank
CSD	Civil Service Department (within the Ministry of Interior)	KEF	Civil Servants' Interest-Conciliation Forum
CSO	Central Statistical Office	KÉKI	Central Food Research Institute
EA	European Agreements	KELER	Central Clearing House and Depository
EBRD	European Bank for Reconstruction and Development	MAHART	Inland Navigation Company
EC	European Commission	MATÁV	Hungarian Telecommunications Company
EEC	European Economic Community	MAV	Hungarian State Railways
EFTA	European Free Trade Association		

MCO	Managed Care Organization	OTC	Over the Counter
MERP	Ministry of Environment and Regional Policy	OTP	National Savings Bank
MFN	Most Favored Nation	PAYG	Pay As You Go
MHB	Hungarian Credit Bank	P.E.	Person Equivalent
MKB	Hungarian Foreign Trade Bank	PIT	Personal Income Tax
MoARD	Ministry of Agriculture and Regional Development	PPI	Producer Price Index
MoE	Ministry of Energy	PPP	Purchasing Power Parity
MoF	Ministry of Finance	PSE	Producer Subsidy Equivalents
MoH	Ministry of Health	PSO	Public Service Obligations
MoI	Ministry of Interior	RCA	Revealed Comparative Advantage (trade index)
MOL	Hungarian Oil Company	REC	Regional Electricity Company
MSW	Municipal Solid Waste	SAPARD	Agriculture (EU pre-accession fund)
MTCWM	Ministry of Transport, Communications and Water Management	SIGMA	Support for Improvement in Governance and Management in Central and Eastern European Countries a joint of the OECD Center for Cooperation with the Economies in Transition and the EU PHARE program
MVM	Hungarian Power Company		
MVMT	Magyar Villamos Muvek Trust (electric utility)	SME	Small and Medium Enterprises
N.A.	Not Applicable	SOE	State-owned Enterprise
NAFTA	North American Free Trade Agreement	SPPA	State Privatization and Property Administration Company
NBH	National Bank of Hungary (central bank)	SSI	State Secretariat for Integration
NDIF	National Deposit Insurance Fund	TEN	Trans-European Networks
NHP	National Health Plan	TPA	Third Party Access
NIRC	National Interest Reconciliation Council	UA	Unemployment Assistance
NPH	National Program of Harmonization	UI	Unemployment Insurance
NTB	Non-tariff Barrier	UWWT	Urban Wastewater Treatment (EU directive)
O&M	Operation and Maintenance	VAT	Value Added Tax
OECD	Organization for Economic Cooperation and Development	VOLAN	Inter-city Bus Company
		WTO	World Trade Organization

ACKNOWLEDGMENTS

This report was prepared by a World Bank team led by Michelle Riboud (who also worked on the labor chapter). The other members of the team in alphabetical order are: Pedro Alba (team leader during final stages of report preparation), Julia Bucknall (environment), Rita Cesti (environment), Bruce Courtney (macroeconomics), Csaba Csaki (agriculture), Michel Debatisse (agriculture), Armin Fidler (health sector), Imre Hollo (health sector), Bart Kaminski (trade and foreign investment), Ioannis Kessides (infrastructure), Mihaly Kopanyi (financial sector), Philippe Lefevre (banking), Millard Long (financial sector), Barbara Nunberg (public administration), Jana Orac (public administration), Agata Pawlowska (private enterprises), S. Ramachandran (private enterprises), Roberto Rocha (macroeconomics and pension reform), and Deborah Wetzel (decentralization). Judit Spat and Anita Papp provided contributions to various chapters of the report. Judit Spat also gave invaluable support during the discussion of the draft report with government officials. Rossana Polastri provided research assistance. Deborah Davis and John Karaagac provided editorial assistance. Marinette Guevara processed the report and provided executive assistance.

The report benefited from valuable comments from many Bank colleagues, especially Hafez Ghanem, Robert Grawe, Laurens Hoppenbrauer, Roumeen Islam, Franz Kaps, Pradeep Mitra, Robert Palacios, Kyle Peters, Carlos Silva-Jauregui and Anthony Venables. The report also benefited from discussions with colleagues from the International Monetary Fund, the European Commission and the Organization for Economic Cooperation and Development.

The different mission members would like to express their gratitude to all their Hungarian counterparts for the time they spent with the mission in frank and friendly discussion. Their cooperation made this report possible. Indeed, the team members profited from the collaboration and discussion with government officials, among others, from: the Ministry of Finance; Ministry of Foreign Affairs; National Bank of Hungary; Prime Minister's Office; Ministry of Agriculture and Rural Development; Ministry of Industry, Trade and Tourism; Ministry of Transport, Communications and Water Management; Ministry of Labor and Social Affairs; Ministry of the Environment; the Communications Authority; the Hungarian Energy Office; the Office of Economic Competition Policy; and the Statistical Office. Among the government officials, the team would like to signal out Peter Ademec, Gustav Bager, Peter Gottfried, Agnes Hegedus, Eva Tarjan, and Agnes Vargha. Key issues were also discussed with academicians and researchers at the Institute of World Economics, Institute of Economics of the Hungarian Academy of Science, Research Institute for Labor, TARKI, Kopint-Datorg, and the Research and Information Institute for Agricultural Economics.

Vice President:	Johannes Linn
Country Director:	Roger Grawe
Sector Director:	Pradeep Mitra
Sector Leader:	Hafez Ghanem
Team Leaders:	Pedro Alba and Michelle Riboud

EXECUTIVE SUMMARY

INTRODUCTION

Hungary is one of the top economic performers among Central Eastern European (CEE) countries in transition, as well as one of the strongest candidates for accession to the European Union (EU). Since 1997, real per capita GDP growth has averaged 5 percent per year, and by 1999 inflation had fallen to 10 percent – 11 percent. The volume of merchandise exports grew by an extraordinary 30 percent in 1997 and 20 percent in 1998. Three quarters of Hungary's exports go to the EU, and two-thirds of exports are high value-added, technology-intensive and human capital-intensive products. The financial sector is among the most robust and efficient in Central Europe, with rapidly emerging capital markets. The enterprise sector is efficient and now mostly private, with substantially increasing labor productivity and expanding commercial ties with the EU and other international markets. Labor markets have proven to be flexible, facilitating the restructuring of the economy while maintaining relatively low levels of unemployment. While Hungary has benefited from good initial conditions compared to other transition economies, this strong performance is mainly the result of the successful stabilization program implemented in the mid-1990s, and of deep structural reforms that began earlier in the decade and accelerated in subsequent years.

The challenge facing Hungary today is to consolidate the stabilization gains and finalize the structural reforms to ensure that its economy remains competitive and that its income levels are placed on a sustainable and rapid convergence path to average EU levels. In the macroeconomic area, additional fiscal adjustment is needed over the medium term to ensure that the investment expansion driving economic recovery and building future growth potential is not interrupted by a reemergence of external imbalances, as in the past. In the structural arena, policymakers should design and implement reform programs for the health system, certain infrastructure sectors, and local government finance. In addition, they should complete the successful structural reform efforts already underway in pensions, the financial sector, the labor market, and trade liberalization. Finally, policymakers need to refine the regulatory and institutional framework in public administration, environment, and agriculture, to increase compliance with EU directives and ensure a smooth and successful entry into the EU's Single Market.

An additional concern facing Hungary pertains to the issue of long-term poverty, especially among the Roma ethnic group. According to the preliminary findings of a Poverty Update Report (to be completed by the beginning of 2000), about 7.5 percent of the population lived in households that experienced poverty four or more times during the period 1992-97. Hence, the data suggest that there is in Hungary a group of long-term poor who are likely to remain poor even with strong economic growth. This development has important implications for Hungary's poverty reduction strategy, since the long-term poor typically need more intensive and expensive policy interventions than those who are temporarily poor. The data also indicate that poverty and social exclusion tend to be higher among the less educated, those living in rural areas, and those with weak attachments to the labor market. Poverty rates are higher among households with three or more children, or if the head-of-household is under 40 years of age or a single parent; single elderly female households also face the risk of severe and

permanent poverty. Finally, ethnicity is an important factor. Roma households are much more vulnerable to poverty than any other group in Hungarian society; indeed, the data indicate that the majority of the long-term poor are Roma. The concentration of long-term poverty among the Roma further complicates the design of effective poverty interventions.

Progress during the Transition

Hungary's successful transition from a centrally planned to a market-oriented economy is due to several factors, which together distinguish Hungary from the other CEE countries. First, Hungary had favorable initial conditions, including its location, a highly skilled and educated workforce, established trade links with Western Europe, and during the communist regime, the widespread existence (and even acceptance) of private entrepreneurship and foreign investment. Second, Hungary implemented a comprehensive program of structural reforms early in the transition process, including in financial and labor markets. The authorities put in place a sound framework of laws and regulations regarding, among other issues, property rights, bankruptcy laws, and supervision and prudential regulations. Finally, the government has been flexible and responsive to changes in economic circumstances. In particular, it decisively responded to the significant external imbalances that emerged in 1993-94 by implementing a far-reaching stabilization program that combined fiscal adjustment measures with the acceleration of structural reforms.

Unlike many other CEE countries and even under the previous centrally planned regime, significant sections of the Hungarian economy were private and open to international trade, including trade with non-communist countries. Although most larger industrial enterprises were state owned, small firms could be privately owned and operated even in the 1960s. The preservation of the entrepreneurial culture helped during the transformation of the economy after the collapse of the Council of Mutual Economic Assistance (CMEA), the communist counterpart to the European Union. Hungary's GDP trough was shallower, after the CMEA's collapse, than it was in other transforming economies, and the development of the private sector has been remarkable: by the end of 1998, it accounted for some 80 percent of GDP, up from 20 percent in 1990. In addition, the early start of the privatization process was facilitated by cash sales to outsiders (often foreign investors with a majority stake), and contributed to the growing importance of the private sector in the economy. With regard to trade, although the spending decisions of exporters remained largely controlled by the state during the previous regime, the state monopoly over foreign trade was substantially weakened by the end of the 1980s. State-owned enterprises (SOEs) enjoyed considerable autonomy, and exporters were allowed to retain some portion of their hard currency earnings. During the first stages of the transition, most exports came from firms with already established international links, and through redirection of exports from former CMEA markets.

From the outset of transition, both the magnitude and widespread political acceptance of foreign direct investment (FDI) in Hungary were unique in the region. Hungary has been the most successful transition country in attracting foreign investors. Between 1990 and 1997, Hungary absorbed approximately half of all foreign capital invested in Central Europe. Such inflows were not concentrated in the more recent period (as in Poland), but were already a large fraction of GDP (4 percent per annum) during 1990-94, thereby giving such investments considerable time to have an impact on the economy. The shift to "second generation" firms, mostly foreign owned, was thus already well advanced in Hungary before 1995, and the revival of the privatization drive during the second half of 1995 accelerated this trend.¹

¹ "Second generation" firms are either newly established or successfully restructured firms, mostly with foreign participation.

Indeed, FDI has played a pivotal role in reintegrating the Hungarian economy into international markets and improving economic performance. A large portion of FDI originates from large multinational corporations with global networks of production and marketing; hence, a significant share of Hungary's domestic business activity is now incorporated into these networks. Moreover, most FDI has come to Hungary not as a way of jumping trade barriers, but to take advantage of the overall economic environment, including location, production, and transaction costs. Data confirm that Hungarian firms with even a modest FDI stake restructured faster and more intensively, and outperformed other firms. For example, foreign-owned firms tend to be more export oriented; by 1998 firms with foreign capital accounted for three-fourths of total trade turnover. This outcome stemmed from the benefits of foreign ownership: FDI gave a large number of Hungarian firms easier access to improved technology and credit, and to better management, marketing, and other business expertise.

The improvement in operational and financial performance of Hungarian firms, and the rapid growth and change in the composition of exports, confirm the substantial progress achieved in industrial restructuring. Since 1992, almost all firms, especially in the manufacturing sector, have improved their financial performance, and only a few state-owned enterprises with controlled prices are now incurring losses (most importantly, the railways and the post office). During 1992-96, 80 to 90 percent of manufacturing firms had an operating cash surplus, and losses were generally relatively small and transitory in nature. Helped by recovery in import demand in the EU, exports soared in 1994, and have continued to grow at double-digit rates since then. The composition of exports has become more diversified, with a notable shift toward high value-added products. Unskilled labor-intensive and natural resource-intensive products have fallen from roughly two-thirds of exports in 1989 to one-third in 1997, while the share of technology-intensive and human capital-intensive products has increased from one-third to two-thirds of exports during the same period. With an EU share in trade turnover of 60 percent during 1990-96, Hungary is more integrated with the EU than a number of EU member countries. Integration has increased the intensity of competition from imports coming from EU suppliers; since 1995, tariffs have been slashed and by the end of 2000 tariff rates on nearly all EU industrial imports will be nil. Considering the progress achieved in industrial restructuring and the already intense competition, Hungary seems well poised to compete in the European Single Market.

In addition, Hungary has implemented a comprehensive program of structural reforms in the financial market, improving both key institutions and the legal and regulatory infrastructure. With regard to the latter, the legal framework for banking has been greatly improved, and substantial progress has been made in harmonizing financial laws and regulations with those of the EU. In addition, Hungary's accounting and auditing rules have been remodeled to international standards. On the institutional side, banks and insurance companies have been restructured, recapitalized, and privatized, mostly through sales to strong foreign strategic investors with experience in managing financial institutions elsewhere. Institutional investors such as mutual funds and pension funds have grown steadily in the past five years, and capital markets have developed rapidly in both size and liquidity. The recently enacted pension reform is expected to lead to a rapid growth of pension fund assets, further boosting domestic capital markets. Overall, therefore, the financial sector is also well positioned for EU membership.

Helped by changes in wage setting mechanisms and employment legislation, labor markets have proven to be quite flexible during the transition period, facilitating the restructuring of the economy. The most striking evidence of labor market flexibility during the 1990s is the substantial reallocation of labor among sectors (away from agriculture and industry, and toward services), rapid productivity gains, a substantial increase in the education level of the labor force, and a decline in employment and labor force participation rates. Participation rates are now somewhat below the EU

average (71 percent for men and 53 percent for women ages 15-59). While unemployment has emerged as a problem during the transition, it remains below the EU average. These good labor market results are due, in part, to the reforms implemented during the 1990s in wage setting mechanisms. Hungary's new mechanisms reduce the role of government and are based on a decentralized wage bargaining system that has helped the wage structure become more responsive to market forces. On the other hand, the transition has also brought a steep decline in real wages (which recent increases have not yet offset).

Although these reform efforts helped the Hungarian economy begin to recover from the transition-induced recession in 1993 and 1994, the incipient upturn was accompanied by large external imbalances. Indeed, at the same time that the economy began to recover, there was a sharp rise in the current account deficit, to nearly 10 percent of GDP in 1993 and 1994, and a significant increase in external debt. These severe external imbalances were primarily caused by fiscal imbalances of roughly the same order of magnitude. The country suffered a sharp loss in creditworthiness, caused not only by these large imbalances, but also by the perception that privatization and other important structural reforms had stalled. Indeed, by mid-1995, only 35 percent of total state assets had been sold. Running disputes between state asset management agencies delayed the privatization process, while the Privatization Law excluded major utilities from the privatization drive.

Faced with a potential balance of payments crisis, the government implemented a drastic stabilization program in March 1995, while accelerating pace of the structural reforms initiated in the early 1990s. The stabilization program combined a strong fiscal adjustment (nearly 6 percent of GDP) with an initial sharp (9 percent) exchange rate depreciation, followed by pre-announced but declining monthly nominal devaluations to restrain inflation. The program also relied on wage restraint, with real wages declining by 9 and 3 percent in 1995 and 1996, respectively. Among the structural reforms was a comprehensive program of enterprise and bank privatization that included the privatization of all major utilities, as well as the restructuring and privatization of all major banks. In 1997, the Privatization Law was amended to allow the sale of all but the single golden share in 18 firms previously considered strategic, including the savings bank (OTP) and the telecommunications company (MATAV). The dominant form of privatization was direct sale to foreign strategic investors, which led not only to a large increase in the volume of FDI, but also, as discussed above, to major efficiency gains. Hungary was also the first country in the region to reform its pension system through changes to the public pay-as-you-go (PAYG) scheme, and the introduction of a second, fully funded private pillar. These and other reforms restored the country's image as the pioneer of structural reforms among the transition countries.

The program of stabilization and structural reforms has yielded impressive results. Growth accelerated in 1997, driven by strong increases in exports and fixed investment. Unlike in the early 1990s, the output recovery in the second half of the decade was accompanied by a sharp *decline* in the current account deficit (from 9 to 2 percent of GDP between 1994 and 1997), and by a decline in Hungary's net external debt (from 45 percent of GDP in 1994 to 25 percent in 1998). Privatization also got a much-needed boost, and by end-1997, HUF 790 billion in assets had been sold (in addition to some HUF 65 billion worth of shares transferred to the social security funds and municipalities in 1996). FDI flows were larger than the current account deficit for three consecutive years (1995-97), and included both greenfield investment on the order of 2 to 3 percent of GDP per year, as well as large privatization transactions. The accumulated stock of FDI amounted to US\$16 billion in late 1998 (excluding inter-company loans), the equivalent of one-third of GDP (by far, the largest in the region). This increase in FDI has not only contributed to a sharp drop in Hungary's external indebtedness, but, as noted above, was key to its significant penetration of markets abroad and to its export growth.

Ensuring the Conditions for Sustained Growth and EU Accession

To ensure that the current strong growth performance is sustained and there is real convergence with its partners in the EU, Hungary needs to consolidate the stabilization gains and finalize the structural and institutional reform program. These objectives, while not easy, are well within the reach of Hungary's policymakers, and would require, broadly speaking, three types of actions:

- *Macroeconomic area:* implementing an additional fiscal adjustment on the order of 1.5 percent of GDP over the next 2 to 3 years to ensure that the ongoing surge in investment and growth is not interrupted by a reemergence of external imbalances;
- *New sector reforms:* preparing and implementing programs in key but yet unreformed sectors that in the medium term have potentially large implications for growth, welfare, and the budget—in particular, the health sector, transport, and local government finance; and
- *More advanced sector reforms:* completing the reform programs in several sectors (such as pension reform, the financial sector, public administration, trade and labor policies), and refining the regulatory and institutional framework in several other areas (such as environmental protection, infrastructure, and agriculture), to finalize the transition process and ensure full compliance with EU directives and a smooth entry into the EU.

These actions are described below in more detail.

Maintaining Macroeconomic Stability

With a per capita income of approximately 49 percent of the EU average on a purchasing power parity (PPP) basis, Hungary will only be able to bridge this income gap by achieving a higher growth rate than the EU and by sustaining it for a long period without generating macroeconomic imbalances. Higher growth rates will require further increases in the ratio of fixed investment to GDP (24.5 percent projected for 1999), as well as further increases in the efficiency of investment. The scope for further productivity gains is large, since labor productivity, despite recent gains, still lags behind EU levels significantly in most sectors of the economy. The government has announced a medium-term investment target of 28 percent of GDP, with the view of maintaining 5 percent yearly output growth over the medium term. Fixed investment continues to grow quickly, and the modernization of infrastructure and the prospects of EU membership could very well lead over the next five years to an investment rate not far from the government's target. At the same time, sustainability implies that the current account deficit should be stabilized at around 4 percent of GDP (from 5.2 percent projected for 1999) to maintain a gradually declining external debt to GDP ratio. Together, these two targets imply an increase in national savings of about 5.0 percent of GDP over the next 5 to 7 years, of which 3.0 percent should be during the pre-accession period to meet interim growth and external targets.

The recent instability in international financial markets and the structural changes taking place in Hungary's balance of payments also suggest the need to rely less on foreign savings. As a result of its strong fundamentals, Hungary managed to weather well two major external shocks during 1998: an increase in profit repatriation by foreign firms, and the Russia crisis. With regard to the former, the current account deficit more than doubled, to 4.8 percent of GDP in 1998, due in part to a sharp increase in net profit remittances. While this increase partly reflected particular circumstances in a handful of multinationals, the increase is also an indicator of longer-term trends. The ratio of remitted profits to the (lagged) stock of FDI increased from 2 percent (the average in 1993-97) to 6 percent in

1998, more in line with the average flow/stock ratio in a representative sample of emerging markets. A prudent medium-run macroeconomic framework should assume a flow/stock ratio of about 5 percent rather than 2 percent, especially as foreign investment in Hungary matures. Despite small direct transmission channels between the two countries, Hungary was also temporarily hard hit by the Russia crisis. During September and October 1998, there were pressures on the exchange rate, a US\$1.5 billion decrease in external reserves, a 50 percent decline in the stock market, and a brief 500 basis point increase in the yield on government bonds. By the end of October, the crisis subsided as investors regained confidence, in part as a result of several government actions, including the announcement of conservative parameters for the 1999 budget. Capital flows, among other benefits, can contribute significantly to the development of the domestic capital market, as they have in the Hungarian case; but they can also prove disruptive in periods of international turmoil, even in countries that pursue sound economic policies, as Hungary has.

Given these circumstances and objectives, a prudent fiscal program would target an increase in the primary surplus of around 1.5 percent of GDP over the next two years. Public savings should aim to contribute some 2.5 percent of GDP of the required 3.0 percent of GDP increase in national savings during the pre-accession period. Assuming that the government misses its 1999 fiscal targets by about 0.5 percent of GDP, this public savings effort should include: (i) a 1.5 percent of GDP increase in the primary surplus (from 1.5 percent in 1999 to 3 percent in 2001, excluding EU grants); (ii) 0.5 percent of GDP from the recently implemented pension reform; and (iii) 0.5 percent of GDP from EU grants. This adjustment would allow investment to continue to expand while reducing the current account deficit. This proposed fiscal adjustment would not only contribute to a sustainable increase in investment and output, but would also tend to depreciate the real exchange rate, and hence should allow for a reduction in the rate of crawl of the nominal exchange rate. In turn, a lower rate of crawl would facilitate the government's efforts to lower the inflation rate to EU levels. Maintaining a competitive exchange rate should be an essential part of Hungary's growth strategy, because the incentive to invest in a small open economy depends in good part on the future capacity of enterprises to export and compete in foreign markets.

The fiscal adjustment should be implemented primarily on the expenditure side of the budget, given the high level of most tax rates in Hungary. In fact, any progress that can be achieved in improving tax collection and broadening the tax base should be used as an opportunity to lower tax rates, though it would be advisable to ensure that the base is broadened before rates are lowered to avoid a loss of revenue. Within fiscal targets, a shift in expenditures will be necessary. As a new member of NATO, Hungary is committed to increasing its defense expenditures. Moreover, as EU accession nears, it is vital that Hungary increase infrastructure investments, especially in sectors such as environment, transport, and agriculture, in order to have access to EU funds. Accommodating these expenditures may require savings in other budgetary areas.

Despite success during the 1990s in fiscal adjustment, there are still important challenges to the sustainability of fiscal policy and the efficient delivery of public services. Three areas, which are also critical to complete the structural agenda, seem to be the most important:

- *Health sector.* The need to improve the poor health status (see below) of the Hungarian population will translate into large pressures on expenditures, as will the aging of the population at the end of the next decade, unless the health system is rationalized. The recent decline in health expenditures seems not sustainable since it has been, in good part, generated by sharp wage cuts, inadequate maintenance of hospitals, and postponing the renewal of medical equipment.

- *Public administration.* Upgrading Hungary's civil service is critical for the authorities to manage the integration of the Hungarian economy into the EU's Single Market. The improvements in public administration may, however, result in expenditure pressures over the medium run, even if the number of new hires is more than offset by departures. In this regard, the authorities will need to reduce the excessive wage disparities between public servants and the private sector in order to attract and keep well-qualified personnel. In addition, upgrading and changing the composition of the civil service may also result in transitory costs, since there may be a need to fund severance payments.
- *Local governments.* Preparing the public sector for the challenges of EU accession also requires increasing the efficiency of local governments in delivering public services. This issue is especially important since local government will be responsible for receiving and allocating a significant volume of EU transfers that are expected to follow EU membership.

Improving the Delivery of Local Public Services and the System of Intergovernmental Finance

Although local governments have been able to meet fiscal targets in recent years, there are still indications of inefficient delivery of services and strains in local finances. Beginning with the 1995 adjustment program, the authorities have managed to introduce greater discipline in local government finance. Between 1995 and 1998, local expenditures declined by 4 percent of GDP to 13 percent of GDP; as a result, although revenues also declined, local governments managed to reduce their overall deficit by 1 percent of GDP, to 0.5 percent of GDP. This decline in expenditures, however, may not be sustainable, given unmet needs for new or rehabilitated local assets. In addition, despite recent improvements, efficiency in the delivery of public services can still be strengthened. For example, there are unexplored economies of scale in organizing effective regional associations. Finally, there is still a systemic imbalance in the intergovernmental finance structure. Expenditure and revenue assignments are not well matched, and the transfer system creates perverse incentives. Getting local government finances right and improving their efficiency is critical given their future role in managing EU structural funds.

Improving the efficiency of local governments will entail actions at both the central and local government levels. The central government needs to clarify the expenditure responsibilities of local government and of intermediate tiers such as regional associations. If the government chooses to allow multi-county and other functional regional associations to deliver services, it must also allow such associations to collect and manage revenues as independent legal entities. More generally, there is a clear need for local governments to develop their own sources of revenue and depend less on transfers from other levels of government: Introducing a value-based property tax and gradually increasing vehicle taxes could increase local revenues significantly. The government should also consider ways of rationalizing and simplifying the grant system. This could include setting up a more systematic approach to determine current grants (e.g., the value of current grants could be tied to macroeconomic benchmarks), while simplifying and unifying the allocation system. The mechanism for investment grants also needs review to ensure that it supports national priorities and equalization purposes.

Increasing Efficiency and Quality in the Health Sector

The health sector faces several of challenges: (i) deteriorating health status of the population; (ii) deficient institutional structure; and (iii) weak finances. The health status of Hungarians is the worst of OECD populations and among the worst for transitional countries. This is largely due to a rapid increase in premature death, disproportionately affecting men in their productive years because of unhealthy lifestyles and occupational and environmental risks. The health sector has been operating under

a deficient institutional structure; its financial situation is fragile. While expenditures on health as a share to GDP have recently declined, forecasts suggest that the decline is not sustainable. Health expenditures will be under increasing pressure as the population ages, as obsolete and badly maintained equipment and installations are replaced, as real wages in the sector increase, and as the demand for better health care increases. Consequently, in a no reform scenario, the annual deficit of the Health Insurance Fund (HIF) could increase to almost 2 percent of GDP by 2010, and increase sharply after that date due to the projected demographic shock.

In early 1999, the government proposed a number of far-reaching reforms in the health sector, designed to improve efficiency, quality, and access. These reforms imply a health system that includes the following elements: (i) a basic health care package accessible to the entire population; (ii) a market for supplementary health insurance which would provide additional services and improve quality; (iii) a single agency (the tax authority APEH) responsible for revenue collection and transfer of resources (on a risk-adjusted, capitated basis) to regional funds that may evolve into managed care organizations (MCOs); (iv) regional funds that purchase the basic care package for a defined member population, using the allocation from APEH and regulated copayments (these MCOs may at a later stage assume the risk for delivering health services directly); (v) internal market mechanisms whereby the regional funds purchase services from public and private providers that comply with minimum accreditation criteria and standards for service delivery; and (vi) an independent supervisory capacity to ensure that the services provided meet quality and financial regulations.

The main challenges in implementing this health reform program are developing the multi-level health insurance system, strengthening the regulation and policy roles and capacity of the Ministry of Health (MoH), gradually introducing market forces to drive efficiency and quality, improving financial mechanisms, and limiting the fiscal cost of the reform. Among these challenges, the first task that needs to be completed is the development and implementation of the essential elements of the health care system, including the basic health care package, the supplemental insurance policy, the rules regarding copayments, and the mechanisms for reinsurance against catastrophic risks. The government may wish to carry out the reform in two stages. In the first stage, the HIF could be split into regional purchasers of health services, while encouraging private insurers to provide supplemental coverage. In the second stage, the regional organizations could be allowed to compete for members. In parallel with these basic reforms, the government should also work on transforming the role of the MoH. The ministry should focus on strategic sector issues including policymaking, priority setting, and regulation, as well as monitoring overall performance to ensure that the health system is indeed becoming more responsive to public health problems. In addition, throughout this process the government should strive to improve efficiency and quality in the system by increasing competition among health providers. In particular, the regional purchasers would strive to increase competition among a growing set of service providers, including both public and for profit organizations. Finally, improving health outcomes with limited resources requires changes on both the revenue and expenditure side of the health system.

Enhancing Competition in the Infrastructure Sector

With the exception of transport, the infrastructure sectors have been privatized and restructured, and their regulatory framework has been greatly improved. These reforms place Hungary in a leading position among transition countries, and in advance of many in Western Europe. Nevertheless, there are several opportunities for further competitive restructuring and regulatory reform, which would give rise to significant new gains in economic performance and ease Hungary's accession to the EU.

Hungary's transport sector faces two main challenges that need to be addressed to prepare for EU accession. The first pertains to the conditions of the transport network and equipment. Large investments are required to construct new infrastructure and renovate existing roads, rail tracks, and the transport fleet. Hungary should prioritize all its transport investment needs, including the three trans-european network (TEN) road and rail corridors, using traditional cost/benefit techniques, and should prepare an investment and financing plan. It is important not to overlook urban transport needs, which play an increasingly important role in Hungary's emerging service economy. Moreover, much can be accomplished without spending large amounts of resources by reducing bottlenecks at border crossings, shrinking the backlog of deferred maintenance and rehabilitation, and upgrading existing roads and bridges in terms of speed, traffic capacity, bearing capacity, and safety. These improvements should be planned on a corridor basis, since benefits are larger if improvements are not implemented in a fragmented manner.

Although Hungary has made considerable progress in reforming and commercializing transport operations during the last decade, reforms are still needed in several areas. Efforts should be continued to restructure the major state-owned transport companies to improve their market orientation, efficiency, and operational independence, with a view to privatizing them as soon as possible. The government should conduct a thorough restructuring of the national railway company, MAV, by separating track operations and creating independent freight and passenger companies. To accelerate the privatization process of VOLAN (intercity buses), freight and bus operations should be separated and the government should offer lease or lease-purchase arrangements to provide financing. MAHART, the inland navigation company, should be reorganized and port operations privatized. BKV, the Budapest urban transport company, and the Municipality of Budapest, should increase tariffs to improve cost recovery. MALEV, the national airline company, should develop a business plan, assuming increasing competition, to assess its best options in a slowly deregulating EU air transport market. Finally, the Ministry of Transport, Communications, and Water Management (MTCWM) should implement laws and legislation on public transportation to harmonize it with EU requirements, and should deregulate intercity bus and truck services, with the government's role limited to ensuring compliance with safety and environmental regulations. More generally, the Government should refrain from tariff setting in the transport sector and instead strengthen the regulatory environment.

The present system in the electricity sector is still in transition, as it must adapt to the requirements of the EU Directive on Electricity (and other EU standards for safety, environmental emissions, etc). Prices in the past were below efficient levels, and the structure of prices was unbalanced, with cross-subsidies provided to domestic consumers. These inefficiencies are rooted in distributional concerns and may be defensible, as long as they remain of modest size. In any case, during the last year considerable progress has been made in addressing several of these issues. For example, tariffs have been substantially rebalanced and current pricing policy is broadly consistent with revenue adequacy. In the future, if competition intensifies in response to a more liberal interpretation of the EU Electricity Directive, a number of regulatory issues will need to be addressed. The most immediate is that competition will create pressure to further align tariffs with costs. If the larger commercial and industrial customers have access to competitive markets and are indeed cheaper to serve than residential customers, then further rebalancing of the rates may become necessary. This should not pose regulatory problems, provided the different components of the costs of serving customers are clearly identified (generation at different times of the day, transmission and distribution). Nonetheless, it may require that any remaining subsidies to residential customers be made explicit to ensure the financial viability of the distribution companies (which bear the major differences in the costs of serving high-volume and low-volume customers).

Issues of the location of power stations and coordination of investments in transmission and generation may become more acute as generation is liberalized and as the transmission part of MVM is reformed to operate on market principles. At present, with MVM responsible for planning the location of new power stations, this coordination can be ensured by systematically comparing the full costs of providing different degrees of transmission reinforcement. The decentralized market approach requires a careful design of signals to guide the location of new power stations. Such an approach raises issues of regulation and governance for the national grid, which may require a new set of incentives to provide the necessary quality of transmission services to new generation. The simplest way to achieve this may be to follow the model of the British NGC, which is required to invest in sufficient transmission capacity to meet set quality standards, while being given incentives to minimize the costs of providing transmission and ancillary services. These incentives take the form of profit sharing: if NGC can lower the cost of providing transmission services, it keeps a fraction of the cost saving. Equivalently, if it fails, then it bears some fraction of the additional cost, up to a limit.

There are three challenges facing Hungary's gas sector. The first is Hungary's dependence on a single gas supplier. Hungary lacks the capacity, by itself, to address that problem effectively, but there are potential solutions on the horizon. The most promising would be a prompt and effective implementation of the EU Gas Directive, which aims to create a competitive gas market throughout the EU by providing for third party access to gas transmission lines. If the directive is fully implemented in the EU, Hungary will have effective access to multiple competing suppliers, with large resulting benefits to the performance of the Hungarian gas market. Second, the present regulatory system provides extremely limited opportunities for competition to provide healthy incentives for market participants. That characteristic of the regulatory system is understandable, given the lack of access to alternative suppliers to the Hungarian market. Nonetheless, the government needs to be prepared to promptly implement pro-competitive regulatory reforms, as soon as the country obtains access to multiple gas suppliers. Third, the present rate structure is inefficient. Residential prices are too low, and there is no difference between the price of gas purchased off peak and the price of gas purchased on peak. The government needs to address this problem promptly by authorizing further increases in the residential price and by creating an on-peak/off-peak price differential.

Hungary has made significant progress in modernizing and reforming its telecommunications sector, and future reforms should aim at promoting greater competitiveness in preparation for joining the EU. The government should take an active role in ensuring that efficient competition for non-exclusive services can survive, both currently and in the future, now that there will be viable franchises creating potentially efficient competition for voice services. Such actions include close scrutiny of all mergers, especially with an eye toward preventing the elimination of potential competition. The authorities should also adopt a market-based spectrum policy that will provide benefits in current mobile wireless services as well as positioning wireless to be a competitive alternative to wire-line voice services. The regulatory authorities also need to reexamine their own roles. They should eliminate any unnecessary regulatory hurdles that frustrate competition. Regulators also need to set forth clear, efficient rules for the interconnection of networks so that competitors that are considering significant investments are not discouraged by lack of certainty.

Reforming Public Administration in Light of EU Accession

The process of preparing for accession to the EU, and negotiating and implementing the acquis, will require high-caliber government. In the last few years, Hungary has made significant progress toward building a modern and efficient public administration, as well as creating a fully professional civil service. Nonetheless, the government will have to address a number of constraints in

terms of government employment practices and remuneration systems, management of human resources in the civil service, and management of the increasingly complex EU accession process.

Public administration suffers from a high turnover of staff, as well as difficulties in staff recruitment and retention. This stems from significant discrepancies in remuneration between the private and public sectors, and between the public and civil service, as well as lack of appropriate incentive systems. In order to address these problems, policy measures will have to be implemented in three areas:

- First, preparation of a strategy for determining a coherent pay policy on an ongoing basis. This means developing the capacity to investigate pay differentials between the private and public sectors for benchmark skills, the collection and publication of turnover and vacancy statistics, and the introduction of a revised pay and grading system, based on appropriate job evaluation techniques.
- Second, strengthening and systematizing of the new pay flexibility mechanisms, including performance pay increments and subtractions, personal salaries, and Euroatlantic Integration supplements. A policy framework outlining clear, concrete criteria for individual pay shifts based on performance or skill grounds needs to be developed.
- Third, addressing the budgetary and staff implications associated with changing skill requirements as a result of EU accession. The authorities should prepare projections of the likely hiring as well as redundancies and relocations of staff; assess the financial implications of these staffing movements; and design a program of redundancy measures. In addition, the authorities should prepare a program to attract the new mix of EU-related skills, and to enhance the existing human resource base through (re)training.

Efficient human resource management and decisionmaking practices in the civil service are of utmost importance. Since 1990, Hungary has made real progress in establishing an independent civil service, and creating the legal foundation for merit-based procedures for recruitment, promotion, and performance evaluation. Nonetheless, several key aspects of human resource management need to be strengthened. First, the roles, responsibilities, and reporting relationships of each of the institutions involved in civil service management should be clarified and simplified, to better coordinate human resource policy and regulation. It is also important to strengthen the capacity of personnel departments at both the central and line ministry levels, and prepare operational manuals and standardized human resource department structures. Second, further actions are needed to ensure fair, transparent, and merit-based practices in the civil service. Among the most important are: establishing a civil service oversight body to review civil service human resources policy and standards; and introducing merit-based recruitment and promotion procedures and annual performance appraisals. Finally, the authorities should prepare a national training strategy, and, among other things, clarify the roles of the different government institutions involved in training.

Management of the process of accession to the European Union will become increasingly important in the coming years. Thus far, Hungary has developed the necessary institutional infrastructure and processes to coordinate the implementation of the Government's Accession Program. However, as the integration process becomes more complex and tasks more numerous, the institutional arrangements will need strengthening. The key areas of improvement regard technical assistance, the integration departments in each ministry, and the coordination of these integration activities with overall public administration concerns. With regard to technical assistance, there is need to clarify the roles of all the institutions involved in technical assistance management, and to develop systems for tracking,

monitoring, and ensuring compliance in technical assistance projects. With regard to integration departments, it would be useful to review best practice and develop guidelines for staffing and procedures for all EU integration departments. Finally, the EU integration strategy could be updated to incorporate administrative impact into its analysis, including the longer-term requirements of administering programs in the EU environment

Preparing the Agriculture Sector to Better Compete in a Single Market

Full price liberalization, successful privatization, a sharp decline in sector employment, and a productivity level comparable to the EU average constitute remarkable achievements in the agriculture and food sector. Nevertheless, as the accession process unfolds, Hungary must still adjust its policies to prepare for implementation of the *acquis communautaire*, while pursuing its search for productivity gains.

The support programs will need substantial revision over the coming years, both to comply with ongoing agreements (WTO) and to be compatible with the Common Agricultural Policy (CAP). By 2001, export subsidies should already be significantly reduced; and credit subsidies, which are widespread in agriculture, will have to be discontinued at the time of accession. The government should also, as part of its pre-accession strategy, modify its current method of setting guaranteed prices—a cost-plus approach—which does not promote adjustment to market demand and can lead to unbearable budgetary costs at times of decreasing international prices. For similar reasons, the government is already resisting pressures to raise guaranteed prices to the current level of EU intervention prices, a level that will be revised downward in the near future. Even with a substantial reduction in EU intervention prices, Hungary's producer prices for cereals will increase. This, in turn, will create higher producer costs for the pig and poultry producers and a growing exportable surplus of cereals. A continued search for competitiveness and a reduction of logistical constraints will be critical to maintaining Hungary's export capacity.

An action plan needs to be designed and implemented to apply and enforce the new legal and regulatory framework. This plan should include, inter alia, a public information campaign, a staff training program, a restructuring plan for state agencies involved in consumer protection, animal and plant protection, agricultural research and extension, border control, farm registration, market information and intervention, and an investment program. While resources made available by the EU during the pre-accession period will be critical to help implementation, it remains essential for the government to develop a realistic plan and contribute to its financing.

Preparation for negotiations should not overshadow the long-term objectives of greater efficiency and growth. To achieve these long-term objectives, the government should remove the various legal constraints that still affect the land market, and should limit the scope for restructuring and investment. It should also privatize the seed companies to allow full access to foreign genetic material and to make these companies profitable. In addition, the government should continue to improve the functioning of the numerous instruments (Budapest Commodity Exchange, warehouse receipt system, Product Councils) that facilitate the marketing and export of agricultural products. Finally, it should collaborate with both the private sector and research institutes to promote the development of new technologies and attractive products.

Achieving EU Environmental Standards at the Lowest Fiscal Cost

Joining the EU will require Hungary to adopt and implement EU legislation and standards in the field of environment. Although environmental protection has an extremely high priority for the EU, it is generally accepted that the investments required to comply with the environmental *acquis* are significant and may not be achievable before Hungary joins.

The investment costs for the adoption of major environmental directives are expected to be significant, although projections are still uncertain. Various studies have attempted to assess these costs, and the range of estimates varies considerably. Total investment costs for Hungary of complying with EU environmental directives in air pollution, wastewater treatment, and waste management vary between ECU 4.1 and 9.3 billion, or 1.7 to 4.5 percent of 1997 GDP per year for 20 years. These costs would be in addition to the 1.6 percent of GDP per year already being spent by the public and private sectors, and excluding expenditures for administration, monitoring, and enforcement incurred mostly by the public sector.

By the time of accession, Hungary must adopt all of the 1995 White Paper measures related to the environment, of which solid waste legislation will be the most costly and most difficult to comply with. This is despite the fact that Hungary is considered further advanced than other accession countries in managing its municipal solid waste (MSW). Depending on the scale, technical characteristics, and siting of facilities, the total investment costs of solid waste management are estimated between ECU 1.8 and 4.4 billion. Difficulties with compliance stem from the absence of a comprehensive solid waste management act covering all types of waste, and the lack of a reliable information system on waste production and disposal methods. In addition, the disposal facilities are inadequate, good natural sites are scarce, and low tariffs for MSW collection and disposal make investment unattractive for private developers.

Investment requirements in the field of wastewater management are also substantial. Hungary has made significant progress in improving water quality during the 1990s, and has invested heavily in collection and treatment of municipal wastewater. Nonetheless, coverage is still far below that required for compliance with EU standards. The total compliance costs are estimated at ECU 2.1 to 4.3 billion, of which the largest part (approximately ECU 2.1 to 2.7 billion) is associated with the Urban Wastewater Treatment Directive.

Adoption of EU measures relating to chemical substances, air pollution, and radioactive contamination does not seem to imply a substantial financial cost, apart from the necessary efforts to upgrade institutions. Concerns have been expressed regarding urban air pollution, particularly in Budapest, resulting from increased road traffic. Compliance with EU legislation on long-range air pollution does not create significant problems, unless the EU tightens its standards. Rough estimates of the total investment costs range between ECU 218 and 618 million, depending on type of technology adopted.

Investment requirements of such a magnitude will have serious implications for the public and private sectors, as well as for the consumers. Most public sector investment is required in sectors that are the responsibility of municipalities (such as water supply, wastewater treatment, and waste disposal). Currently, several funds provide grants for municipal investment, in addition to significant government subsidies for capital investment. In the future, however, an increasing proportion of the investment costs will have to come from the utilities' own cash flows from operations, which implies charging consumers

efficient tariffs. The ability to raise utility tariffs is likely to be a key constraint on the required upgrading of wastewater, waste disposal, and energy generating capacity.

There are five sets of actions that would help Hungary meet the EU requirements most efficiently and at minimum cost. First, strengthen institutional capacity in order to enforce laws effectively and to set incentives for improving compliance. This will be essential for developing policies that bring the greatest environmental benefits for a given level of expenditure or effort, and that use public and external funds most wisely in terms of both maximum environmental benefit and reducing distortions elsewhere in the economy. Second, conduct negotiations prudently to obtain either derogation or long transition periods in areas with relatively low benefit/cost ratios. Third, utilize public and EU subsidies to direct investments toward strategic goals, particularly in the area of wastewater collection and treatment, and municipal solid waste. At the same time, limiting the proportion of grant funding—and thus requiring municipalities to contribute significantly from their own resources—will create an incentive for municipalities to invest more efficiently. Fourth, focus on reducing pollution from the largest settlements, since these efforts will tend to have the largest environmental impact. Ensure that investment plans take advantage of the substantial economies of scale that can be achieved through multi-municipal cooperation, despite the increased institutional difficulties of such investments. Make use of technical assistance from the EU and other sources to help the less efficient utilities improve their performance.

Completing Pension Reforms

Hungary was the first transition country to implement a comprehensive pension reform. The main elements of the reform were the introduction of a mandatory and fully funded second pillar, the maintenance of the voluntary third pillar introduced in 1994, and changes in key parameters of the PAYG first pillar. Reforms of PAYG included an increase in the retirement age, an increase in minimum years of service for pension eligibility, and a change in the indexing formula for pensions, which will now give equal weight to prices and wages. Contributions and accrual rates in the PAYG system were reduced by about one-fourth to make room for increasing contributions to the second pillar (6, 7, and 8 percent in 1998, 1999, and 2000, respectively). The new system is mandatory for new entrants to the labor force, but voluntary for existing contributors. It is designed to be attractive to workers under 37 to 40 years of age, given conservative assumptions on returns. Some 60 percent of the younger workers have already joined the new system.

The Hungarian pension reform was designed to achieve three interrelated objectives: (i) to ensure a reasonable and sustainable income at retirement; (ii) to enhance Hungary's future growth performance by promoting national savings, developing capital markets, and reducing distortions in the labor market; and (iii) to ensure greater fairness across generations. Replacing part of the PAYG by a second pillar generates an immediate revenue loss in the PAYG as well as a transitional deficit, because the system must continue paying full PAYG benefits (not downsized) for a number of years. The transitional deficit is not a fiscal deficit in the usual sense, however, because the revenue loss in the public sector is matched by private savings of the same magnitude, leaving national savings unchanged. In addition, the transitional deficit is projected to decline during the next decade, because of the reform of the parameters of the PAYG. The impact of the full reform on national savings can be ascertained by combining the flows of private savings (the contributions and returns to the second pillar) and the PAYG balances. National savings are expected to increase progressively from 2000 on, due to the steady increase in private savings and the progressive decline in the PAYG deficit. The combination of the two effects will lead national savings to increase by 2 percent of GDP during the next decade—approximately 0.2 percent of GDP per year. If the central budget fully offsets the transitional deficit, as implied by the

government's original intention to keep the primary surplus of the general government around at least 2 percent of GDP, then the impact of the reform on national savings would be more front loaded. The net savings gain would be channeled through pension funds in the form of long-term financing flows to the private sector, contributing to capital formation in the private sector and enhancing Hungary's growth prospects.

Pending policy issues in the pension area include: increasing the contribution to the second pillar, as originally planned; reviewing the system of financial guarantees for the second pillar; and strengthening the regulatory and supervisory framework. Citing unforeseen expenditures, the 1999 budget failed to increase the contribution rate to the second pillar to 7 percent, but instead maintained it at 6 percent. This decision will not result in an improvement in fiscal policy or in Hungary's overall macroeconomic performance, since the larger flows to the PAYG will be fully offset by smaller flows to the second pillar, leaving national savings unchanged. The government should increase the contribution rate to 8 percent, as planned, in 2000. Further delays will not improve national savings but will increase uncertainty among switchers and pension funds, which require a stable policy framework to make informed decisions. The pension reform introduced a system of guarantees to ensure a minimum second pillar benefit equal to 25 percent of the first pillar. Policymakers may consider measures to make the guarantee system more robust and minimize the risk to the state budget. Detailed calculations should be made to determine whether or not some increases in the fees charged by the Guarantee Fund would be required. Also, improvements could be made in the design of the minimum return guarantee. The safety of the second pillar would also be served by strengthening the institutional and regulatory frameworks. This includes improving the reporting and payment infrastructure, refining the regulatory framework to enhance transparency and safety, and strengthening the supervisory function. The supervisory agency should work closely with the insurance and capital market supervision agencies, since pension funds typically outsource many activities to service providers that are supervised by other agencies.

Completing the Transition in the Financial Sector

In the field of finance, Hungary is in the forefront of reforms among transition countries. Its legal framework for banking has been greatly improved and is almost fully in compliance with EU legislation. Its banks have been restructured and sold, for the most part to strong foreign strategic investors. Its insurance sector is now healthy, and capital markets have developed rapidly in both size and liquidity. The pension reform is expected to result in a rapid growth in pension assets, further boosting the development of capital markets.

Completing this remarkable transformation of Hungary's financial system will require actions to widen access to finance, further strengthen supervision, change regulations and legislation to fully conform with EU legislation, and motivate further consolidation among providers of financial services. Although the banking system has substantially improved in terms of the services offered and the quality of its assets, small and medium enterprises (SMEs), agriculture, households, and municipalities still have difficulty gaining access to funding. Most Hungarian firms have surprisingly little debt, but the lack of access to financing is particularly acute for SMEs, since they often cannot access loans from foreign banks (as firms with FDI can through their foreign parent), or fund themselves through the supply chain (as some small firms can). This is in part a developmental problem that only time and experience will rectify. However, bringing inflation under control and working to clarify property rights in agriculture and housing will certainly help resolve the problem. Property registries should be improved, restrictions on property sales should be removed, and the enforcement of creditor rights should be strengthened.

The supervision of financial markets still needs to be strengthened, consolidated, and made more independent of political pressures. Hungary must clearly move to strengthen its laws, regulations, and institutions to enable the Supervisor to work without political interference. The failure of two banks and six brokerage houses in 1998 has revealed underlying weaknesses in the supervision of banks and capital market operations. The bank failures were the final outcome of problems well known to the Supervisor. Failure to act in a timely manner resulted in losses amounting to more than 1 percent of GDP. The legal authority of the Supervisor should be strengthened to allow it to issue binding regulations and to intervene in banks based on the results of inspections. Although in the past universal banking was not allowed, many financial institutions *de facto* operated in this way. Hungarian legislation defines holdings in such a manner that banks can escape from consolidated supervision by transferring some activities to a non-bank subsidiary. At the beginning of 1999, Hungary adopted full universal banking, as required by EU directives. Though in Hungary the banking and capital market agencies work under one common chief executive, integration of these two areas is not fully effective. There are also three different agencies for insurance, pension funds, and asset managers, despite strong overlaps in the ownership and control of such institutions. One option to improve coordination would be to create a capital markets council comprising the chief executives of the agencies supervising the capital markets, and ensuring that the different supervising agencies are legally empowered to share information. Another option would be to combine insurance and pension supervision as an interim step toward more integrated supervision.

In the banking, insurance, and brokerage industries, there are too many small and weak firms. In the insurance industry, a substantial number of firms, most of them mutuals, are too small to achieve adequate economies of scale and risk management. In the banking industry, small and medium-sized banks may not be able to face the increasing competition in the industry for deposits and loans, and further consolidation cannot be ruled out. In the brokerage industry, some small brokers lack appropriate information technology and risk management systems, and their safeguards of clients' assets have been questionable. A policy of higher capital requirements would lead to mergers of these small units and would help reduce institutional risk in the market.

Hungary will also need to change certain aspects of laws and regulations regarding the financial system, to be in conformity with EU legislation. These include the treatment of foreign branches, ceilings on deposit insurance, cross-border trade in financial services, capital adequacy, and regulation of capital movements. Despite the challenges that remain, Hungary has a strong track record in financial sector reform; and in terms of laws, regulations, and institutional strength, it will soon be ready for the country's entry into the EU.

Continuing to Facilitate Labor Market Adjustment

The Hungarian labor market has adjusted to the new economic environment and has achieved substantial gains in productivity. The rapid decline of the labor force share in agriculture and its rise in the service sector, the substantial reallocation of labor in manufacturing toward newly established private firms, and the sharp increase in the return to skills all support this interpretation. Data also show that labor productivity increased dramatically in the manufacturing sector. In five years between 1992 and 1997, real productivity more than doubled. This accomplishment was essentially due to the performance of enterprises with foreign owners and to the increasing proportion of workers in those enterprises. Hungary thus enters the pre-accession stage under favorable conditions and seems well positioned to cope with competitive pressures in Europe's Single Market. On the legal side, harmonization of the regulatory framework with the *acquis communautaire* is also fairly advanced.

Notwithstanding the gains achieved thus far, successful integration into the EU will require continued productivity increases and job creation. In 1996, labor productivity in manufacturing was still only about 30 percent that of Italy and Spain. Maintaining the recent pace of productivity increases is unlikely over the long term. The destruction of many jobs that was linked to the transition is now largely over; and the bulk of the sale of assets to foreign investors is now complete, as is the sizable reallocation of labor among sectors. From now on, changes are likely to be smaller, and further productivity gains are likely to be more difficult to achieve. Thus, achieving a substantial increase in the level of employment will be difficult. Currently, the employment rate of the population is somewhat below the EU average. This is due mainly to the employment rate of workers aged 55 or more—a rate almost half that of Germany or France. Workers hit by the process of job destruction and encouraged to retire early will not return to the labor force, but those who are young may want later retirement, and it will prove costly to keep them out of the labor force. Continuous job creation will be critical to keep the unemployment rate down.

Migration flows are not likely to ease the pressure on the labor market. A number of factors induce one to think that labor flows from Hungary to EU countries will probably remain small. First, the income differences between the EU and Hungary tend to be smaller than necessary to generate sizable migration. Second, there are no large Hungarian communities in EU countries that would be able to work as social networks, and thereby reduce the costs of insertion. Third, the EU countries themselves have unemployment problems. Finally, during the last wave of accession, the potential migration flows expected from Greece, Portugal, and Spain to EU members never materialized, despite the elimination of border controls.

Pursuing a strategy conducive to job creation and continuous adjustment to innovation is thus essential for Hungary. Although the current labor force, which is younger and more educated than in the past, will be a great help, the policy framework still matters. The first priority is to reduce the taxes on labor. This is necessary both to decrease the bias against labor and to help reduce the informal economy. Recent efforts at lowering social security contributions and at widening the tax base are steps in this direction. Nonetheless, they remain too modest. The financing of support to the long-term unemployed through general revenues should be considered. More importantly, the financing of the health care system should be reformed.

There is still room for improvement of programs that support the unemployed. The unemployment assistance system should be reviewed to avoid threshold effects and poverty traps. Work tests should be enforced to avoid a waste of scarce public resources. Efforts to evaluate and improve the effectiveness of active policies should also be continued, with special attention to the long-term unemployed. To reduce regional unemployment rate differentials—and reduce long-term unemployment—consideration should be given to other types of policies aimed at increasing labor force mobility, particularly policies that foster the development of public transportation and mortgage financing.

The Hungarian wage formation system seems to have provided adequate flexibility thus far. Returns to skills are increasing, and the minimum wage does not appear to be a binding constraint on employment. Attention, however, needs to focus on employment protection legislation. Firms seem to find ways to avoid the impact of some of the regulations on layoffs, and this comes at a social cost. Possible adverse effects on the employment of some population groups (women and older workers) need to be evaluated. If Hungary further improves its policy framework, and if it maintains incentives that facilitate the adjustment of the labor market to rapid changes in the economic environment, then it should continue to benefit from significant productivity increases. Such increases are crucial to ensure a smooth

integration into the European Union and to bridge the gap between the country's per capita income and that of current EU member countries.

Further Liberalizing Foreign Trade

Despite the very significant progress made in liberalizing trade and the extraordinary export performance during the past decade, two threats linger. First, a slippage in macroeconomic adjustment could trigger a crisis that might adversely affect export performance. This is, however, as discussed above, not a likely scenario. Second, there is the danger that, with attractiveness of free trade zones fading, FDI inflows will also decline, in turn harming export performance. Indeed, industrial free trade zones have been an important factor in attracting FDI to Hungary. However, with the emergence of a Pan-European system of cumulation of rules of origin, products from free trade zones lose preferential access to Pan-European markets if duties paid on imports of inputs are reimbursed. A move toward further trade liberalization would counteract this threat by fostering the continued competitiveness of Hungarian firms, both domestic and foreign owned. While Hungary has a liberal investment regime, conditions in market access are unnecessarily difficult for Most Favored Nation (MFN) suppliers. Hungary still adheres to quantitative restrictions on imports of some industrial products (the so-called global consumer quota), and its tariff rates are substantially higher than those of the EU. As a small country, Hungary could benefit enormously from unilateral liberalization.

The government should liberalize the MFN foreign trade regime for industrial products. This entails significantly reducing the scope of non-tariff measures and adopting EU MFN tariff rates on industrial products. By the standards of Central European transition economies, the NTB coverage of imports in Hungary (nearly 20 percent) is high. The global quota on consumer products should be abolished, since it contributes to higher import prices; it also invites lobbying efforts for protection. Furthermore, the government should review products subject to non-automatic licensing in exports and imports. Items that do not meet the test of environmental hazard, national security, or preservation of cultural values should be removed from the list. Tariff rates on industrial products are substantially higher in Hungary than in the EU. In order to ease adjustment to EU membership and improve economic growth performance during the pre-accession stage, Hungary should consider adopting the EU's (preferably post-Uruguay Round) MFN tariff schedule on industrial products. The average MFN tariff rate on industrial products would fall from 8 percent to around 4 percent. This measure has several advantages. It would level the playing field for MFN suppliers with conditions in EU markets. It is simple and easy to implement. There would be little, if any domestic opposition from import-competing sectors, since they already face formidable competitors from the EU. And finally, Hungary could simply lower applied rates to those of the EU without changing statutory and binding rates, and would not need to notify formally the WTO.

1. SUSTAINING GROWTH AND GAINING MEMBERSHIP IN THE EUROPEAN UNION

INTRODUCTION

Hungary's economic performance improved dramatically in the second half of the 1990s as a result of strong stabilization measures and deep structural reforms. During this period, Hungary was able to move from economic stagnation to strong growth, while also dramatically improving its external accounts. Today, Hungary is regarded as a top performer among transitional countries, and has regained access to foreign finance at very favorable rates despite the current turmoil affecting international capital markets. Hungary is also regarded as one of the strongest candidates for accession to the European Union (EU).

The country's challenge now is to consolidate its stabilization gains and finalize its structural reforms so that the recovery can be sustained for a long period of time. These objectives are well within the purview of Hungary's policymakers. In the macroeconomic area, policymakers must ensure that the investment expansion which has been driving economic recovery, and which is also building future growth potential, is not interrupted by a reemergence of external imbalances, due to either a less favorable environment or to excessive Government and private consumption at home. Indeed, according to the analysis in this report, maintaining the pace of investment without causing excessive current account deficits will require some additional fiscal adjustments over the medium term.

In the structural area, policymakers need not only to successfully complete key ongoing reform programs, such as the pension reform; but also to design and implement reforms in other key areas, such as the health system and local government finance. They also need to refine the regulatory and institutional framework in other structural areas, so as to achieve full compliance with EU directives and ensure a smooth and successful entry into the single EU market.

This first chapter of the report provides an overview of Hungary's economy and the main challenges facing policymakers on the road to EU accession, and is structured as follows. The second section reviews Hungary's macroeconomic performance in the 1990s, focusing on the stabilization and recovery that took place in the second half of the decade. The third section examines the causes of the recent deterioration in the current account, as well as the Government's policy response to the turmoil in international capital markets. The fourth section examines the process of achieving EU membership and convergence to EU income levels. Finally, the fifth section proposes a macroeconomic framework needed for sustained growth, and sets the stage for the rest of the report.

STABILIZATION AND RECOVERY IN THE SECOND HALF OF THE 1990S

Unsustainable Recovery in the First Half of the 1990s

Hungary experienced a deep recession in the early stages of its transition, as indicated by a 20 percent drop in GDP between 1990 and 1993. All other transition economies in Eastern Europe also experienced a similar early recession, which originated primarily from the collapse of exports under

Council of Mutual Economic Assistance (CMEA) trade arrangements as a result of, *inter alia*, the liberalization of prices and foreign trade and reductions in subsidies. Together with most of these other economies, Hungary began to recover from its early recession in 1993-94 (see Table 1.1). However, while the other economies were able to consolidate their recovery in the following years, Hungary experienced a sharp slowdown in economic activity. In the middle of the decade (1995 and 1996), Hungary appeared to have the poorest macroeconomic performance among all Central and Eastern European (CEE) countries, as indicated by the highest rates of inflation and the lowest rates of output growth (Table 1.1).

Table 1.1: Inflation and Growth in Selected CEE Countries, 1993-98

	1993	1994	1995	1996	1997	1998	1999 ¹
Inflation (average CPI, in percent per year)							
Hungary	22.5	18.8	28.2	23.6	18.3	14.3	9.0
Czech Republic	20.8	10.1	9.1	8.8	8.5	10.7	2.2
Poland	35.3	32.2	27.8	19.9	14.8	11.8	6.8
Slovak Republic	23.2	13.4	9.9	5.8	6.2	6.7	11.5
Slovenia	32.9	21.0	13.5	9.9	8.4	7.9	8.0
Real GDP growth (in percent per year)							
Hungary	-0.6	2.9	1.5	1.3	4.6	5.1	4.0
Czech Republic	0.6	2.7	6.4	3.9	1.0	-2.7	-1.0
Poland	3.8	5.2	7.0	6.1	6.9	4.8	4.0
Slovak Republic	-3.7	4.9	6.9	6.6	6.5	4.4	1.5
Slovenia	2.8	5.3	4.1	3.1	3.8	3.9	3.8

¹ Staff projections.

Source: Central statistical offices of the respective countries.

The Hungarian output recovery was interrupted by the emergence of extremely large external imbalances, as indicated by current account deficits of nearly 10 percent of GDP in 1993 and 1994, and by a significant increase in the external debt (Table 1.2 and Figure 1.1). These severe external imbalances were caused primarily by fiscal imbalances of the same order of magnitude (Table 1.2 and Figure 1.1), although the real appreciation of the forint and other factors also played a role.¹ The country suffered a sharp loss in creditworthiness, caused not only by these large imbalances, but also by the perception that privatization and other important structural reforms had stalled. By early 1995, Hungary was paying very high spreads in its external borrowings (more than 500 basis points above LIBOR).

Stabilization and Acceleration of Structural Reforms in the Mid-1990s

Faced with the prospect of a balance of payments crisis, the Government implemented a drastic stabilization program in March 1995, while also accelerating the structural reforms initiated in the early 1990s. The program included a sharp fiscal adjustment, a 9 percent devaluation of the forint followed by a preannounced crawling peg, and a very rigid wage policy. The extent of fiscal support for the program is revealed by the sharp decline in the general deficit—from 8.4 percent of GDP in 1994 to 3 percent in 1996 (excluding privatization revenues). This decline was made possible by an impressive reduction in fiscal expenditures—by 10 percent of GDP in the same period (Table 1.2).²

¹ See World Bank (1995), *Country Economic Memorandum: Hungary: Structural Reforms for Sustainable Growth*.

² These data were provided by the Ministry of Finance and may include double counting in the consolidation of Government accounts. Since this double counting is likely to have been reduced each year, these figures may overstate the overall reduction in expenditures and revenues.

Table 1.2: Selected Economic Indicators, 1993-98

	1993	1994	1995	1996	1997	1998
Real Sector						
(percent change)						
Real GDP	-0.6	2.9	1.5	1.3	4.6	5.1
Exports of goods and services (real)	-10.1	13.7	13.4	7.4	26.4	16.3
Imports of goods and services (real)	20.2	8.8	-0.7	5.7	25.5	22.5
Fixed investment (real)	2.0	12.5	-4.3	6.7	9.2	11.4
Private consumption (real)	1.9	-0.2	-7.1	-2.7	1.7	3.8
Average CPI	22.5	18.8	28.2	23.6	18.3	14.3
Gross wage growth (real)	-0.5	5.1	-8.9	-2.6	3.4	4.4
Real effective exchange rate (unit labor cost)	4.3	7.3	19.4	8.6	2.7	8.5
Unemployment rate (end of period)	12.6	10.9	10.9	10.7	10.4	9.1
(in percent of GDP)						
Exports of goods and services	26.4	28.9	37.3	38.9	45.5	49.8
Imports of goods and services	34.6	35.4	38.5	39.9	46.0	52.3
Fixed investment	18.9	20.1	20.0	21.4	22.1	23.2
General Government						
Overall balance (excl. privatization)	-6.6	-8.4	-6.4	-3.0	-4.8	-4.7
Overall balance (incl. privatization)	-6.0	-7.5	-3.2	0.8	-1.8	-4.4
Primary balance (excl. privatization)	-2.7	-2.2	2.2	3.7	2.7	1.6
Expenditures	60.8	60.4	54.3	49.0	49.2	47.1
Public debt	90.4	88.2	86.4	72.8	63.9	60.2
External Accounts						
Trade balance	-8.4	-8.8	-5.5	-5.9	-3.8	-4.4
Current account balance	-9.0	-9.5	-5.3	-3.7	-2.1	-4.8
Foreign direct investment	6.0	2.8	10.0	4.4	3.6	3.0
Gross external debt	63.7	68.4	70.9	61.0	51.9	56.3
Net external debt	38.7	45.4	36.6	31.4	24.4	26.0

Sources: Ministry of Finance, National Bank of Hungary, Central Statistical Office, and staff estimates.

Fiscal management has remained prudent in more recent years. While there was some loosening of fiscal policy in 1997 and 1998, as indicated by the decline in the primary surplus and increase in the overall deficit, this loosening was smaller than it may appear. This is because the worsening of the fiscal indicators reflects, in part, the absorption of the quasi-fiscal deficit of the National Bank of Hungary (NBH) (a deficit that already existed, but was not explicitly computed),³ and the revenue losses from the pension reform, which are neutral in terms of national savings (Chapter 2). The payment in 1997 of some interest that had fallen due in 1996 also distorted the deficit figures somewhat—artificially reducing the cash deficit in 1996 and increasing it in 1997 (Chapter 2).

³ See 1995 Country Economic Memorandum, *ibid.*

The 9 percent devaluation of the forint provided an initial gain in competitiveness, although it also contributed to a temporary increase in inflation. The initial devaluation was followed, however, by preannounced and declining monthly devaluations of the forint vis-à-vis a currency basket, which placed inflation firmly on a downward path. Finally, the use of wage policy as an instrument of stabilization is revealed by the sharp decline in real gross wages in 1995 and 1996—by 9 and 3 percent, respectively. The low increase in nominal wages not only provided a second nominal anchor, but also improved enterprise profitability and competitiveness, creating the conditions for the subsequent expansion of investment and exports.

The stabilization package of March 1995 was accompanied by an impressive acceleration of structural reforms. During the 1995-98 period, Hungary implemented a comprehensive program of enterprise and bank reforms that included the privatization of all major utilities as well as the restructuring and privatization of all major banks (chapters 4 and 5). Hungary was also the first country in the region to implement a systemic pension reform, involving reforms to the public pay-as-you-go (PAYG) scheme as well as the introduction of fully funded private pillar (Chapter 2). These and other reforms restored the country's image as a pioneer in structural reforms among transition countries, and generated a large increase in the volume of foreign direct investment (FDI) and heightened the prospects for major efficiency gains.

Impressive Performance in the Second Half of the 1990s

Indeed, the program of stabilization and structural reforms initiated in 1995 has yielded impressive results. As shown in Table 1.2 and Figure 1.1, the combination of the preannounced and declining crawl, the restrictive wage policy, and tighter fiscal policies has resulted in a steady decline in the rate of inflation to 10 percent – 11 percent in 1999. Although the decelerating devaluations of the nominal exchange rate resulted in some appreciation of the real exchange rate, this real appreciation has been relatively moderate when measured by the relative consumer and producer price indices (CPIs and PPIs). Moreover, the real exchange rate, when measured by relative real unit labor costs, depreciated further in the second half of the 1990s, as increases in labor productivity outpaced increases in real wages by a significant margin.

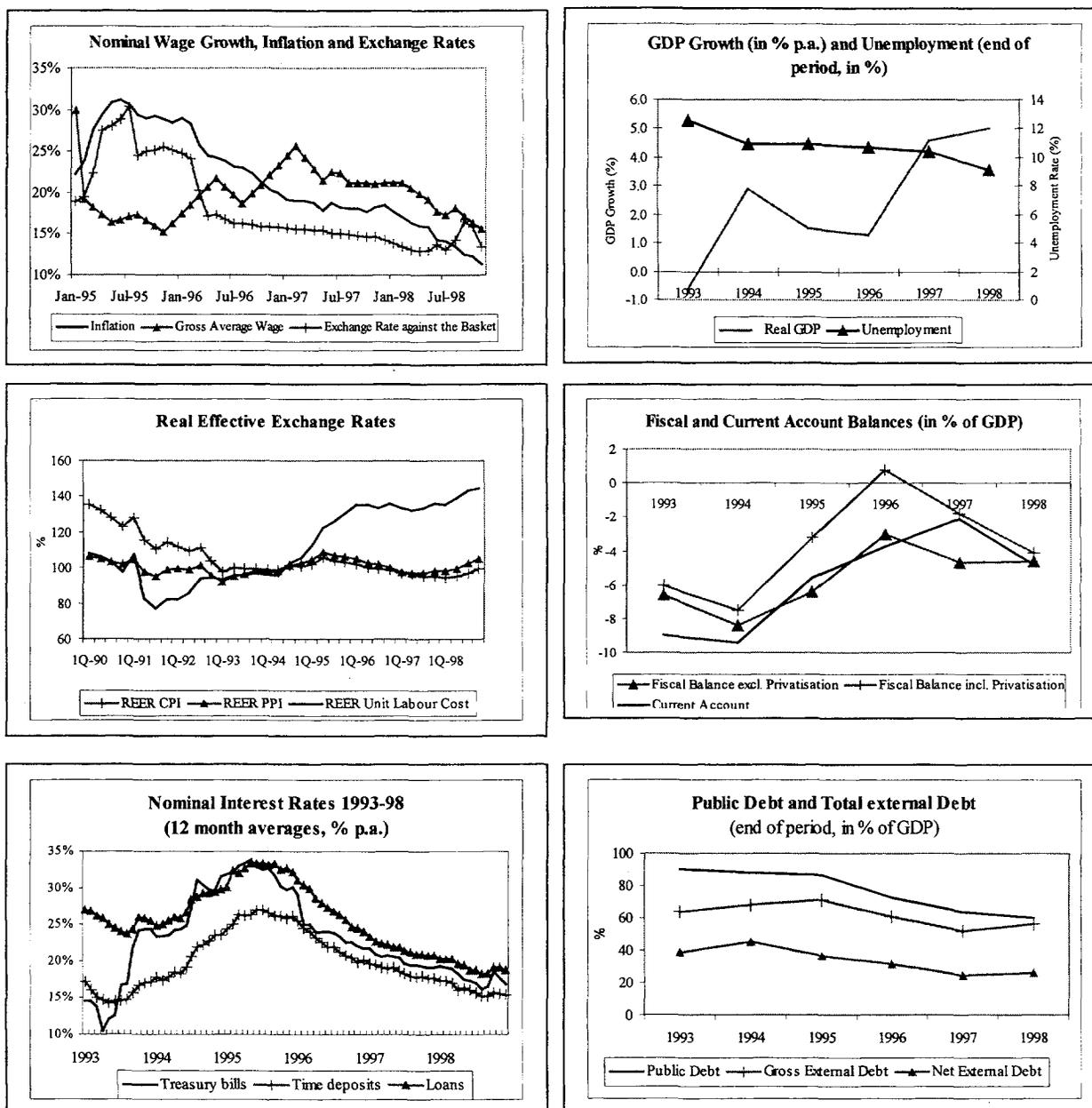
The fiscal adjustment and the restrictive wage policy caused a temporary slowdown in the GDP growth rate in 1995-96. As noted above, this was the period when Hungary grew much less than its neighbors did. However, growth accelerated in 1997, driven by strong increases in exports and fixed investment (Table 1.2). Unlike the early 1990s, the output recovery was accompanied by an improvement in the external accounts, as indicated by the sharp decline in the current account deficit (from 9 to 2 percent of GDP between 1994 and 1997), and by the decline in Hungary's net external debt (from 45 percent of GDP in 1994 to 25 percent in 1998).

The decline in Hungary's levels of indebtedness resulted not only from the decline in the current account deficit, but also from the large flows of FDI in the second half of the 1990s. These flows were actually larger than the current account deficits for three consecutive years (1995-97), and involved both greenfield investments on the order of 2-3 percent of GDP per year, and large privatization transactions (Figure 1.2). The accumulated stock of FDI amounted to US\$16 billion⁴ in late 1998—the equivalent of one third of GDP (the largest in the region). This increase in FDI has contributed not only to a sharp drop in Hungary's external indebtedness, but also to a greater penetration in markets abroad and to the growth of Hungary's exports.

⁴ This figure excludes inter-company loans.

Hungary entered 1998 with a much healthier economy and seemed to be finally meeting the conditions for sustained growth. The recovery was driven by exports and investment, and was underpinned by important structural reforms. The growth of real wages and pensions resulted in a recovery of private consumption after two years of compression, but the growth of real wages was kept below productivity growth, and the increase in private consumption did not outpace GDP growth.

Figure 1.1: Selected Economic Indicators



Sources: Ministry of Finance, National Bank of Hungary, and Central Statistical Office.

Although the fiscal situation in 1998 still needed careful monitoring, it did not seem to cause any strong crowding out of private investment. On the contrary, the fiscal deficit did not seem to be pressing the real exchange rate or causing problems for export performance, as indicated by the reduction of relative real unit labor costs. Public debt had fallen drastically (from 90 to 60 percent of GDP), as a result

of the smaller deficits and the large revenues from privatization. Moreover, the share of the private sector in domestic credits had increased steadily, and nominal and real lending rates had fallen (Figure 1.1 and Chapter 4.) All in all, there seemed to be ample room for further expansion in output, without excessive pressure on the current account.

RECENT PRESSURES ON THE EXTERNAL ACCOUNTS

Trade and Current Account Developments in 1998

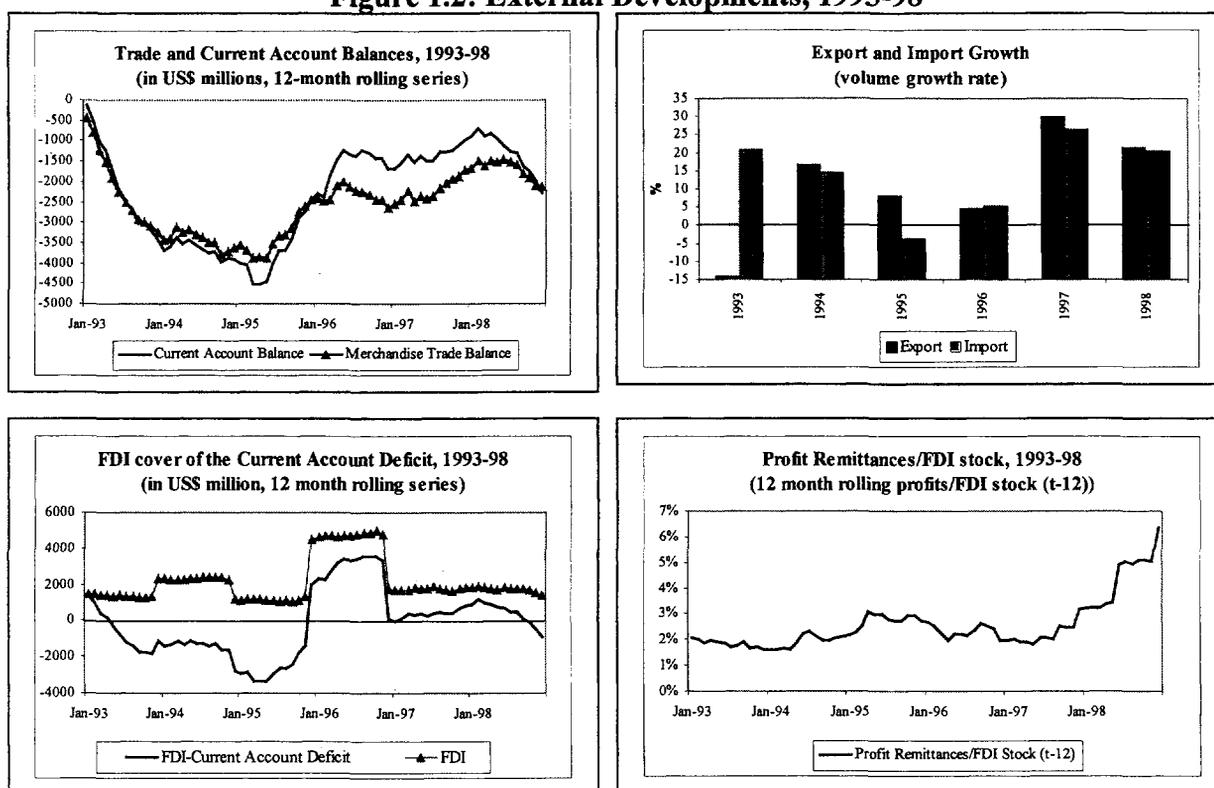
After three years of steady decline, the current account deficit more than doubled between 1997 and 1998 (from 2.1 to 4.8 percent of GDP). The increase in the trade account deficit amounted to 0.6 percent of GDP, or only one fourth of the total increase in the current deficit. More important were the decrease in the surplus of services (1.1 percent of GDP) and the increase in the deficit of income (1.1 percent of GDP), the latter largely the result of a nearly US\$500 million increase in net profit remittances. The increase in the current account deficit and the decline in the flows of FDI (to a level insufficient to cover the current account deficit) resulted in an increase in gross and net external debts—both in US dollars and as a share of GDP—after three consecutive years of decline.

The worsening of the current deficit after three years of improvement has raised the issue of whether the larger deficit is permanent or temporary, and whether it is of such size as to merit policy adjustments. The worsening of the trade deficit does not seem excessive, although the slowdown in export growth in 1998 (Figure 1.2) begs some explanation. To some extent, it is not surprising that export growth should slow from its torrid pace of 1997 (about 30 percent in volume growth), since this unusually fast rate was the result of substantial greenfield FDI coming on stream after being initiated earlier in the decade. Since many exports rely on imported intermediate and investment goods, import growth also accelerated in 1997 and slowed down in 1998, although the continuing expansion of fixed investment and the renewed growth of private consumption also affected imports and the trade account. The collapse of the export markets of Russia and the countries of the former Soviet Union (FSU) in the second half of 1998 also contributed to the overall decline in export growth, and a fast recovery of these markets should not be expected. However, the impact of the Russia crisis on Hungary's trade performance should not be exaggerated, as these exports accounted for only a small share of total exports (4 percent) before 1998. Overall, the increase in the trade deficit in 1998 does not seem to be a major cause for concern.

In contrast, the increase in remitted profits was so abrupt and of such magnitude as to merit further analysis. As shown in Figure 1.2, the shift in the current account preceded the shift in the trade account and became even more pronounced at the end of the year (both series are constructed on a 12-month rolling basis). This outcome was due in large part to very large profit remittances in June and December by a few large companies. Remittances of profits tend to peak in these two months, especially in December, but the size of the transfers was unusually large, driving the ratio of remitted profits to the (lagged) stock of FDI from 2 percent (the average in 1993-97) to 6 percent at the end of 1998 (Figure 1.2).

There are several possible explanations for this sudden increase in remitted profits. These include the unanticipated remittance of profits motivated by fears of a devaluation of the forint; and the strategic reassessment of the position of Hungary's enterprises vis-à-vis the markets of the FSU after the Russia crisis (see next section). However, the increase in profit remittances may also reflect a convergence of remitted profits from very low initial levels to their long-run equilibrium levels—foreign investors start remitting more profits after an initial period of operational and financial consolidation of their subsidiaries.

Figure 1.2: External Developments, 1993-98



Sources: National Bank of Hungary and staff estimates.

It may be possible that the abrupt increase in profit remittances in 1998 was primarily motivated by particular circumstances and that such remittances will decrease in 1999. At the same time, there is no reason to believe that the level of remitted profits will be significantly smaller in the medium run. On the contrary, the ratio of remitted profits to the stock of FDI in a sample of eight representative emerging countries has been 5 to 8 percent (Table 1.3). The average ratio has recently declined to around 5 percent, but this has been due to very large increases in FDI in recent years (the remittance of profits follows changes in the stock of FDI, with a lag). These results indicate that it would not be prudent to construct a medium-run framework based on the assumption of low profit remittances. Instead, Hungarian policymakers should calibrate medium-run policies assuming that remitted profits will eventually stabilize around 5 percent of the FDI stock.⁵

Table 1.3: Ratio of Profit Remittances to the Stock of FDI in Selected Countries, 1993-97
(percent)

	1993	1994	1995	1996	1997
All countries	7.6	7.3	6.8	6.5	5.5
Latin American countries	8.1	8.1	7.0	6.6	5.8
Asian Countries and Turkey	7.1	6.6	6.5	6.3	5.1

Note: Profit remittances in year (t) overestimated stock at the end of year (t - 1)

Sample: Argentina, Brazil, Chile, Indonesia, Republic of Korea, Mexico, Thailand, Turkey.

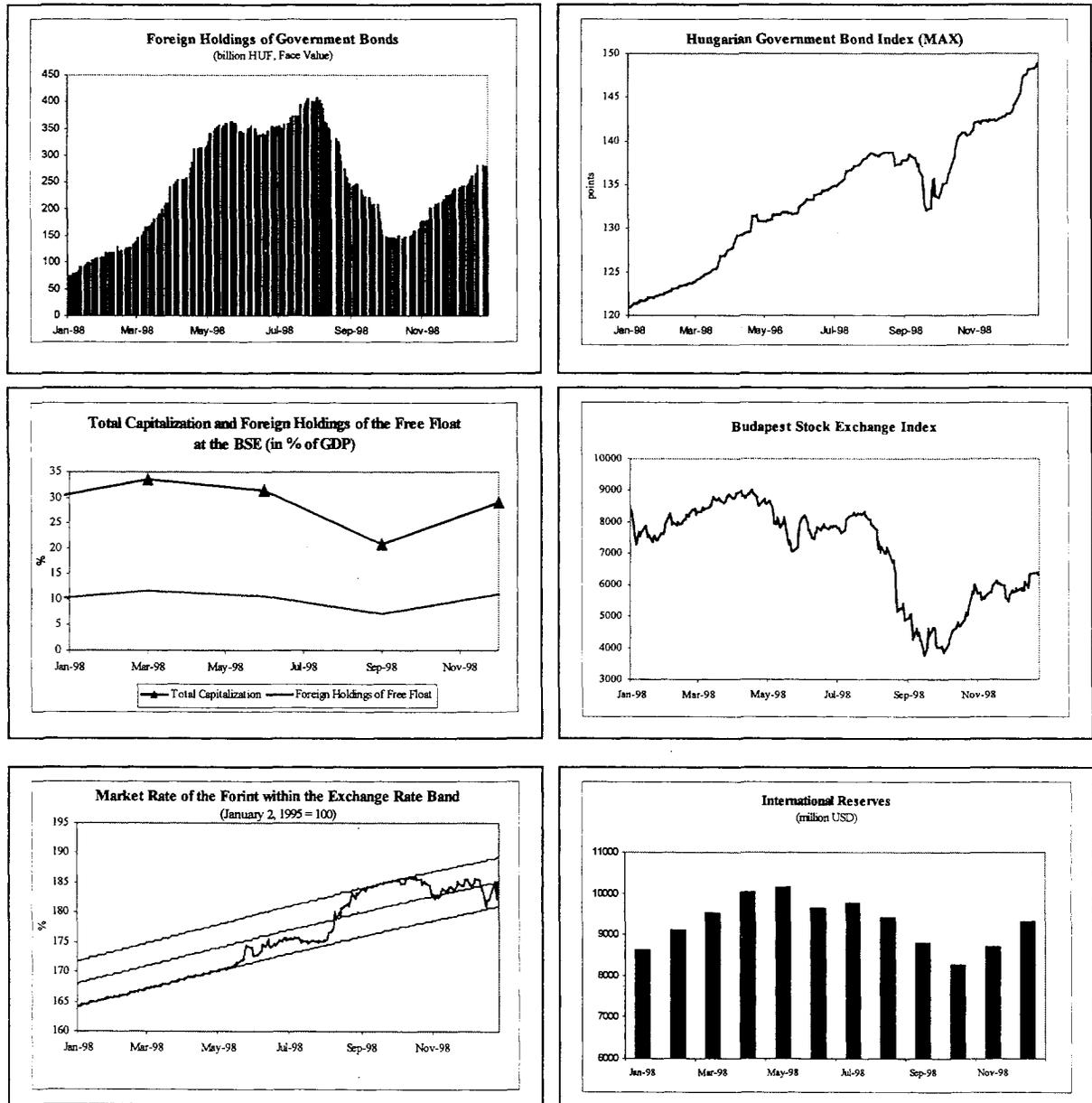
Source: International Financial Statistics (IFS).

⁵ It is reasonable to assume that the average return on FDI will be at least 10-12 percent (8 percent for utilities and higher for manufacturing). Assuming an average payout ratio of 50 percent yields a 5 to 6 percent ratio of remitted profits.

Fighting the Turmoil in World Capital Markets

The Russia crisis in August-September 1998 did not have large direct effects on Hungary, as its exports to Russia amounted to less than 4 percent of total exports. However, Hungary was affected by the general turmoil in international financial markets that resulted from the Russia crisis. In the two months following the crisis, yields on Government bonds increased by 500 basis points, the Budapest Stock Exchange index (BUX) declined by more than 50 percent, and the exchange rate fell to the depreciation edge of its (albeit rather narrow) band (Figure 1.3).

Figure 1.3: Impact of the 1998 International Crisis on the Financial Market



Sources: National Bank of Hungary, Budapest Stock Exchange, and Government Debt Management Office.

Since 1995, foreign investors have played an increasingly large role in Hungary's securities market. Foreign portfolio flows amounted to 2 to 3 percent of GDP per year in the second half of the 1990s, thereby keeping the forint at the appreciation limit of its fluctuation band (Figure 1.3), and forcing the NBH to undertake costly sterilization efforts. By mid-1998, foreign portfolio investors held the equivalent of 4 percent of GDP in Government securities (15 percent of the total amount traded), and the equivalent of 10 percent of GDP in equity (approximately two thirds of the free float). These inflows significantly contributed to reducing the Government's borrowing costs (Figure 1.1 and Chapter 4), and to increasing liquidity in the equity market (foreign institutional investors account for approximately two thirds of turnover).

The Russia crisis triggered large portfolio shifts. As shown in Figure 1.3, foreigners sold more than US\$1 billion (HUF 250) worth of Government bonds in August and September, driving down bond prices and contributing to both the weakening of the forint and to the drop in foreign exchange reserves (official reserves fell from US\$9.8 billion to US\$8.3 billion between July and October). The decline in equity prices was also substantial, as indicated by the 50 percent drop in the Budapest Stock Exchange index. Unlike the Government bond market, however, the sale of equities apparently did not have a significant impact on the country's reserves. While many foreign investors sold Hungarian shares, others were willing to buy these shares at the reduced prices, resulting in a negligible net capital outflow from the equity market.

In response to the weakening of the forint, the NBH announced in August and September its intention to reduce the rate of crawl in October; the central bank increased its one-month reverse-repo rate by 100 basis points and intervened in the foreign exchange market to demonstrate its support of the currency. These measures were backed up by official statements from the NBH, the Ministry of Finance, and the Ministry of the Economy. These statements expressed confidence in the country's economic fundamentals, suggested the possibility of a further reduction in the rate of crawl in January, and announced the main fiscal parameters for 1999.

By the end of October 1998, the crisis had subsided, as indicated by the strengthening of the forint as well as the recovery of the bond and equity markets (Figure 1.3). By the end of January 1999, the forint had strengthened to the mid-point of its band, the BUX had recovered about half of its crisis decline, and bond yields had fallen by more than 800 basis points from their crisis peak, although real interest rates were still higher than their pre-crisis levels (Chapter 4). In December, Standard and Poors further upgraded the rating of Hungary's public debt. In January, the Government's first 10-year domestic bond was oversubscribed, and Hungary became the first Central European country to issue a Eurobond denominated in euros, with a spread of only 85 basis points over German Government bonds.

The developments in 1998 show that, while foreign portfolio inflows have contributed significantly to the development of Hungary's capital market, they can also prove disruptive in periods of international financial turmoil. Although Hungary weathered the crisis very well, the fact remains that its financial markets were subject to substantial volatility despite relatively sound economic fundamentals, despite the low share of Hungarian exports to Russia, and despite a robust banking system with limited exposure to Russia. These events highlight the need to continue prudent macroeconomic policies in this era of mercurial international investor sentiment.

EU MEMBERSHIP AND INCOME CONVERGENCE

The Process of Achieving EU Membership

Hungary presented its membership application to the EU in April of 1994. Prior to this, Hungary and the EU had signed an association agreement (the Europe Agreement) in 1991, which became

effective in 1994. This agreement provided the legal basis for relations between Hungary and the EU. Its aim was to provide a framework for political dialogue, for technical and financial assistance that will serve to support Hungary's integration into the EU, and for promoting the expansion of trade and economic relations between the parties.

At the Copenhagen Summit of 1993, the heads of the Governments of the EU decided that the associated countries of Central and Eastern Europe could become members of the EU as soon as they were able to assume the obligations of membership. These obligations include: (i) the stability of institutions guaranteeing democracy, the rule of law, and human rights; (ii) a functioning market economy; and (iii) the ability to carry out the other obligations of membership, including full compliance with the *acquis communautaire*—the large body of EU legislation. The European Commission's White Paper of 1995 provided further guidance on the accession process, by identifying the key measures in each sector of EU legislation, and by suggesting the sequence in which parallel legislation in the EU accession countries should be tackled adopted.

In July 1997, the European Commission completed an evaluation of the membership applications of 10 candidate countries, and selected 5 countries for early accession: Hungary, the Czech Republic, Estonia, Poland, and Slovenia. In the case of Hungary, the Commission recognized its achievements in the second half of the 1990s in the areas of macroeconomic management and structural reforms. Formal and detailed negotiations assessing Hungary's level of compliance with EU legislation began in the spring of 1998. Although the process of harmonization with the large body of EU legislation is likely to take a few more years, it is expected that membership would take place in the 2002-2004 period.

Relationship Between EU Membership and Income Convergence

One of the most important benefits to Hungary of economic integration with the EU is the possibility of expanding its growth potential and increasing the welfare of its population. There are potentially three interrelated ways that economic integration can affect growth: (i) faster accumulation of physical and human capital; (ii) faster absorption of technology, and (iii) improvement in the overall policy framework.⁶ In particular, joining the EU involves adopting a large body of laws—the *acquis communautaire*—designed to ensure well-defined property rights, rules of competition, and state aid policy. Moreover, the EU promotes competition and the efficient allocation of resources through the four freedoms (trade, services, capital, and labor). Adopting the *acquis* usually implies an improvement in the policy framework for the new member, and also makes the country more stable and therefore less risky, thus contributing to an improvement in the investment climate. On the technology side, integration brings the benefits of faster spillovers of knowledge through several channels, including more FDI.

The growth effects of economic integration with the EU can be illustrated through the experience of Ireland, Greece, Portugal and Spain.⁷ As shown in Table 1.4, Ireland's income per capita started converging slowly with that of other EU countries soon after accession, but only accelerated in the mid-1990s, 20 years after entry. Spain and Portugal have shown a steady pattern of convergence, although Portugal has converged at a faster rate, in part because it started from a lower initial base. Greece's income gap with the EU countries actually widened after entry and, although it started catching up in the 1990s, its relative position has not improved since the date of membership. Except for Greece, these countries experienced investment booms upon accession to the EU.⁸ The booms were driven primarily by

⁶ Baldwin, R and E. Seghezza (1996), *Growth and European Integration: Towards an Empirical Assessment*.

⁷ Ireland joined the EU in 1973, Greece in 1981, and Spain and Portugal in 1986.

⁸ Baldwin, J. Francois and R. Portes (1997), "The Costs and Benefits of Eastern Enlargement: Impact on the EU and Central Europe."

the reduced political risk, by the restructuring of the capital stock in response to new trade and production patterns, and by the introduction of new technologies accompanied by increased FDI. The opening of the capital account also played an important role—for these countries, entry was generally accompanied by an increase in capital inflows.

Table 1.4: Income Convergence with the EU of Ireland, Greece, Spain, and Portugal

	1960	1973	1981	1986	1990	1995	1998	Index 1998 ¹
	GDP per capita at purchasing power parity (EU average=100)							
Ireland (1973)	61	<u>59</u>	65	64	74	96	108	184.4
Greece (1981)	44	71	<u>69</u>	63	58	66	68	98.8
Portugal (1986)	40	58	<u>56</u>	<u>54</u>	61	71	72	132.9
Spain (1986)	57	75	70	<u>70</u>	77	79	81	115.9

¹The index measures the improvement between the year of accession and 1998 of each country's income per capita vis-à-vis the EU average.

Source: European Commission.

The reduction in the income gap of 3 out of the 4 middle-income countries that joined the EU in the enlargement of the 1970s and the 1980s was to be expected. Not only do low-income countries tend to grow faster than high-income countries (because of diminishing returns to capital), but the adoption of EU rules and regulations forced an acceleration of structural changes and promoted growth. Indeed, implementing the *acquis* has proven to be a beneficial, albeit demanding task of the accession process, requiring not only the modification of a number of laws and regulations in many sectors of the economy, but also modernization of the administrative and judicial capacity of the state.

The impact of accession on growth, however, has not been automatic or equal across countries. Although integration into the EU's large common market generally increases competitive pressures and improves efficiency, it still leaves a large scope for differences among member states. Gains from economic integration have been contingent on the policy framework and reforms implemented by the individual countries, and this has played a key role in their relative performance. The weaker commitment to reform is the main reason why the performance of Greece has lagged.⁹

The fact that growth performance can be substantially influenced by the policy environment has been well documented in the recent growth literature.¹⁰ Empirical studies have identified key features that distinguish countries with high and low rates of economic growth. The general conclusions are that long-run growth is predominantly determined by initial income conditions, by the pace of physical capital accumulation (as measured by the ratio of investment to GDP), by the pace of human capital accumulation (comprising the growth of the labor force and education standards), and by the quality of the policy framework. We use these criteria to assess Hungary's future growth rates relative to those of the EU under different policy scenarios (the methodology is described in more detail in Annex 1).¹¹

⁹ Baldwin and Seghezza (1996) found that, for three period averages (1971-90, 1971-74, and 1975-90), European countries experienced higher total factor productivity growth than the sample average that included non-European countries. Another important finding is that European countries that resisted deep integration had systematically worse productivity growth than EU members.

¹⁰ See Barro, R. (1997), *Determinants of Economic Growth, A Cross-Country Empirical Study*; and Barro, R and X. Sala-i-Martin (1995), *Economic Growth*.

¹¹ Hungary's growth rates are assessed using the estimation results of a growth model developed in Barbone L. and J. Zalduendo (1997), *EU Accession of Central and Eastern Europe: Bridging the Income Gap*. This growth model is an extension of Sachs, J. and A. Wagner (1996), *Achieving Rapid Growth in the Transition Economies of Central Europe*.

Hungary's Initial Conditions on the Eve of EU Accession

Hungary is approaching the period of EU accession with a per capita income approximately 49 percent of the EU average on a purchasing power parity (PPP) basis. Hungary has the lowest fertility rate among all accession countries, and one of the highest education standards. The ratio of fixed investment to GDP in 1998 was 23.2 percent. This is lower than the average ratio for middle income countries (25 percent in 1997¹²), and for all candidates for EU accession except Poland. Finally, the quality of the policy framework, while below the EU average¹³, is still adequate to support integration and growth. As shown in Table 1.5, if these conditions were maintained, Hungary would have an average annual growth rate almost 1.5 percent above the EU average, and take 24 years to converge to 75 percent and 57 years to converge to 100 percent of the average EU income level.¹⁴ The reason Hungary would converge, even without further increases in investment and in efficiency, is that it is starting from a much lower base. As noted above, lower-income countries tend to grow faster than high-income countries because return on capital is higher in the former group (Hungary also has an investment ratio slightly higher than the EU average). At the same time, the results also show that it would take a long time for convergence to occur.

If the levels of fixed investment were, however, permanently raised to 28 percent of GDP (the Government's medium-run target), Hungary would be able to grow by about 2.2 percent per year above the EU average. That is, an increase in fixed investment by roughly 5 percent of GDP would result in an increase in annual growth of around 0.7 percent of GDP. This increase may not seem striking, but it would reduce the period of convergence to 41 years. Increasing the investment ratio and also improving the quality of the policy framework to EU levels would increase Hungary's average annual growth rate to 3.7 percent above the EU average, and would dramatically reduce the period of convergence to only 22 years.

These results are based on the average growth experience of OECD countries over the last three decades. Using these results to project the future growth of Hungary and other candidate countries must include all the appropriate caveats. Nonetheless, they provide some indication of the relative impact of different policy measures. In particular, the results show that making an effort to increase investment pays off in the long run, but that ensuring a sound policy framework may be even more important for growth performance and the speed of convergence.

Table 1.5: Years to Close Income Gap with the EU under Different Scenarios

Convergence to:	I/GDP = 23.5 percent Policy index = 3.1	I/GDP = 28 percent Policy index = 3.1	I/GDP = 28 percent Policy index = 3.8 (EU average)
75 percent of EU15 average	24	19	12
100 percent of EU15 average	57	41	22

Note: I/GDP is the ratio of fixed investment to GDP.

Source: Staff estimates.

¹² *World Development Report 1998*.

¹³ The quality of Hungary's policy framework has been assessed using a standardized policy index developed by the Heritage Foundation (the Index of Economic Freedom, which has a scale of 0 to 5). The value for Hungary was estimated at 3.1 in 1996, compared to the EU average of 3.8.

¹⁴ If the EU continued to grow at 2 percent per year, this would imply an average annual growth rate for Hungary of 3.5 percent during the whole convergence period. Growth would be above 3.5 percent per year in the first years, and below this rate in the later stages.

Hungary has already made substantial progress in stabilizing and transforming its economy in recent years. These efforts have enabled a recovery of investment which had fallen to less than 19 percent of GDP in 1993; they have produced large and visible gains in productivity, and have resulted in a recovery of output and employment. The Government that was elected in May 1998 has set ambitious targets for the long run, including a further increase in fixed investment to 28 percent of GDP, and per capita income growth rates above 5 percent per year. If these results materialize, Hungary could converge to average EU income levels in about 25 years. It is important to stress that convergence is defined on a PPP basis, and does not take into account any appreciation of the real exchange rate.

These targets are within the reach of policymakers. The investment expansion is proceeding, and the modernization of infrastructure and the prospect of EU membership could very well lead investment to increase to targeted levels. The scope for further productivity gains is also large, as labor productivity still lags significantly behind EU levels in most sectors of the economy. However, some additional efforts may be required for this high-growth scenario to materialize, in both the macroeconomic and structural areas. In the macroeconomic area, it is essential to ensure that the investment expansion proceeds without generating imbalances in the current account. In the structural area, Hungary must deepen the reforms already implemented (e.g., banking sector reform, pension reform), and must make an effort to fully make its legislation compatible with that of the EU. Hungary must also tackle some remaining problems that are not strictly related to EU accession, but that could become an obstacle to further increases in efficiency and to the maintenance of macroeconomic equilibrium (e.g., reform of the health system).

ENSURING THE CONDITIONS FOR SUSTAINED GROWTH AND RAPID INCOME CONVERGENCE

Main Elements of a Sustainable High-Growth Strategy

Hungary's capacity to bridge the income gap with the EU depends not only on achieving higher output growth rates than the EU, but also on its ability to sustain these rates for long periods of time without generating macroeconomic imbalances. The recent international financial turmoil clearly shows the importance of avoiding large external imbalances, which pose a risk of disruption to foreign financing. Capital flows can contribute significantly to the development of domestic capital markets (as they have in the Hungarian case), but they can also prove disruptive in periods of international turmoil, even in countries that pursue sound economic policies, as Hungary has.

It would be prudent to target a reduction in the current account deficit to levels that would place external debt to GDP ratios on a slowly declining path. Assuming FDI flows are sustained at about 3 percent of GDP each year, this target could be achieved with a current account deficit of 4 percent of GDP.¹⁵ The Government of Hungary has adopted this as a reasonable target. Since the current account deficit in 1999 is likely to widen to about 5.2 percent of GDP (see below), this will require a moderate improvement of 1.2 percent of GDP. At the same time, the Government has laid out an ambitious program to further increase the ratio of fixed investment to GDP to 28 percent in the medium-run, from a likely 24.2 percent in 1999.

Together, these targets will require an increase in savings of 5.0 percent of GDP over the next 5 to 7 years. Part of the investment financing could be met through transfers from the EU—after accession, Hungary could possibly count on 2 percent of GDP in structural funds. Though transfers from the EU are not part of domestic savings, they can constitute an important source of non-debt investment financing. However, these funds would only materialize after 2002-2004, and their precise timing and magnitude

¹⁵ This assumes a moderate inflow of portfolio investment to the equity market to maintain the non-resident's share of the free float. Although this may prove to be a conservative estimate of future portfolio investment, a medium-run strategy should not rely excessively on these capital flows, given their volatility.

remains uncertain. In addition, there is a need to maintain investment expansion in the pre-accession period, while also keeping the external situation under control. This would require a pre-accession increase in savings of 3.0 percent of GDP.

The expansion of fixed investment in the pre-accession period could, in principle, be financed from private savings. However, it is highly unlikely that private savings would grow in the next few years to the extent necessary to finance the investment expansion and improve the current account at the same time. Although the ratios of private savings to disposable income and to GDP do tend to increase during the growth process, this increase is usually very gradual. In the particular case of Hungary, one must also take into account that real private consumption declined sharply in 1995 and 1996, as a result of the real wage compression during these years. It would be unreasonable to assume that private consumption would grow at rates well below GDP growth rates in the next few years.

These considerations reveal the need for some additional fiscal adjustment in order to ensure consistency between the Government's investment and current account targets. Moreover, the fiscal adjustment is best measured in terms of the primary and real (or operational) deficits, and should take into consideration the savings effect of the pension reform implemented in 1998. Changes in the nominal overall deficit do not provide an accurate indication of the contribution of fiscal policy to savings. The ongoing and projected decline in inflation will produce a decrease in the nominal overall deficit through lower nominal interest payments, but this decrease does not produce a corresponding increase in national savings (Chapter 2).

As explained in more detail in the next section and in Chapter 2, a prudent fiscal program would involve an increase in the primary surplus of around 1.5 percent of GDP over the next two years; that is, from 1.5 percent of GDP in 1999 to around 3 percent in 2001. The total contribution of fiscal policy to savings would amount to approximately 2.0 percent of GDP, taking into account the pension reform effect and the expected reduction in real interest payments (resulting primarily from some additional reduction in the ratio of public debt to GDP, but also from some reduction in real interest rates). This adjustment would allow investment to continue to expand concurrent with a reduction in the current account deficit. The failure to make an additional fiscal adjustment could force the NBH to tighten monetary policy in an effort to contain the current account deficit. This policy mix (tight money and relatively easy fiscal policy) would imply high interest rates, which would likely slow the growth of investment in the pre-accession period.

The proposed fiscal adjustment would not only contribute to a sustainable increase in investment and output, but also would facilitate a continued reduction in the rate of the crawl of the exchange rate. This would allow the inflation rate to fall toward EU levels, while reducing the risk of a real appreciation during the disinflation process. Maintaining a competitive exchange rate should be an essential part of Hungary's growth strategy, because the incentive to invest in a small, open economy depends in large part on the future capacity of enterprises to export and compete in foreign markets.

The fiscal adjustment would also enhance the credibility of the Government in the tripartite wage negotiations (usually conducted at the end of each year), and facilitate the conclusion of wage agreements involving declining nominal wage growth rates. Given the already high level of most tax rates in Hungary, the fiscal adjustment should be implemented primarily on the expenditure side of the budget. In fact, any progress that can be achieved in improving tax collection and broadening tax bases should be used as an opportunity to lower tax rates.

The Reform Scenario

The medium-term macroeconomic reform scenario (Table 1.6) assumes that the Government will make steady progress in approximating EU legislation, deepening the banking sector and pension

reforms, and tackling the remaining public sector reforms of the health system and local government finance. The scenario also assumes that the Government will increase the primary surplus to 3 percent of GDP by 2001 to make room for an increase in investment, concurrent with a reduction in the current account deficit. Together, this policy mix would provide the foundation for a sustained GDP growth of 5 percent per year in the context of macroeconomic equilibrium (or 5.3 percent per year on a per capita basis, given the negative growth of Hungary's population).

In 1999, slower growth in the EU (especially in Germany) is likely to lead to a reduction in Hungary's exports, which, together with the dampening effects of the Kosovo crisis, will slow Hungary's GDP growth to about 4 percent. Assuming no significant reversals in international energy and commodity prices, inflation (measured by the CPI) is likely to continue to fall, to below 10 percent. This combination of slower growth and lower inflation is likely to make the revenue targets of the 1999 budget unachievable, since these targets were based on assumptions of 5 percent GDP growth and 11 percent inflation. To meet the primary surplus target of 2 percent of GDP set in the 1999 budget, expenditures would need to be reigned in. While the authorities have already announced that the bulk of the extraordinary reserves built into the 1999 budget will not be spent, additional expenditure cuts would be necessary to ensure that the target is met. At the time of writing (July 1999), it appears that such steps will not be taken, and that the primary surplus will be 1.5 percent of GDP.

Lower than expected inflation is also likely to result in real wage growth of more than 4 percent in 1999. This is likely to lead to robust consumption and, together with an increase in investment, should result in a small increase in the current account deficit, to 5.2 percent of GDP. As a result, the ratio of gross and net external debt to GDP will increase again in 1999 for the second year in a row.

The scenario assumes that the primary surplus increases by 1.0 percent of GDP in 2000 and by a further 0.5 percent of GDP in 2001, and then held constant at 3 percent of GDP thereafter. This fiscal tightening should lead to a gradual reduction in the current account deficit to 4 percent of GDP. It is assumed in the current account projections that profit remittances will remain at about 5 percent of the lagged stock of FDI. As discussed above, this ratio will be higher than the average ratio in 1993-97, but lower than the ratio at end-1998, and also lower than the average ratio of a representative sample of middle-income countries.

Though the timing of Hungary's EU accession is still uncertain, it is assumed for purposes of this reform scenario that accession will take place in 2003. EU membership requires substantial and sustained increases in infrastructure investment, especially in sectors such as the environment, transport, and agriculture. It is assumed that investment will increase to 26 percent of GDP by 2002, on the eve of EU accession, and will increase further to 28 percent of GDP, as envisaged by the Government, after EU accession. The projected increase in investment in the pre-accession period is feasible, in a scenario of fiscal adjustment, macroeconomic equilibrium, and lower real interest rates, combined with the prospect of integration into a large common market.

As noted above, taken together, the current account and investment targets will require an increase in domestic savings of 3.0 percent of GDP during the pre-accession period (adopting 1999 as the base year). The additional increase in investment after 2002, amounting to 2 percent of GDP, is assumed to be primarily financed through the EU's structural funds.

While household savings can be expected to increase endogenously as a result of sustained high GDP growth rates, this is likely to be a slow process; it would be unrealistic to rely on substantial increases in household savings in the next few years. Instead, the bulk of the domestic savings gap should be filled by increased Government savings. The recent pension reform will contribute slightly more than 1 percent of GDP to national savings in the pre-accession period (Chapter 2). Since about 50 percent of this savings will have already occurred by 1999, the Government can count on about 0.5

percent of GDP in the next three years as a result of this reform. Therefore, an increase in the primary surplus to 3 percent of GDP would imply a total fiscal contribution to savings formation of 2.0 percent of GDP between 1999 and 2001.

Table 1.6: Illustrative Medium-Term Framework

	1998	1999	2000	2001	2002	2003	2004
Real Sector							
	(percent change)						
Real GDP	5.1	4.0	4.2	4.5	5.0	5.0	5.0
Real fixed investment	11.4	8.5	7.1	6.8	7.2	9.0	9.0
Real private consumption	3.8	4.2	3.2	3.6	4.0	4.0	4.0
Exports of goods and services	16.3	10.3	11.4	9.2	9.0	8.7	8.3
Imports of goods and services	22.5	11.3	9.9	8.2	8.4	9.2	8.8
Inflation (GDP deflator)	14.2	8.5	5.3	4.5	4.0	3.5	3.0
	(in percent of GDP)						
Fixed Investment	23.2	24.2	24.9	25.5	26.0	27.0	28.0
General Government							
Overall balance (excluding privatization)	-4.7	-4.5	-2.7	-1.7	-1.3	-0.9	-0.7
Primary balance (excluding privatization)	1.6	1.5	2.5	3.0	3.0	3.0	3.0
Expenditures	47.1	46.3	44.9	43.9	42.8	43.4	43.5
Public debt	60.2	58.0	55.7	52.9	49.9	47.0	44.1
External Accounts							
Current account balance	-4.8	-5.2	-4.5	-4.2	-4.0	-4.0	-4.0
Foreign direct investment	3.0	3.0	3.1	3.1	3.1	3.0	3.0
Gross external debt	56.3	58.1	59.9	58.8	57.5	55.5	54.3
Net external debt	26.0	26.4	26.3	24.3	22.1	19.0	17.0

Source: Staff estimates.

Though the magnitude is still uncertain, the EU is likely to provide some pre-accession transfers to help finance an increase in infrastructure investment and then increase these transfers substantially after EU accession. In the pre-accession period, it is assumed that these revenues will amount to 0.5 percent of GDP per year, and will increase to 2 percent of GDP after accession.¹⁶ The envisaged fiscal adjustment and the pre-accession transfers do not entirely close the savings requirements. It is, however, reasonable to assume that the corporate sector will grow more profitable as total factor productivity grows, and that this will contribute to an increase in domestic savings. Moreover, the current high level of stockbuilding is likely to be reduced, somewhat diminishing the requisite increase in domestic savings.

Barring a prolonged decline in EU growth rates, export growth is expected to remain strong as greenfield investment continues to come online. Though this growth is expected to slow slightly over time, it is projected to remain above GDP growth. Given the high import content of exports, import growth should be expected to nearly mirror export growth, though the modest fiscal tightening should dampen import growth slightly over the next two years. After EU accession, the sustained growth in infrastructure investment should lead to a gradual increase in the ratio of the trade balance to GDP, which should be offset by an increase in net official transfers from the EU. FDI flows are likely to remain at least at 3 percent of GDP in the years approaching EU accession. If the current account deficit can be limited to 4 percent of GDP, the ratio of gross external debt to GDP would resume its downward trend. An increasing proportion of external debt would be undertaken by the private sector. Assuming that the

¹⁶ The Government will have to mobilize resources to meet co-financing requirements. Moreover, since a large part of these funds will be channeled to local governments, steps must be taken to ensure adequate absorptive capacity at the local level.

stock of official reserves is maintained at 4 months of imports, and that imports grow faster than GDP, the net external debt ratio would decline at a more rapid rate than the gross. These improving debt indicators, together with ongoing structural reforms, are likely to strengthen Hungary's credit ratings and further reduce Hungary's external borrowing costs.

The Objective and Structure of the Country Report

The objective of this report is to contribute to Hungary's ongoing efforts to prepare for integration with the EU. It provides an assessment of progress in several sectors and identifies the main reforms that needed to successfully complete the transformation initiated one decade ago. The report is structured as follows: Chapter 2 elaborates on the fiscal framework. It provides an overview of Hungary's medium-run fiscal program; evaluates the program's contribution to savings, capital formation, and growth; and it assesses the sustainability of fiscal policy beyond year 2001. It also provides an in-depth analysis of reforms required in the pension, health, and intergovernmental finance systems.

Chapter 3 is concerned with foreign trade and trade policies. It examines the reorientation of foreign trade in the early 1990s and the rapid integration of Hungary's trade into world markets, especially into the EU. It investigates the essential role of FDI in industrial restructuring and export performance. It also identifies the main policy issues and provides key recommendations for a pre-accession strategy that will maintain high the competitiveness of Hungarian exports.

Chapter 4 addresses financial sector reform. It provides an overview of banking sector development over the past decade, including harmonization of financial laws and regulations with the EU, progress in privatization, progress in coping with bad loans and troubled debtors, and resource mobilization and allocation systems. It also contains a detailed study of the insurance sector and capital markets. Finally it provides a list of reforms needed to strengthen Hungary's financial system and integrate it with the EU.

Chapter 5 analyses the transition of the enterprise sector. It evaluates the progress achieved in privatization and investigates the role of FDI in enterprise restructuring. It also identifies problems that need to be addressed in order to maintain FDI inflows as accession approaches. Chapter 6 examines regulatory issues in the infrastructure sectors. It provides an overview of reforms undertaken to date in the electricity, telecommunication, and gas sectors. Drawing on the experience in OECD countries, it puts forward several options for further competitive restructuring and regulatory reform to prepare Hungary's infrastructure sector for competition in EU markets.

Chapter 7 focuses on the labor market and social policies. After reviewing recent trends in employment, education, and real wages, it investigates the extent to which the Hungarian labor market has adjusted to the new economic environment. It also examines the effectiveness of social policies in ensuring an efficient allocation of Hungary's human capital and compliance with EU accession requirements. Finally, it suggests a number of measures to increase the level of employment, flexibility, and productivity in the labor market, while ensuring smooth integration into the European Union.

Chapter 8 looks at institutional reforms in the public administration; in particular, the three main issues critical to building a modern, efficient, and professional civil service capable of negotiating and implementing the *acquis communautaire*. First, adequate remuneration systems—pay policy and pay flexibility mechanisms—to facilitate recruitment and retention of highly skilled personnel. Second, efficient human resource management and decision-making practices, to create a transparent and effective civil service. And finally, attracting the new mix of EU-related skills to ensure efficient management of the EU accession process.

Chapter 9 addresses the agriculture and food sector. It examines the recent liberalization of consumer and producer prices, privatization of land and the food industry, and openness toward foreign investors. It also investigates the various agricultural support programs and recommends revisions and policy adjustments for the pre-accession period, to induce greater productivity and growth in this sector and prepare Hungary for the implementation of the *acquis*.

Chapter 10 concentrates on the problem of meeting EU environment standards at minimum cost. It focuses on the investment required to comply with major EU environmental directives, and on mechanisms for financing these investments. It identifies several recommendations that will help Hungary to comply with the EU requirements in the most efficient way.

2. A FISCAL FRAMEWORK FOR SUSTAINED GROWTH

AN OVERVIEW OF HUNGARY'S MEDIUM-RUN FISCAL FRAMEWORK

Fiscal Adjustment in the Mid-1990s

Hungary's public finances sharply deteriorated during the early years of the transition, as demonstrated by the dramatic shift in the general Government balance from a surplus of 0.5 percent of GDP in 1990 to a deficit of 8.4 percent of GDP in 1994. Hungary entered 1995 with even larger fiscal imbalances, one of the highest ratio of public expenditures to GDP in the world (around 60 percent), and a very large public debt (almost 90 percent of GDP). As mentioned in Chapter 1, these fiscal imbalances caused similar imbalances in the external accounts; they threatened a balance of payments crisis and prevented a sustained recovery of output and employment after the transitional recession.

To avert a balance of payments crisis and create the conditions for a sustained recovery, the Government implemented a radical fiscal adjustment in 1995, centered on a sharp reduction in fiscal expenditures. Total expenditures were reduced by nearly 13 percent of GDP between 1994 and 1998 (Table 2.1), which more than offset a large decline in revenues and enabled a significant reduction in the overall and primary deficits—by around 4 percent of GDP, excluding privatization revenues. This fiscal adjustment, combined with large revenues from the privatization of utilities and banks, made it possible for the Government to achieve a sharp reduction in its debt—from nearly 90 percent of GDP in 1994 to 60 percent in 1998.¹

Table 2.1: An Overview of the General Government Budget (% of GDP), 1993-98

	1993	1994	1995	1996	1997	1998*
Total Revenues (excluding privatization revenues)	51.5	51.2	47.7	45.8	43.8	42.2
Total expenditures	60.8	60.4	54.3	49.0	49.2	47.1
Interest payments	4.6	6.8	9.3	8.3	9.8	7.8
Net lending	-3.3	-1.7	-3.4	-4.0	-3.6	-0.5
Privatization revenues	0.6	0.9	3.2	3.8	3.0	-0.3
Primary Balance (excluding privatization revenues)	-2.7	-2.2	2.2	3.7	2.7	1.6
Overall Balance (excluding privatization revenues)	-6.6	-8.4	-6.4	-3.0	-4.8	-4.7
Overall Balance (including privatization revenues)	-6.0	-7.5	-3.2	0.8	-1.8	-4.4
General Government debt	90.4	88.2	86.4	72.8	63.9	60.2
Interest-bearing debt related to cleaning of NBH	0.0	1.4	2.3	4.8	26.0	24.2
Overall balance on accrual basis, excluding privatization revenues (NBH estimates)	-7.7	-9.6	-7.3	-4.6	-5.1	-4.8
Consolidated operational deficit (NBH estimates)	5.1	5.5	2.1	-0.6	0.7	2.0

* 1998 figures are World Bank staff estimates.

Sources: Ministry of Finance, NBH, and World Bank staff estimates.

¹ Hungary's fiscal reform in the 1990s also included a reorganization of the public sector, with the absorption of numerous extra budgetary funds into the central budget. A detailed analysis of Hungary's fiscal adjustment is provided in Kiss, G. (1998), and in Bokros and Dethier (1998).

The drastic reduction in expenditures would have resulted in a much more pronounced decline in both the deficit and the level of debt, had not revenues declined by a large amount as well—about 9 percent of GDP during 1994 and 1998. As shown in Table 2.2, almost half of that decline was due to lower revenues from trade and payroll taxes. Some of the revenue losses were intentional: tariff rates were reduced as a result of World Trade Organization (WTO) and Europe agreements, and payroll tax rates were lowered in an effort to reduce labor costs. But other losses were the result of a growing erosion of the payroll tax base, stemming from less than full adjustments of ceilings on payroll contributions and from ongoing tax evasion. The reduction in nontax revenues was also substantial. It reflected a mix of deliberate policy actions and unexpected events, including smaller dividends and loss of other income from enterprises due to privatization, and to lower revenues from fees (e.g., fees on housing transactions).

TABLE 2.2: GENERAL REVENUES, 1994-98
(percent of GDP)

	1994	1995	1996	1997	1998	1994-98
Total Revenues	51.2	47.7	45.8	43.8	42.2	-9.0
Tax Revenues	39.5	38.4	36.8	35.7	34.8	-4.7
Payroll taxes	12.5	11.3	10.4	10.7	10.7	-1.8
Value-added tax	7.7	7.6	7.5	7.9	8.1	0.4
Excises	3.8	3.6	3.2	3.1	3.1	-0.7
Personal income tax	7.0	6.8	7.1	6.6	6.5	-0.5
Corporate income tax	1.4	1.9	1.8	1.9	2.3	0.9
Trade taxes	3.4	4.4	3.6	1.9	1.3	-2.2
Local taxes	0.8	0.9	1.3	1.4	1.3	0.5
Other taxes	2.9	1.9	1.8	2.2	2.1	-0.8
Nontax Revenues	9.8	8.0	7.8	6.8	6.1	-3.7
Property income	3.3	1.8	2.8	2.8	n.a.	n.a.
Fees and charges	3.6	3.3	3.3	2.6	n.a.	n.a.
Other nontax revenues	2.9	2.9	1.7	1.4	n.a.	n.a.
Capital Revenues	1.9	1.4	1.3	1.2	1.2	-0.7

Source: Ministry of Finance and World Bank staff estimates.

As shown in Table 2.3, the reduction in expenditures took place primarily through lower public sector wages and transfers to households (e.g., pensions, sick pay, family allowances). Subsidies did not decline as much, in part because they had already been cut substantially in the early 1990s. This adjustment in expenditures took place in a period when the country had to spend a substantial volume of resources cleaning the banking system and solving a severe quasi-fiscal problem at the NBH. As discussed in greater detail in Chapter 4, the restructuring of banks proceeded in several stages, with the bulk of the costs occurring in the first half of the 1990s, when the Government issued bonds amounting to almost 10 percent of GDP. Nonetheless, the annual interest expenditures incurred from these transactions continued to burden the budget in subsequent years (with costs initially reaching about 1.5 percent of GDP). In late 1998, the Government issued bonds amounting to more than 1 percent of GDP to clean the last large problem bank. The quasi-fiscal deficit of the NBH was finally eliminated in 1997 when the Government issued bonds amounting to more than 20 percent of GDP, and ultimately paid more than 1 percent of GDP in interest in order to eliminate the NBH's large foreign exchange losses (which had resulted from many years of mispricing domestic credits funded by foreign liabilities).²

² The Government had already recognized the NBH losses as its liability, but has paid no interest on this liability. See Rocha and Saldanha (1993), and Barabas, Hamecz, and Nemeyi (1998).

During 1997 and 1998, there was some loosening of fiscal policy, as indicated by a reduction in the primary surplus of 2 percent of GDP (approximately 1 percent in each year). Estimates of the operational (or real) deficit also suggest a fiscal deterioration in 1997. This deterioration has been somewhat overestimated, as it reflects the postponement of some interest payments that should have taken place in 1996. Computing the overall deficit on an accrual basis (Table 2.1) reveals a larger deficit in 1996 and a smaller deterioration in 1997. The 1998 deterioration was, again, of smaller magnitude than suggested by the indicators. While the primary surplus declined by 1.1 percent of GDP, part of this decline can be explained by the implementation of a comprehensive pension reform, which included the partial replacement of the PAYG by a private and fully funded system (see discussion below).

Table 2.3: General Expenditures, 1994-98
(percent of GDP)

	1994	1995	1996	1997	1998	1994-98
Total Expenditures	60.4	54.3	49.0	49.2	47.1	-13.3
by Economic Classification						
Wages and salaries	9.6	8.4	7.5	7.3	7.3	-2.3
Transfers to households	22.2	20.8	17.5	16.4	16.4	-5.8
Interest payments	6.8	9.3	8.3	9.8	7.8	1.0
Related to cleaning of NBH	0.0	0.0	0.0	1.2	1.0	1.0
Related to bank restructuring	1.2	1.7	1.5	1.0	0.7	-0.5
Subsidies	3.0	2.1	2.6	1.9	2.0	-1.0
Capital expenditures	8.5	5.7	5.3	6.1	5.7	-2.8
Other expenditures	10.2	8.1	7.8	7.7	7.9	-2.3

Source: Ministry of Finance and World Bank staff estimates.

The Medium-Run Fiscal Program and Its Contribution to Savings and Growth

In preparation for the 2000 budget, in July 1999 the Government adopted guidelines for a 3-year fiscal program (2000-2002) that aims at a primary surplus (excluding privatization revenues) of 2 percent of GDP in 2001 and 2002. The overall deficit (also excluding privatization revenues) was budgeted to decline to 4 percent of GDP in 1999 and projected to decline to 2.5 percent of GDP in 2002. This decline would be due principally to lower nominal interest payments resulting from the anticipated decline in inflation. The program also called for a continued decrease in expenditures relative to GDP, in order to reduce tax rates and revenues relative to GDP and reduce the size of the public sector (Table 2.4).

Two central questions must be addressed in assessing Hungary's medium-run fiscal program. The first is whether the fiscal program will contribute positively and significantly to savings, capital formation, and growth. The second is whether the fiscal targets can be achieved under the present policies and then sustained after 2002. In answering the second question, it is important to assess fiscal policy in 1999 and in the rest of the pre-accession period, and to identify other factors that could represent important challenges to fiscal policy in the longer run.

The 1999 budget implied an effective fiscal adjustment of around 1 percent of GDP, comprising an explicit improvement in the primary surplus of 0.7 percent of GDP, and an additional implicit adjustment of 0.3 to 0.4 percent of GDP due to revenue losses from the pension reform. As noted above, the pension reform included reforms to the PAYG system as well as partial replacement of the PAYG by a second, fully funded pillar. The revenue losses in the PAYG system are themselves savings neutral, because the transitional deficits of that system are matched by larger private savings of the same magnitude. By offsetting the revenue losses of the PAYG, the Government effectively generates net

savings (i.e., the increase in private savings is not offset by public dissavings, leading to an overall increase in national savings).³

Table 2.4: Hungary's Medium-Run Fiscal Program, 1998-2001
(percent of GDP)

	1998	1999	2000	2001	2002
Government's Medium-Run Fiscal Program					
Primary balance (excluding privatization revenues)	1.6	2.2	2.3	2.0	2.0
Overall balance (excluding privatization revenues)	-4.7	-4.0	-3.0	-2.8	-2.5
Reform Scenario					
Primary balance (excluding privatization revenues)	1.6	1.5	2.5	3.0	3.0
Overall balance (excluding privatization revenues)	-4.7	-4.5	-2.7	-1.7	-1.3
Revenues (excluding privatization revenue)	42.2	41.8	42.2	42.2	41.4
Expenditures	47.1	46.1	44.9	43.9	42.8
Net lending	-0.5	-0.2	-0.1	-0.1	0.0
General Government debt	60.2	58.0	55.7	52.9	49.9
Memorandum item:					
Annual revenue loss from pension reform	0.3	0.4	0.3	0.1	0.1

Source: Ministry of Finance and World Bank staff estimates.

As discussed in Chapter 1, the 1999 budget was prepared assuming a real GDP growth rate of 5 percent and average inflation of 11 percent. It now appears more likely that both will be lower (about 4 and 10 percent, respectively). Earlier in 1999, the Government announced the freezing of HUF 40 billion in special and general reserves, the equivalent of 0.4 percent of GDP. The freezing of reserves had already been envisaged as a contingency measure to offset the adverse impact of lower real GDP growth, and it temporarily improved the credibility of the fiscal target. While there have been doubts among private analysts during the first eight months of the year as to whether the target can be achieved, it now seems likely that the Government will be able to meet fiscal targets without additional corrective measures.⁴

If the 1999 budget deficit target is not met, a larger fiscal adjustment in 2000 will be required to meet the fiscal targets proposed in the Government's guidelines. It would be advisable for this fiscal adjustment to be brought about through further reductions in expenditures rather than increases in revenues. Within the fiscal targets, a shift in expenditures will be necessary. As a new member of NATO, Hungary is committed to increasing its defense expenditures. Moreover, as EU accession nears, it is vital that Hungary increase and sustain infrastructure investments, especially in key sectors such as environment, transport, and agriculture. Accommodating these expenditures may require introducing more targeted social programs, in order to generate savings while maintaining protections for low-income segments of the population. On the revenue side, it would be prudent to ensure that tax bases are broadened before tax rates are reduced, to avoid a loss in revenues. Many tax rates in Hungary are high by international comparison (e.g., payroll tax rates of 50 percent and upper VAT rates of 25 percent). Further increases in tax rates would generate greater distortions and induce more tax evasion. Moreover, there is an ongoing effort to improve tax collection and broaden tax bases. Success in broadening tax

³ As shown in section B, even if the central budget did not offset the revenue losses of the PAYG, the pension reform would still generate savings of roughly the same order of magnitude, due to the reforms to that system (increases in the retirement age and the move from wage indexing of pensions to a mixed formula). These savings, however, would take a longer period to materialize, because reforms to the PAYG would reduce the transition deficit only gradually.

⁴ These debts were due to the larger than expected deficit in the first six months of the year—HUF 391 billion, or 89 percent of the total deficit projected for the year.

bases should be used to reduce tax rates. This is particularly true of the payroll tax, which remains one of the highest in the world.

The Government's guidelines call for a reduction in the overall general Government deficit in 2001 and 2002. However, the fall in the overall deficit would be due primarily to the projected drop in inflation and nominal interest payments, which would not contribute to savings formation.⁵ The overall deficit target implies a reduction in the primary surplus to 2 percent of GDP for both these years. This strategy appears to rely too heavily on increases in private savings to accommodate the envisaged increase in investment concurrent with a decline in the current account deficit.

As discussed in Chapter 1, freeing resources for a continuing expansion of fixed investment in the remainder of the pre-accession period (by an additional 1.8 percent of GDP), and a simultaneous improvement in the current account (by 1.2 percent of GDP) may require some additional efforts in the fiscal area. A more prudent fiscal program is described in our reform scenario in Chapter 1. This would include increasing the primary surplus to 2.5 percent of GDP in 2000 and to 3 percent in 2001 and 2002. The overall contribution of fiscal policy to savings formation would thus amount to roughly 2 percent of GDP (0.5 percent of GDP from the pension reform and 1.5 percent of GDP from the increased primary surplus), or two-thirds of the total required increase in savings.⁶

Sustainability of Fiscal Policy in the Longer Run

It is also important to look at the longer run, and assess whether Hungary's public finances rest on a solid foundation, or whether there are hidden problems that would eventually cause an increase in expenditures and threaten fiscal equilibrium. Addressing this question involves investigating whether the sharp reduction of expenditures that occurred in the past four years is sustainable across all areas of the public sector, or whether there are key areas where expenditures have been unsustainably compressed.

Hungary's present fiscal situation contains some bright aspects, but also some vulnerable areas that must be addressed as soon as possible, to avoid the reemergence of fiscal imbalances. On the positive side, Hungary has already absorbed the large fiscal costs that are often associated with a large-scale restructuring of the banking and enterprise sectors—a problem that continues to affect other transition countries. Except for Postabank, all large banks have been privatized; after the recent restructuring of Postabank, further fiscal expenditures associated with bank restructuring are not expected (Chapter 4). As examined in section B, Hungary also implemented a comprehensive pension reform, thereby greatly reducing the large actuarial imbalances that continue to affect the PAYG systems of many countries in Western and Eastern Europe.

On the negative side, however, Hungary has not yet satisfactorily addressed the serious problems affecting the health sector. As discussed in section C, the decline in health expenditures relative to GDP since 1995 has, to some extent, been artificial. The decline in health expenditures has been largely generated by sharp wage cuts, by inadequate maintenance of hospitals, and by postponing the renewal of medical equipment. The need to improve the poor health status of the Hungarian population will translate into large pressures on expenditures, unless the health system is rationalized. The need for health reform becomes even more obvious considering the aging of the population, which implies additional pressures to increase health expenditures.

⁵ Everything else constant, a drop in inflation would reduce the nominal deficit and private savings by the same magnitude. See Cukierman and Mortensen (1986), Eisner (1989), and Blejer and Cheasty (1991).

⁶ If real interest rates declined significantly from the average 1998-99 levels (around 5 percent), the reduction in the operational deficit would exceed 2 percent of GDP, implying a greater contribution of fiscal policy to savings formation.

In addition to problems in the health sector, policymakers also have to address imbalances in other areas of the public sector, such as the public administration. There is a need to reduce the excessive wage disparities between public servants and the private sector (exacerbated during the period of fiscal adjustment), in order to attract well-qualified workers into the public administration. The need to upgrade Hungary's civil service appears even more pressing considering that the process of EU accession will require the hiring of significant numbers of well-qualified professionals who are capable of managing the integration of the Hungarian economy into the Common Market. Hence, the upgrading of Hungary's public administration will probably result in some expenditure pressures in the medium run. This is true even if the new hirings are offset by laying off of less essential since the Government will have to pay higher average wages and make severance payments as well. (Challenges in the area of public administration are examined in more detail in chapter 8.)

Finally, preparing the public sector for the challenges of the next decade also involve examining the efficiency of local governments in delivering public services. As discussed in section D, local governments have substantial responsibilities in the provision of public services, but remain excessively fragmented and dependent on transfers from the Central Government. Ensuring greater efficiency in the operation of local governments acquires even greater importance in view of the fact that local governments will be in charge of receiving and allocating the large EU transfers that are expected to follow EU membership.

PENSION REFORM

The pension reform passed by the Hungarian Parliament in the summer of 1997 constitutes one of the most critical steps in Hungary's transformation from a centrally planned to a modern market economy that relies on a balanced partnership between the public and private sectors. Hungary was the first transition country to implement a systemic pension reform, involving the move from a pure public, pay-as-you-go (PAYG) system into a multi-pillar system—a step now being taken by other Central European countries such as Poland and Latvia. This section briefly reviews the conditions of the pension system at the start of the reform, describes the main components of the reform package, assesses the medium and long-run effects of the reform, and identifies some pending policy issues.⁷

Initial Conditions

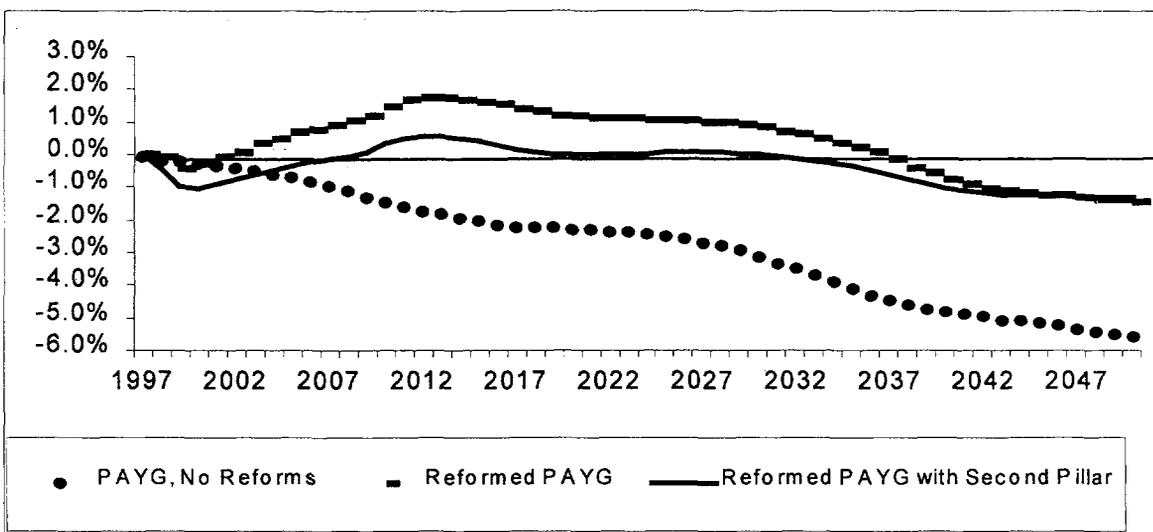
The Hungarian pension reform was developed in 1997 under very adverse initial conditions. In particular, the broadly defined PAYG system (including pensions paid by the pension and health insurance funds and the central budget) was already running deficits of around 1 percent of GDP by the mid-1990s, despite charging very high contribution rates (30.5 percent of gross wages). This difficult financial situation was the result of increasing evasion and the erosion of the tax base, and a sharp increase in the system's dependency ratio (the ratio of pensioners to active workers). The deficits were not larger because the average pension benefit was also reduced (from more than 70 percent of the average wage in the late 1970s to 60 percent in the mid-1990s) through extensive manipulation of the benefit formula. These arbitrary adjustments prevented a fiscal crisis, but also undermined the population's confidence in the pension system.

The PAYG system was estimated before the reform to be running deficits that would reach almost 6 percent of GDP by the end of the projection period (2050); this would depress national savings by a commensurate amount and place a heavy burden on the economy (see Figure 2.1). Moreover, eliminating these deficits by increasing tax rates or by lowering replacement ratios would not be viable options, since tax rates would need to be doubled or the replacement ratios would need to be halved. The

⁷ A detailed analysis of the Hungarian pension reform is provided in Palacios and Rocha (1998).

adverse impact of either of these solutions on Hungary's economic performance, and on the welfare of future generations would, be dramatic.

Figure 2.1: Pay As You Go Balance Under Three Different Scenarios (percent of GDP)



Source: Palacios and Rocha (1998)

Main Components of the Reform

The Hungarian pension reform was designed to achieve three inter-related objectives: (i) ensure a reasonable and sustainable income at retirement; (ii) enhance Hungary's future growth performance by promoting national savings, developing capital markets, and reducing distortions in the labor market; and (iii) improve fairness across generations. In order to meet these objectives, the Government opted for a multi-pillar reform, including reforms to the PAYG system, the introduction of a mandatory and funded second pillar, and the maintenance of the voluntary third pillar (which had been introduced in 1994).⁸

The parametric reforms to the PAYG included several components: (i) a gradual increase in the retirement age to 62 for both men and women, combined with an increase in the minimum years of service for early retirement; (ii) a change from wage indexation of pensions to a combined formula including equally weighted wages and prices; and (iii) other changes in the benefit formula designed to tighten the link between contributions and benefits.

Workers already in the labor force were offered the option of staying in the reformed PAYG or switching to a new system consisting of a downsized PAYG first pillar and the new private and fully funded second pillar. Contributions and accrual rates in the new first pillar were downsized by about one fourth, in order to open room for increasing contributions to the second pillar (6, 7, and 8 percent in 1998, 1999, and 2000, respectively). The new system was designed to attract workers under 37 to 40 years of age. These workers would accept a one quarter reduction in their acquired rights and in the benefits from the reformed first pillar, but could expect a higher return on the second pillar. Under conservative assumptions (a rate of return during accumulation of 1.5 percent above wage growth—lower than the average return of private funds in OECD countries), workers under 37 would find it attractive to switch;

⁸ The reform also included a "zero" pillar—a means tested income guarantee, financed from general taxes.

workers above that age would find it attractive to stay in the PAYG. The new system is mandatory for new entrants into the labor force.

The actual switching outcome has been consistent with expectations—in 1998, approximately 1.3 million workers chose the new system, 75 percent of which were under the age of 35. This amounts to roughly 30 percent of the labor force, or almost 60 percent of workers under 40. Most of the switching workers chose to place their second pillar accounts in one of the five large pension funds operated by international insurance companies—possibly motivated by the reputation and perceived high professional standards of these institutions. It is expected that at least 1.5 million workers will switch to the new system by December 1999, the deadline for exercising the switching option.

Assessing the Long-Run Impact of the Reform

The PAYG reforms are expected to substantially improve the financial standing of the pension system over the medium and long run. As shown in Figure 2.1, these reforms are projected increase PAYG surpluses (even without the introduction of the second pillar) during the next decade and until 2010-2012. These surpluses will decline gradually after that date, and eventually shift again into deficits due to further demographic shocks, thereby indicating the need for additional corrections to the PAYG in the future (further increases in the retirement age and a shift to pure price indexation).

Policymakers had to make an early decision whether limit the pension reform to these parametric changes in the PAYG, or take the additional step of introducing a second pillar. The decision to introduce a mixed system was motivated by several considerations. First, although the surpluses produced by the PAYG reforms would, in principle, build a cushion and enhance national savings, they would also create room for politically motivated increases in benefits and/or induce larger central budget deficits, thereby destroying some of the main objectives of the reform.⁹ Second, even if these savings were safeguarded, pure PAYG reforms would not produce the same long-run efficiency gains in the capital and labor markets. They would thus contribute less to future economic performance. Third, multi-pillar systems offer more protection in the long run than single pillar systems because of better diversification of all risks.

Replacing part of the PAYG by a second pillar generates an immediate revenue loss in the PAYG as well as a transitional deficit, because the system must continue paying full PAYG benefits (not downsized) for a number of years. The transitional deficit is not a fiscal deficit in the usual sense, however, because the revenue loss in the public sector is matched by private savings of the same magnitude, leaving national savings unchanged. In addition, the transitional deficit is projected to decline during the next decade because of the parametric reforms to the PAYG. As shown in Figure 2.1, the introduction of the second pillar has generated an immediate “official” deficit of around 0.3 percent of GDP in 1998, and is projected to lead to deficits around 1 percent of GDP in 2000. The overall PAYG deficit is, however, projected to decline gradually after 2001, due to the gradual but steady impact of the PAYG reforms.

The impact of the full reform on national savings can be ascertained by combining the flows of private savings (the contributions and returns to the second pillar) and the PAYG balances. As shown in Figure 2.2, national savings are expected to increase progressively from 2000 on, due to the steady increase in private savings and the progressive decline in the PAYG deficit. The combination of the two effects would lead national savings to increase by 2 percent of GDP during the next decade—

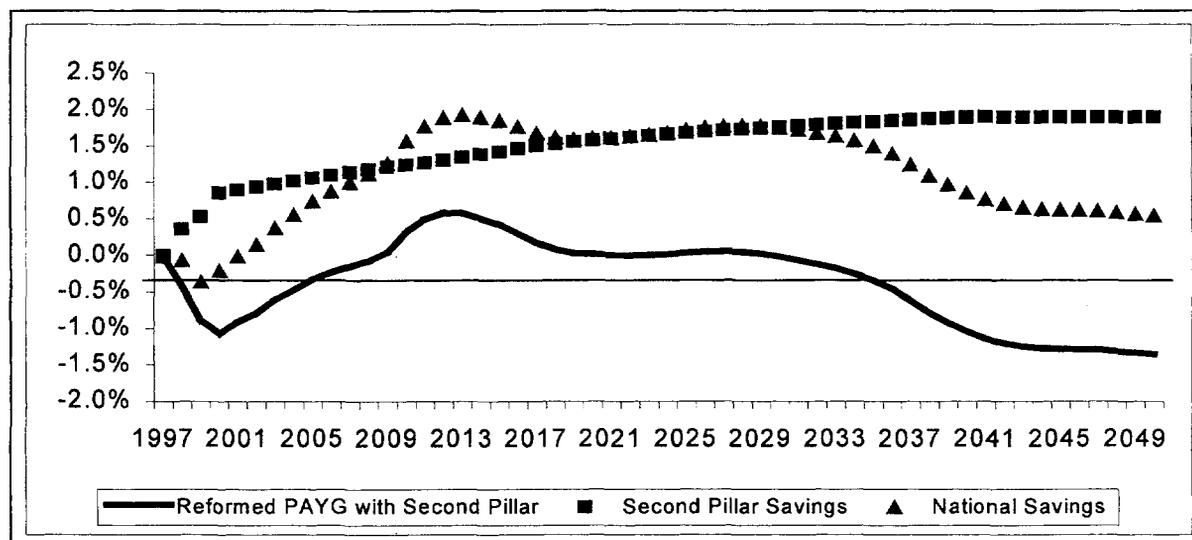
⁹ The real rate of return on public PAYG reserves in other countries has been extremely low and often negative, due to political interference in asset allocation.

approximately 0.2 percent of GDP per year. The net savings gain would be channeled through pension funds in the form of long-term financing flows to the private sector, contributing to capital formation in the private sector and enhancing Hungary's growth prospects.

These simulations assume that the central budget does not adjust to the PAYG balances during the transition. If the central budget fully offsets the transitional deficit, as implied by the Government's intention to keep the primary surplus of the general Government around at least 2 percent of GDP (section 1), the impact of the reform on national savings would be more front loaded. Indeed, if the primary surplus of the general Government is kept constant throughout the next decade, the impact of the reform on national savings would be equal to the private savings effect shown in Figure 2.2—a fast gain of around 1 percent of GDP in the first years of the reform, followed by more moderate gains thereafter.

The full impact of the pension reform on future growth depends on many other indirect effects. It depends on the impact of the parametric reforms on private savings, the endogenous effect of higher growth itself on private savings, the direct impact of capital market development on growth, and the positive labor market effects due to the tightened link between contributions and benefits. Although it is admittedly difficult to quantify all these additional effects, their net impact on long-run growth is judged to be positive, thereby strengthening the direct savings effect discussed above.

Figure 2.2: Pay As You Go Balances, Private Flows, and National Savings (percent of GDP)



Source: Palacios and Rocha (1998)

Pending Policy Issues

During the drafting of the 1999 budget, the Government decided to maintain the contribution to the second pillar at 6 percent in 1999, instead of increasing it to 7 percent as planned. According to the official explanation, the higher than expected deficit in the social security funds, and the unforeseen expenditures related to the restructuring of Postabank, made this amendment necessary. The Government has also recently announced its intention of maintaining the second pillar contribution at 6 percent in 2000, and has also announced that it may review other elements of the reform, such as the guarantee to the second pillar and the mandatory status of new entrants to the labor force.

Although it is true that the decision to retain the contribution to the second pillar at 6 percent will result in more resources flowing to the PAYG in 1999 and 2000, the amounts are small. In addition, this decision will not result in any real improvement in fiscal policy or in Hungary's overall macroeconomic

performance; the larger flows to the PAYG will be fully offset by smaller flows to the second pillar, leaving national savings unchanged. At the same time, this decision has greatly increased uncertainty among both switchers and the managers of the pension funds two groups that must rely on a stable policy framework in order to make informed decisions.

The pension reform passed by Parliament in the summer of 1997 represents an important step in the right direction. It is expected to generate a more diversified and stable retirement income, and to contribute to Hungary's growth performance. The reform is also expected to eliminate the bias against young workers which is commonly found in pure PAYG schemes. Nonetheless, the actuarial simulations show that the PAYG may have to undergo additional reforms due to further demographic pressures, and these future reforms will affect primarily young workers. The introduction of a second, fully funded pillar opens the possibility for these workers to maintain a reasonable income at retirement, even if these additional corrections take place in the future.

The best policy option for the Government is, therefore, to deepen the reform and to ensure that the young second pillar is able to live up to its potential. This implies increasing the contribution to the second pillar to 8 percent as planned as soon as possible, and improving the institutional and regulatory framework for pension funds. The latter measures involve improving the infrastructure for reporting and payments by employers, ensuring that payments are properly credited to individual accounts, refining the regulatory framework to enhance transparency and safety, and strengthening the supervisory function, to enable supervisors to identify and correct problems at an early stage.

Guarantees on Second Pillar Returns

The new Hungarian system includes new legislation and institutions designed to improve the safety of private pension funds. Prudential regulation includes licensing, investment guidelines, reporting, and disclosure requirements. Efforts have been made to strengthen the State Pension Fund Supervision (an agency created in 1993 to supervise voluntary funds), to help it meet its expanded responsibilities. Finally, the new system also includes the guarantee of a minimum second pillar benefit, equal to 25 percent of the first pillar benefit; this is called the normative guarantee. Should the balance of the second pillar account at retirement fall short of the level needed for to provide this minimum, the difference must be supplemented by a newly created Guarantee Fund. The Guarantee Fund is financed through membership fees (equal to 0.3 to 0.5 percent of contributions) and is ultimately backed by the central budget.¹⁰

One important question related to the new Hungarian system is whether the Guarantee Fund will have sufficient resources to honor the normative guarantee, or whether this guarantee creates a serious risk to the state budget. This question can be preliminarily addressed by examining the rate of return on the second pillar that would trigger the guarantee for different age groups, and comparing it with the rate of return that could be expected under reasonable conditions. If the triggering rates are excessively high, that implies that the guarantee is excessively generous, and that the Guarantee Fund could run out of resources and resort to the state budget as the final guarantor.

When workers were given the choice of staying in the PAYG or switching to the new system, they were presented with a baseline scenario for the second pillar. This scenario included a real rate of return during the accumulation period equal to 1.5 percent above wage growth, operating costs equal to

¹⁰ All countries that have introduced a second pillar have also introduced safeguards to protect workers' accounts. These safeguards include a regulatory framework to prevent fraud and reckless behavior, as well as guarantees in some form. Excessive guarantees have generally been avoided, however, because they tend to cause distortions in capital markets and entail risks to the budget.

15 percent of contributions, and a real annuity rate of 2 percent below wage growth. These assumptions are actually on the conservative side; the average returns of private pension funds in the OECD have been higher than 1.5 percent and operating costs in the voluntary system in Hungary have been around 10 percent of contributions.

Under these assumptions, as shown in Table 2.5, the new system is primarily attractive for workers under 37 to 40 years of age. These workers can expect to achieve a higher replacement ratio (or higher internal rate of return) in the new system, basically because they are able to compound interest over a longer period of years.¹¹ The new system was not designed to be attractive to older workers, who do not have enough working years remaining to compound interest and to offset the partial loss of benefits in the first pillar. The new system is particularly unsuited for workers above 47 years of age, because these workers are not covered by the normative guarantee. Fortunately, the age distribution of the first one million switchers followed the original targets and expectations: almost 75 percent of switchers are 35 years or below, around 15 percent are 36 to 40, and only 10 percent are 41 to 47 years of age.

Table 2.5: Replacement Ratios and Internal Rates of Return under Conservative Assumptions

	25 year-old worker		35 year-old worker		45 year-old worker	
	Rep. Ratio	IRR	Rep. Ratio	IRR	Rep. Ratio	IRR
PAYG	64.0%	1.2%	64.0%	1.2%	64.0%	1.4%
Pillar I	47.3%	1.2%	47.3%	1.0%	47.3%	0.9%
Pillar II	25.2%	2.9%	18.5%	2.5%	11.5%	2.0%
Total	72.5%	1.7%	65.8%	1.3%	58.8%	1.0%

Source: Palacios and Rocha (1998).

Table 2.6: Replacement Ratios and Internal Returns if Guarantee is Triggered

	25 year-old worker		35 year-old worker		45 year-old worker	
	Trigger rate of return during accumulation: 0.0%		Trigger rate of return during accumulation: 1.2%		Trigger rate of return during accumulation: 4.8%	
	Rep. Ratio	IRR	Rep. Ratio	IRR	Rep. Ratio	IRR
Pillar I	47.3%	1.2%	47.3%	1.0%	47.3%	0.9%
Pillar II	11.8%	-0.4%	11.8%	0.3%	11.8%	2.1%
Total	59.1%	0.9%	59.1%	0.9%	59.1%	1.1%

Source: Palacios and Rocha (1998)

The age distribution of switchers suggests that the normative guarantee is unlikely to be called in large amounts. As shown in Table 2.6, for very young workers, the likelihood of the guarantee being called is extremely small—the average real rate of return during the accumulation period would have to drop to less than 0 percent (approximately 3 percent below projected wage growth). For workers in their thirties, the risk of the guarantee being called is also low—the average real rate of return during accumulation would have to be lower than 1.2 percent. By contrast, workers in their mid-forties pose a higher risk to the Guarantee Fund, as the guarantee will be triggered if the average real return falls below 4.8 percent—an outcome that cannot be dismissed.

Policymakers may want to consider certain measures to make the system more robust and to minimize the implicit risk to the state budget. First, the Guarantee Fund must be prepared to honor the guarantees. This is especially true for those workers in the 40 to 47 age group, who will be retiring in 2013 to 2020 period. Ensuring the ability to honor the guarantees entails elaborating detailed scenarios to

¹¹ The calculations presented here assume that pension benefits from the PAYG and Pillar I will be adjusted annually using the so-called Swiss formula, which gives equal weight to wage and price changes. However, given the demographic deterioration expected during the next decades, it is unlikely that today's young workers would benefit from this more generous indexation formula. The PAYG will most probably only be able to afford protection against price increases. This would further reduce the internal rate of return in the PAYG system, thereby making the funded pillar even more attractive.

determine whether the Guarantee Fund's reserves will be sufficient or whether some increase in membership fees will be needed. Second, the regulatory framework may need to be further improved, especially regarding the frequency and rules of asset valuation, the methodology for calculating minimum returns, and the constitution of minimum reserves. In particular, capital gains and losses should be fully reflected in the individual accounts, minimum returns (currently defined as 85 percent of the average return of long-run Government securities) should be assessed over a long period of time (e.g., a 36-month rolling period), and the minimum reserves should be constituted by the asset manager, not the pension fund. Finally, the supervision agency should be strengthened; and it should work closely with the insurance and the capital market supervisions, since pension funds typically outsource their activities to service providers, which are in the same financial group but are supervised by other agencies.

CHALLENGES IN THE HEALTH SECTOR

Need for Reform in the Health Sector

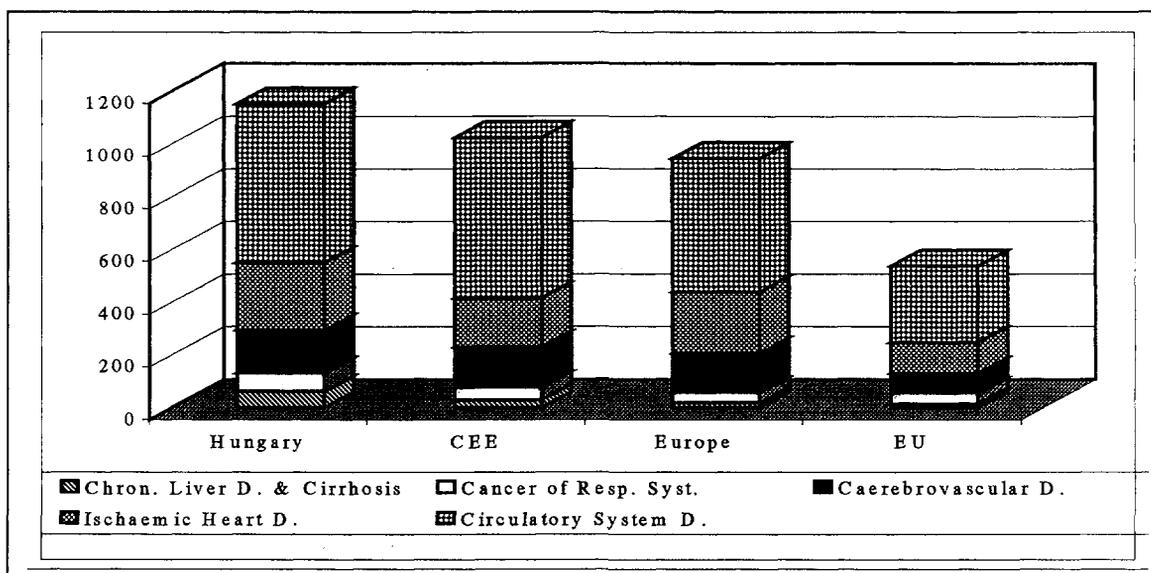
Hungary is facing a public health crisis with long-term and far-reaching implications for the population, for the stability of public finances, and for the overall performance of the economy. The deterioration of the health status of the Hungarian population, particularly during the transition years, has led to an increasing health gap between Hungary and the EU; and there are signs that this gap is widening.¹² As shown in Figure 2.3., life expectancy and the burden of disease in Hungary are among the worst in Europe. Life expectancy is six years below the EU average life expectancy and is the lowest in the OECD.¹³ This health gap is largely the result of a rapid increase in premature death, disproportionately affecting men in their productive years. Today, male mortality is more than twice what it was 30 years ago. Hungary's high mortality rate is predominantly due to chronic diseases associated with unhealthy lifestyles, as well as occupational and environmental risks. Compared to the EU, each day an extra 100 people die in Hungary from avoidable causes, such as smoking, unhealthy diets, and a lack of adequate preventive health services.

The widening health gap between Hungary and the EU is worrisome, particularly taking into account that Hungary has spent between 8 and 10 percent of its GDP on health—a level of spending comparable to the EU average. The deteriorating health status of the population not only generates additional pressures on health care spending, but also drives other direct and indirect costs associated with the decline in productivity of the work force. On average, each Hungarian worker is absent from work 16.5 days annually, compared to 5.2 and 5.5 days for workers in the U.S. and the Netherlands, respectively; such high levels of absenteeism are equivalent to more than 60 million lost work days per year. In addition, this leads to large sickness payments by the Health Insurance Fund (HIF), amounting to almost US\$200 million per year. The loss in labor market productivity is estimated at US\$840 million per year (1.7 percent of GDP), and the foregone income from avoidable mortality and morbidity is estimated at US\$614 million per year (1.2 percent of GDP).

¹² The gap is also rising between Hungary and other CEE countries. See World Health Organization (1997), and OECD (1999).

¹³ See Expert Consultative Group (1998).

Figure 2.3: Comparative Disease Burden
(mortality per 100,000 population)



Source: World Bank (1993), and staff estimates

While the health status of the population is poor, public health care spending is high. As shown in Table 2.7, health care spending almost doubled during the first half of the 1990s—from 5.7 percent of GDP in 1989 to 10.8 percent of GDP in 1994. Health expenditures have declined since 1995, both as a share of GDP and as a share of total public expenditures. This decline was not the result of efficiency measures, but rather of a sharp wage compression and postponement of needed investments. The low salaries in the health sector have led to a rapid increase in under-the-table payments to medical professionals,¹⁴ while the lack of investment has caused a deterioration of health infrastructure (hospitals and medical equipment). The benefits package, however, remains generous, and pharmaceutical expenditures are rapidly increasing.

Table 2.7: Health Expenditures, Total and Public Sector, 1991-98

	1989	1991	1992	1993	1994	1995	1996	1997	1998
Total health expenditures (percent of GDP)	5.7	7.3	9.6	10.2	10.8	9.9	9.3	8.4	8.0
Public sector health expenditures (percent of GDP)	-	-	-	9.9	10.5	9.2	8.3	7.3	6.9
Public sector health expenditures (percent of total public expenditures)	-	12.8	16.5	18.2	18.8	17.9	18.4	17.0	13.7

Source: Ministry of Finance and World Bank staff estimates.

Hungary's health care system has also experienced problems on the revenue side. Despite the reduction in public health expenditures by 2 percent of GDP between 1994 and 1998, the concomitant drop in revenues has resulted in an HIF deficit equal to 0.7 percent of GDP. Revenue erosion can be attributed to reduction in the payroll tax, tax evasion, and underpayment—for example, annual contributions of the self-employed are one fifth those of salaried employees in the formal sector.

Policymakers face the major challenge of improving health services and the health status of the population while avoiding an explosion of expenditures and the emergence of large deficits. The current

¹⁴ Salaries of health care workers have been declining in real terms since 1991, and doctor's wages are today only one third higher than average wages in the economy.

institutional framework is not prepared to cope with this challenge. Although responsibility for health care provision has been transferred to local governments and to private general practitioners, local governments have little incentive to manage health resources, since 90 percent of local health expenditures are financed by transfers from the HIF and the central government. In addition, the central government guarantees the provision of health care, even in the event of insufficient HIF revenues. Performance of the HIF is hampered by an unclear mandate, by institutional overlaps, and by legal obstacles that prevent the fund from acting as a selective purchaser of services and a monitor of quality.

Because of the absence of a clear institutional and policy framework and of adequate incentives, the problems affecting the health system have persisted throughout the 1990s. Spending on pharmaceuticals has continued to increase (from 22 to 30 percent of total expenditures), despite several attempts to curb its growth. There is still an overcapacity of hospital beds (nearly 30 percent higher than the OECD average), and an uneven distribution of equipment, beds, and medical personnel. Ineffective hospital reimbursement systems (which pay hospitals on a fee-for-service basis) have led to rapid spending increases for high technology care (e.g., MRI and dialysis). They have also promoted high service volumes and overbilling for costly procedures. There is evidence that hospitals manipulate the payment system by misreporting diagnoses and procedures to inflate their revenues. The service network is grossly unbalanced in favor of inpatient care and treatment by specialists.¹⁵ At the same time, the sector suffers from a lack of long-term and nursing home care options, an undersupply of nurses, and a declining budget for primary care and prevention. Furthermore, there are inequalities in service provision, with minorities suffering from a lack of access to the health system.

Health expenditures will face increasing pressure in the future, as a result of the aging of the population, underinvestment in infrastructure and equipment, salary pressures from doctors and nurses, the need to address the health gap vis-à-vis the EU, and the increasing demand for higher-quality medical care. An emerging epidemiological profile characterized by chronic diseases, combined with ever-increasing treatment costs for an aging and chronically ill population, has the potential to lead to an explosion in health expenditures.¹⁶

The failure to contain the structural factors that drive inefficiency in the health sector poses a serious threat to public finances. The open-ended liability that the Government assumes in the sector, and the importance of health in terms of overall public spending, make reforms necessary. In the absence of reform (and keeping pharmaceutical expenditures, wages, and investments constant), annual HIF deficits would remain at about 0.7 percent of GDP until 2010. Taking into account the likely increase in pharmaceutical expenditures, wages, and investments, annual HIF deficits could increase to about 1.9 percent of GDP by 2010. Deficits would increase sharply after that date, due to the projected demographic shock (caused by the retirement of the post-war baby boom generation and the accompanying deterioration of old age and system dependency ratios).¹⁷

Main Elements of Health Reform in Hungary

In early 1999, the Government proposed a number of far-reaching reforms in the health sector designed to improve the efficiency and quality of the system. The proposed reform would establish a

¹⁵ Hungary ranks first among 25 OECD countries in the number of specialists per 1000 population (2.7/1000). In contrast, the ranking is 13 (0.7/1000) for general practitioners and 17 (6.2/1000) for nurses.

¹⁶ The elderly consume 3.5 times as many health services as the rest of the population, and the cost of the services they require is considerably higher than average.

¹⁷ See Hollo, Long, and Papp (1998); and Jakab and Fidler (1998).

health system that would include the following elements: (i) a basic but comprehensive health care package accessible to the entire population; (ii) a market for supplementary health insurance that would provide additional services and improve quality; (iii) a single agency (the tax authority APEH) responsible for revenue collection and transfer of resources (on a risk-adjusted, capitated basis) to regional funds that may evolve as managed care organizations (MCOs); (iv) the regional funds would purchase the basic care package for a defined population, using the capitated allocation from APEH and regulated copayments (MCOs may, at a later stage, assume the risk for delivering health services directly); (v) the regional funds and private insurance companies would offer supplementary insurance for services outside the basic package; (vi) internal market mechanisms would be developed whereby the regional funds would purchase services from public and private providers that comply with minimum accreditation criteria and standards for service delivery; and (vii) an independent supervisory and regulatory agency (superintendency) would be developed to ensure that the provided services meet quality and financial regulations.

The proposed health reform would create far-reaching changes in the regulation, financing, and organizational arrangements of the health sector. These changes would take a number of years to be fully implemented, and require careful sequencing of reform steps. Each decision should weigh the fiscal impact against the expected gains in terms of efficiency and improvements in the population's health. In addition, the prevailing low institutional capacity must be considered as a factor that might limit the scope and speed of the reform. The following paragraphs discuss the key elements of the reform proposal, highlighting risks associated with the reform and focusing on those elements that are essential to the success of the effort.

Develop a multi-level health insurance system that provides mandatory and universal access to a basic level of services, while creating a second pillar of supplementary health insurance. The abolition of HIF's near-monopoly would allow for the development of regional (and eventually competing) health insurance funds and should promote efficiency in the sector. Key elements of this part of the reform would include establishment of a superintendency, development of the basic package, a well-defined supplementary insurance policy, clearly defined copayment policies, and development of reinsurance-type mechanisms that provide coverage against catastrophic risks.

Given the tight timeframe the Government has set for the reform (to be introduced by January 1, 2001), it is advisable that it be carried out in two stages. In the first stage, the HIF would be split into regional purchasers of a basic package of services, while private insurers would be encouraged to provide supplementary insurance covering other services. In the second phase, the Government may wish to consider the pros and cons of allowing regional health care organizations to gradually compete for members, thus allowing individuals to choose their insurer. It is important to clearly define the ownership structure of the newly formed managed care organizations, and the sequencing by which competition would be introduced.

Gradually introduce market forces to drive efficiency gains and improve quality. Increasing competition among providers through implementation of the purchasing function should lead to a reduction in the sector's excess capacity (estimated at 30 to 40 percent); and should encourage provider organizations to improve clinical quality and customer focus within their organizations. The purchasing agencies would pay selected providers through performance-based remuneration (capitation, DRG, point system), with strict surveillance and control over the quality and quantity of services provided and over health outcomes. The purchaser would strive to promote competition among providers and increase consumer choice, while at the same time keeping the risk pool intact. The specific service improvements to be generated by the introduction of purchasing include: (i) reduction in the average length of stay, to be achieved by replacing inpatient care with ambulatory services and reducing unnecessary care; (ii) rationalization of health care infrastructure and human resources through selective contracting; and (iii)

reduction in the burden of disease and disability by focusing on national health priorities and strategic goals (set by the Ministry of Health, MoH).

On the provider side, the pursuit of greater efficiency would be facilitated by the development of a pluralistic (public/private, for-profit/nonprofit) provider network. Within a strongly regulated framework, such providers (both physicians in private practice and health care institutions) must be free to introduce changes in staffing and internal budgetary allocations to meet the demands of the purchasing agencies, and to provide a defined benefits package to the population. In order for this system to function effectively, health workers should be employees, not public servants.

The effectiveness of these changes would depend on a number of critical aspects. The introduction of selective contracting among providers would create incentives for them to improve efficiency and quality, reduce hospital overcapacity of acute-care beds, increase allocations to primary health care services and reduce reimbursement fraud. Nonetheless, it is critical that the reimbursement systems, such as DRGs and the ambulatory point system, be modified to reflect the changing paradigm in the health system. Failure to implement selective contracting or to modify the mechanisms to pay providers would severely limit efficiency gains in the proposed system. In addition, the regional funds and MCOs should receive the budgetary transfers for investment costs in plant and equipment that are currently transferred from the MoH to providers.

Develop a comprehensive health policy framework, including regulation, priority setting, and policymaking. The weak regulatory capacity of the MoH and its failure to establish an integral national health policy impede the current system and pose an important threat to reform. Under the proposed reform, the role of regulating managed care organizations and private providers would be an essential element to ensure equity and access to the basic package. The MoH must be responsible for policymaking, priority setting, and regulation, while focusing on establishing strategic direction for the sector, monitoring overall sector performance, and holding other actors accountable for meeting policy objectives.¹⁸ The MoH must also promote an appropriate legislative agenda to support public health priorities and build consensus for political action. The key policy instruments that need to be developed include epidemiological surveillance, data management for decisionmaking, and human resources specialized in public health and health management. The Government should also place considerable emphasis on establishing a regulatory framework, creating institutional capacity to regulate the insurance sector and health care providers, defining national health priorities, and translating health priorities into purchasing strategies for health insurance plans. Such an agenda would require substantial changes to the current role of the MoH in health financing and provision.

Increasing the accountability and transparency of local government financing and provision of health care services. The failure to enforce budget caps for municipal government financing of health care services has a detrimental effect on budgetary discipline. Cost overruns by municipal hospitals, and irrational investments and staffing policies contribute to HIF deficits, but have little impact on the health of the population. In the context of a reformed system, the role of municipal governments in health financing and provision must be addressed in order to improve financial discipline and increase the autonomy and management capacity of provider organizations. The reform must include incentives for municipal governments to reduce overcapacity in the sector and to strengthen local hospital management.

¹⁸ This would be achieved through a National Health Plan (NHP) produced annually by the MOH, which would lay out the key health targets and monitoring indicators. Several countries are producing NHPs, including the United Kingdom and New Zealand. The financing agency needs to ensure that overall allocation is in accordance with the NHP, and articulating agencies need to base their purchasing strategy on the NHP.

Ensuring financial sustainability by improving revenue collection. While the reforms detailed above are meant to control expenditures and to increase value for money in the health care system, the Government will also have to improve revenue collection. The first dimension of change focuses on improving the revenue-generating capacity of the health insurance system. Although the recent transfer of collection responsibility from the HIF to APEH should produce efficiency gains, additional reforms are needed to reduce evasion and underpayment, and to make revenue collection by the HIF more equitable. The main changes would be to collect more taxes from self-employed workers, reduce evasion by large employers, impose large fines on outstanding debts, and agree on debt repayment strategies with debtor organizations.

Future revenue increases must be achieved primarily through more efficient collection of payroll taxes from existing contributors and improved collection from the self-employed. Currently, salaried employees bear a disproportionate share of the burden, paying 87 percent of all HIF revenues and receiving only 34 percent of the benefits. The absence of contributions from pensioners, and the relatively small contributions from the unemployed, students, and the self-employed (due partly to underreporting and evasion), undermine the solidarity-based social insurance concept and lead to increased deficits. Smaller HIF deficits and increased fairness across different insured groups could be achieved if the self-employed were subject to a contribution equal in proportion to that of salaried employees. Central Government transfers should cover contributions for the elderly, students, and the unemployed in order to reduce the deficit and the burden on salaried employees. Furthermore, introducing Government transfers to cover health care benefits for pensioners, the unemployed, and students would make the system more progressive, allowing and allow for an additional reduction in payroll tax rates. However, this would require adjustments in the central budget in order to not increase the general Government deficit. The issue of generous cash benefits and other entitlements offered by the HIF must also be addressed in the reformed system. Cash benefits should be gradually phased out or transferred to other budget lines.

The second dimension of increased revenue generation is to stimulate private financing through a supplementary insurance market, well-defined copayment policies, and increased private investment in health care infrastructure. While overall financing of the system would remain public through payroll contributions and general revenues, policies to increase private financing could close the investment gap, lead to the development of more rational payment systems for medical professionals, and produce substantial improvements in the quality of care.

Mitigating risk and limiting the fiscal cost of reforms. Although efficiency and quality gains are likely, health reforms resulting in changes to the current health insurance scheme are not without risk. A large-scale health reform, as demonstrated in other countries, carries fiscal, logistical, administrative—and ultimately political—risks. It is particularly important that any changes include policy and operational instruments that would explicitly limit the medium to long-term fiscal liabilities of the health care system. In addition, improving the capacity of the health care system to deal in a more cost-effective manner with an aging population that is burdened by chronic diseases would be key to mitigating the indirect fiscal liabilities. It is also critical to develop appropriate regulations to limit risk selection by private health plans, as well as to offset fiscal risks, in order to ensure equal access and improve the quality of care. Strategies to transfer financial risk from the Government's budget to the newly formed insurance entities would help to ease the Government's burden of caring for the poor, the elderly, and the ill. Substantial risks are associated with the potential increase in administrative expenditures. Experience in other countries operating under competitive health insurance indicates that transaction costs and administrative expenditures can be as high as 15 percent of contributions.¹⁹ Controlling marketing

¹⁹ The difference between the costs of public and private insurers is, however, frequently overestimated, because private costs tend to be more explicit and transparent than public costs.

expenditures and excessive switching of benefit plans would be essential to keeping overall costs under control.

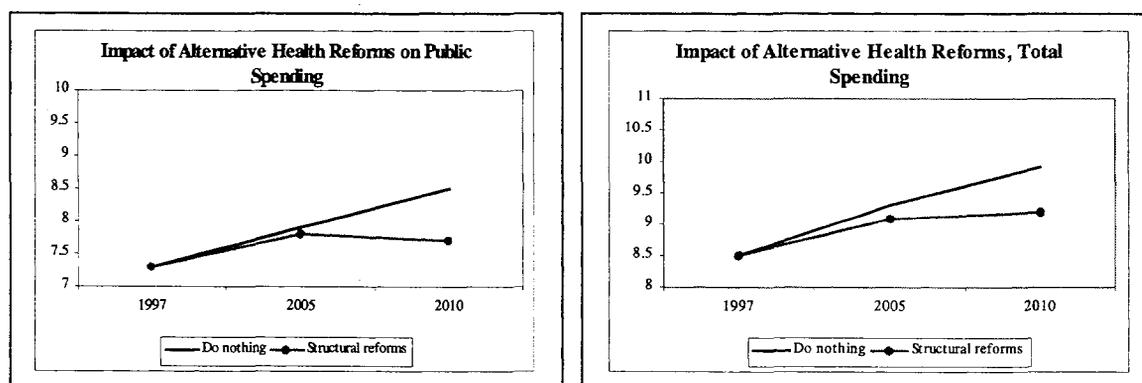
In order to achieve the maximum benefit from health financing reform, the perverse incentives that currently dominate health provision must be addressed. As mentioned above, a key aspect of the provider market reform is the introduction of selective purchasing by health insurance agencies. Purchasing decisions, in turn, must be guided by clear policy priorities (a responsibility of the MoH) and the requirements of a compulsory minimum package. The introduction of purchasing within a clearly defined legal and regulatory environment would stimulate competition among providers, yielding greater efficiency and better quality. In addition to introducing such incentives, selective purchasing would be a powerful instrument for reducing excess capacity over time. In fact, unless insurers are free to enter into contracts with providers on a competitive basis, there will be no rationalization of the health system. If insurers must accept any willing provider, the reform of the health financing and insurance system will not result in savings, but only in the status quo at a higher fiscal cost.

Fiscal Impact of a Reformed System

The previous section outlined the structural changes in the financing, organization, and delivery of health services that are necessary to improve the health status of the population, while avoiding deficits in the health sector. While the short-term impact of these reforms may actually be to increase, not decrease, public expenditures on health, evidence indicates that the consistent application of these policies can produce dramatic changes in the health of the population and achieve cost savings in the medium to long term (World Bank 1993). Structural reform programs in other countries that have addressed deficiencies in the financing, organization, and delivery of health care services have shown that an initial investment of between US\$17 and US\$25 per capita is required. In Hungary, this would mean an investment of US\$180 to US\$260 million.

The implementation of a carefully sequenced health reform program that improves priority setting, addresses institutional inefficiencies, and introduces cost containment mechanisms would lower expenditures and yield important fiscal benefits. Figure 2.4 displays projected expenditures under two alternative reform scenarios: (i) without the introduction of reforms ("do nothing"); and (ii) with a sequenced structural reform, as detailed above.

Figure 2.4: Projections for the Health System



Source: World Bank staff estimates.

In the absence of reforms, rising costs (wage pressures, growing capital investment, and higher pharmaceutical prices) not offset by efficiency gains would lead health care expenditures to increase by at least 1.5 percent of GDP within 10 years. After 2010, additional pressures would arise due to the sharp aging of the population and the related burden of chronic illness.

Misguided reforms can be cost ineffective. Empirical evidence suggests that the introduction of competing health insurance funds without adequate regulation could lead to a sizable increase in total health expenditures, with little or no improvement in the health status of the population.²⁰ Most of the increase would stem from increased administrative expenses (of up to 15 percent of total spending). Under conservative assumptions of risk selection by insurance companies, the impact on public spending is even more striking. In this case, assuming that more than 60 percent of employed and self-employed workers are enrolled in health insurance funds other than HIF by 2010, and assuming that the lower-income and chronically ill patients would be left to the public system, the deficit in the overall budget attributable to the health sector would increase from 0.7 percent to more than 2 percent of GDP. The large burden on public finances would stem from a sharp decline in HIF revenues, combined with only a minor reduction in health care spending, as those individuals that consume health care services in excess of the national average would remain in the public system due to their inability to pay an actuarially fair premium for health insurance.

The proposed gradual reforms, however, would introduce greater financial discipline and orient spending toward services that yield the greatest health gains for the population. After an initial increase in expenditure (from 7.3 to 7.8 percent of GDP), due mainly to capital investments needed to repair and modernize Hungary's deteriorated health facilities, public spending on health would remain nearly constant at 7.7 percent of GDP. Under this scenario, the efficiency gains would allow for a wage adjustment in the sector despite a likely increase in administrative costs.²¹ Due to private sector-led supplementary coverage, total health expenditures would increase to 9.2 percent of GDP by 2010.

Although the above estimates are preliminary, the scope for cost containment and greater efficiency is supported by empirical evidence from reforms in other OECD countries.²² In fact, a conservative 10 percent efficiency gain achieved by realigning institutions and incentives would imply an annual stream of economic benefits of 0.7 percent of GDP. While some of the changes, such as the aging of the population and the epidemiological transition, are generally beyond the control of Hungarian policymakers, efforts to fine tune the financing, organization, and delivery of health services should lead to more effective utilization of limited resources while enhancing service quality and, ultimately, improving health outcomes.

LOCAL GOVERNMENT FINANCES IN THE CONTEXT OF EU ACCESSION

Local Government Finances in the First Half of the 1990s

Local government expenditures have accounted for roughly 20 percent of public sector expenditures and 35 percent of public sector investment. As shown in Table 2.8, locally raised tax revenues over which localities have control have amounted to only 20 percent of total revenues, or roughly 3 percent of GDP. Local governments also receive a share of the personal income tax, based on

²⁰ In this context, the secondary effects of the Czech health reform are illustrative. The introduction of a multiple payer system has resulted in higher salaries and more health care consumption, leading to a sizable increase in health expenditures (from 6 to 9 percent of GDP). This increase, however, has not been accompanied by visible quality or productivity gains or by improvements in the health of the population.

²¹ Administrative costs are assumed to increase from 4 to 8 percent of HIF revenues, due to improved supervision, some advertising expenditures, and multiple layers of administration.

²² Some selected examples are: pharmaceutical reference pricing in Germany; tobacco legislation in the United States; hospital corporatization and purchasing reform in the United Kingdom; introduction of hard budget constraints for hospital reimbursement in Austria; primary care reform in Spain; definition of benefit packages and risk adjusted capitation formulas in the Netherlands.

the amount collected within their jurisdiction, and 50 percent of the motor vehicle tax; but these two revenue sources yield only 11 percent of total local revenues. As a result, local governments depend heavily on transfers from other areas of the public sector to finance their expenditures. Transfers comprise a system of normative and earmarked transfers to cover current expenditures, as well as a system of specific grants to finance investment.

Table 2.8: Local Government Accounts, 1993-98
(percent of GDP)

	1993	1994	1995	1996	1997	1998
Total Revenues	16.1	15.9	13.6	13.0	12.8	12.0
Own current revenues	3.0	2.8	2.6	3.0	3.3	2.9
Revenue sharing with Central Govt.	1.4	1.5	1.7	1.6	1.7	1.9
Transfers from Central Govt.	7.7	7.3	5.7	5.0	4.3	4.2
Transfers from other public sector	2.8	2.9	2.4	2.4	2.4	2.2
Capital revenues	0.7	0.9	0.8	0.6	0.6	0.5
Other revenues	0.5	0.5	0.4	0.4	0.5	0.3
Total Expenditures	17.2	17.4	13.9	13.0	13.1	12.7
Current expenditures	13.5	13.7	11.5	10.9	10.5	10.2
Capital expenditures	3.1	3.3	2.4	2.1	2.6	2.4
Other expenditures	0.6	0.4	0.0	0.0	0.0	0.1
Balance	-1.1	-1.5	-0.3	0.0	-0.3	-0.7
Net Financing	0.5	1.0	0.2	0.3	0.3	0.4
Privatization revenues	0.2	0.3	0.5	0.7	1.0	0.5
Net borrowing	0.3	0.7	-0.2	-0.4	-0.7	-0.1
Residual Balance	-0.6	-0.5	-0.1	0.3	0.0	-0.3
Memo item:						
Borrowing/borrowing cap (percent)	117.0	167.0	81.0	27.0	19.0	30.0

Source: Ministry of Finance and World Bank staff estimates.

Before 1996, transfers and own revenues, including borrowings, were insufficient to cover total expenditures. They resulted in residual deficits (Table 2.8) which were ultimately covered by the central Government. During this period, some local governments also started to default on their debt and to call for additional resources from the Central Government. This situation stemmed, in part, from an imbalance between expenditure responsibilities and revenue assignments, but also from the lack of transparency in the use of public moneys, and from the fact that the Central Government is ultimately responsible for many local government obligations.

Recent Efforts to Introduce Transparency and Discipline

The stabilization program initiated in 1995 (chapter 1 and section 1 of this chapter) included three elements that introduced greater discipline in the management of local government finances. First, transfers declined by around 3 percent of GDP, and efforts were made to improve and simplify the system of normative transfers. Second, annual borrowings by local governments were subject to a cap (equal to 70 percent of own revenues minus debt servicing costs). Finally, the Parliament enacted a local bankruptcy law that prevents bailouts by the Central Government, forbids the use of core local government assets as collateral, forces local governments to negotiate with their creditors, and allows the Central Government to appoint a commissioner to control local finances during bankruptcy proceedings. As shown in Table 2.8, these measures have resulted in a substantial reduction in current and capital expenditures and in the reduction of local government deficits. New borrowing has remained well under the borrowing cap, and local governments have also made use of their privatization revenues to retire part of their debts.²³

²³ Their assets include the housing stock, companies established locally, and shares of state companies utilizing the land in their territory.

Although local governments have been able to meet fiscal targets in recent years, there are also indications of inefficiencies in the delivery of public services and of strains in local finances. First, there is still a systemic imbalance in the intergovernmental finance structure. Expenditure and revenue assignments are not well matched; the system of transfers creates inappropriate incentives, which lead many local governments to claim additional deficit grants to manage financial difficulties. Although the amount of deficit grants has remained about HUF 7 billion in 1996 and 1997 (around 0.1 percent of GDP), the number of local governments applying for such grants increased to almost 25 percent of all municipalities.

Second, fragmentation in the provision of services implies that economies of scale are not exploited, leading to high costs and poor quality services in many areas. There have been efforts to promote cost-effective service delivery through the creation of functional associations and regional development units. Such associations are, however, constrained by their limited legal status, and by their inability to either collect own revenues or to receive grants from the state as a single entity. Roles and responsibilities of the different levels of regional development are still unclear; this creates problems of coordination and undermines efficiency in service delivery.

Third, although it is true that local expenditures have declined as a share of GDP in response to the decline in transfers and the tighter borrowing constraints, it is unlikely that expenditures can be maintained at their current level. This is because the amortization of local assets has not been properly incorporated in local spending decisions, because the renewal of assets has been repeatedly postponed, and because there are substantial additional investment needs.²⁴

Policy Options in the Light of EU Accession

The Government must identify the best set of policies to guide the operations of local governments, in view of the need to rebuild and improve local infrastructure (sewage systems, water treatment, roads, hospitals), and the need to prepare the economy for integration with the EU. Achieving EU membership will give Hungary access to structural funds that could amount to about 2 percent of GDP every year. Although access to these funds would substantially increase the scope for rebuilding local infrastructure, it is essential that local governments have the capacity to meet the cofinancing requirements. These requirements, at about 20 percent, imply that local governments will need to contribute an additional 0.5 percent of GDP to infrastructure projects in order to utilize the EU's structural funds.

If local governments are able to develop their own revenue sources, the cofinancing requirements could be partially met from these sources. Any remaining cofinancing needs would have to be met from additional transfers from the Central Government or from borrowings. In any case, there is a clear need to develop the capacity of local governments to generate and to manage a larger volume of resources. In order to strengthen this capacity, the Government may consider adopting the following policies:

First, the Central Government needs to further clarify the role of the intermediate tiers, such as regions, counties, and associations. Expenditure assignments need to be specified more precisely; and inconsistencies concerning local government and sectoral legislation (health, education) need to be removed, thereby clarifying where decisionmaking lies. If the Government chooses to support the development of municipal associations, it needs to allow such associations to act as legal entities, collect revenues, and receive grants. Multi-county and county development organizations can also perform the

²⁴ As an illustration, in the health sector, in which a majority of hospitals are owned by local governments, the stock of buildings needing renovation or replacement was an estimated HUF 140 billion at the end of 1997 (the equivalent of 1.7 percent of GDP).

important function of managing EU funds, but their programming and implementation capacity should be improved.

Second, local governments need to further develop their capacity to generate revenues from local sources. Introducing a value-based property tax and implementing a gradual upward revision of the vehicle tax rates for large cars could significantly boost local revenues. Personal income tax (PIT) sharing currently allocated by origin might be replaced by a PIT surcharge system. There is also scope for raising more revenues from the business tax by having the tax implemented by a wider range of subnationals. The property tax, the PIT surcharge, and the business tax are expected to gradually become the major sources of local revenues; this would increase the ratio of revenues subject to local discretion, and hence enforce local accountability.

Third, the Government may wish to pursue a more systematic approach to determining current grants, in order to ensure predictability and improve fiscal planning at the local level. The annual level of transfers for current expenditures might be tied to macroeconomic benchmarks such as inflation and GDP growth, as in France, or determined as a fixed percentage of taxes, as in Japan. Moreover, the system for allocating current grants needs to be simplified and made administratively less burdensome. Equalization grants currently allocated through numerous parallel channels should be consolidated into a single equalization fund designed to compensate imbalances across municipalities and regions.

Fourth, the mechanism for investment grants needs to be reviewed to ensure that it supports national priorities and equalization purposes. The system of investment grants remains fragmented. It has substantial administrative costs, and it creates incentives for localities to focus their efforts on obtaining grants from the center as opposed to increasing their own revenues and improving budget management. One option for the Government would be to pool all the resources currently allocated to local investments into a single investment grant mechanism. The improved cross-sectoral coordination (as a result of Government Resolution 263/1997) has been a step in this direction. Limitations on which local entities or projects will be considered for capital grants might be made more stringent, to ensure that selected projects are economically viable, and are of the highest priority.

3. FOREIGN TRADE AND CONTESTABILITY OF MARKETS

Achieving sustainable and rapid growth before and after accession to the EU will require maintaining strong export performance. This, in turn, hinges critically on the ability of Hungarian firms to compete in a single European market. By analyzing recent trends in trade patterns and export performance, and by examining market access issues, this chapter gauges Hungary's ability to compete in a single market, and to identify the policy measures that could further bolster this ability.¹

REORIENTATION OF FOREIGN TRADE TOWARD MARKET-DRIVEN PATTERNS

The demise of central planning, coupled with the rapidly declining Soviet capability to sustain "soft" settlements in intra-CMEA trade, provided the catalyst for a reorientation of Hungary's commercial relations. In the second half of the 1980s, the combination of the falling oil price in intra-CMEA trade and cuts in Soviet deliveries encouraged CMEA members to restrain exports to the FSU and increase exports to hard currency markets. This heralded a return to trade patterns determined by economic, rather than political, considerations. The share of former CMEA trade in Hungary's total foreign trade fell from 60 percent in 1986 to 42 percent in 1989 and to 22 percent in 1991.

The challenge of readjusting trade patterns in the early 1990s proved formidable. In the previous two decades, the competitiveness of Hungarian exports to Western markets had declined. Indeed, many Hungarian firms had operated in "soft" CMEA markets devoid of competition and dominated by products of poor quality. Furthermore, the shift to convertible currencies in CMEA trade, combined with a rapidly falling import demand in the FSU, caused significant deterioration in Hungary's terms of trade, mainly with the FSU.

Hungary has successfully met these challenges. After experiencing a 5 percent drop in total exports in 1991 and another 13 drop 1993, Hungary increased its volume of exports by 17 percent in 1994, to a level exceeding that of 1989. Since that time, exports have continued to rapidly increase, with the share going to developed countries rising to about 70 percent. Changes on the import side were even more pronounced. As a result, the process of geographic reorientation to market-driven patterns of foreign trade was quickly achieved.

Given their proximity and high GDP, the EU countries have quickly become Hungary's largest trading partners. *In 1989, the 15 EU countries (including the countries that would join the EU in 1995) accounted for 34 percent of Hungary's total exports; this figure rose to 50 percent in 1991. Following the entry into force of trade provisions of the European Agreements (EA) in*

¹ This chapter focuses mainly on manufacturing; agriculture is the subject of Chapter 9.

1992, this share rose to more than 70 percent in 1997. This suggests a massive reorientation of Hungary's exports toward EU markets.²

INTEGRATION INTO EU MARKETS: EXPORT PERFORMANCE

The scope and depth of a country's integration into EU markets for goods offer important insights about the ability of its firms to compete in a single market. With the share of EU in its trade turnover amounting to around two thirds, Hungary is actually more integrated into the EU than a number of EU-members themselves. Note that the average ratio of inter-EU trade to external trade was 61 percent in 1990-96.³ This integration took place as competition from imports from EU suppliers became more intense: since 1995, tariffs on industrial products have been slashed by 15 percent annually, and will be zeroed in 2001.⁴ It thus appears that Hungarian firms have so far been quite successful in a more competitive environment.

An interesting question for the future concerns the ability of Hungarian firms to withstand competitive pressures from a single market. A deeper analysis of Hungary's export performance in EU markets since the beginning of the transition can offer an answer.

Expansion of Exports to the EU: Two Phases

One can distinguish two different phases in Hungary's exports to the EU: 1989-92 and 1994-97. During the first phase, the expansion in exports to the EU, triggered by the collapse of former CMEA markets and the liberalization of both imports and the exchange rate regime, were driven mainly a redirection of manufactures exports to Western markets. Most of these were EU markets. The value of exports to EU countries increased by 76 percent between 1989 and 1992.⁵ This expansion, however, lost steam in 1993, at which time the value of EU-oriented exports fell by 12 percent (see Table 3.1).

In the late 1980s, the FSU accounted for approximately 40 percent of Hungary's total exports of machinery and transport equipment, whereas the EU accounted for 10 percent.⁶ These ratios were almost reversed, however, by 1991, when the EU's share reached about 35 percent and that of the FSU had fallen to 19 percent. In 1992, the share of the FSU fell further, to 16 percent.

² Total exports are as reported in Hungarian official statistics. Exports to the EU are derived from EU import statistics. In order to account for differences due to c.i.f./f.o.b. (cost of insurance and freight/free on board) conventions, the value of imports from the EU as reported by Hungary was corrected by annual growth rates of EU imports from Hungary as reported by the EU. This approach may overstate the share of EU-oriented exports, since some exports (e.g., those due to outward processing) were not accounted for in the Hungarian statistics, thus understating the value of total exports.

³ Author's calculations from data in UN COMTRADE database.

⁴ The share of EU industrial products in total industrial imports for which Hungary eliminated duties in 1992 was around 30 percent. These were mainly products not produced domestically. In 1999 most industrial products from the EU are no longer subject to tariffs.

⁵ This analysis is based on mirror statistics; i.e., data on Hungarian exports and imports as reported by its EU trading partners to the UN COMTRADE database.

⁶ Calculations are based on data reported by Hungary to the UN COMTRADE database.

**Table 3.1: Two Phases of Hungary's Export Expansion
(annual changes in percent)**

Annual growth rates	1990	1991	1992	1992, 1989=100	1993	1994	1995	1996	1997	1997, 1993=100
Hungarian exports to EU*	30.5	20.0	12.7	184	-11.7	25.8	37.4	12.6	19.2	232
In terms of share in EU imports **	10.3	15.7	9.4	140	-5.5	14.1	17.0	9.5	13.2	165
Total exports **	-0.2	6.2	5.2	111	-16.8	20.2	20.3	2.2	21.2	179

Sources: * Derived from data reported by EU to UN COMTRADE database.

** Derived from *Statistical Yearbook of External Trade*, Hungarian Central Statistical Office, Budapest 1997.

During the second phase, exports, which gained additional momentum over 1994-97, grew at an average 24 percent per year. Most of this growth came from newly established or restructured industrial capacity (second generation firms, mostly foreign owned). The value of exports to EU countries increased by 132 percent—almost 50 percentage points more than during the first phase. Economic recovery has not slowed this growth; if anything, the recovery was export led. Rapidly growing export earnings and inflows of foreign capital have allowed an increase in imports, thereby providing higher quality products for both consumption and investment.

Table 3.2: Hungarian Exports to the EU in a Comparative Perspective, 1992-97

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Value of EU Imports from	(in millions of US dollars)								
Czech Republic	2,843	3,476	4,050	5,513	6,498	8,604	11,597	12,176	13,179
Estonia	N/A	N/A	N/A	344	308	739	1,314	1,579	1,870
Hungary	3,705	4,834	5,799	6,537	5,773	7,260	9,974	11,231	13,398
Poland	5,167	7,705	8,781	10,274	9,834	11,934	15,260	15,678	16,049
Slovenia	N/A	N/A	N/A	2,415	3,698	4,502	5,617	5,501	5,276
Rate of Growth of EU imports from	(in percent)								
Czech Republic		22	17	36	18	32	35	7	7
Estonia		N/A	N/A	N/A	-10	140	78	20	13
Hungary		30	20	13	-12	26	37	13	19
Poland		49	14	17	-4	21	32	3	2
Slovenia		N/A	N/A	N/A	53	22	25	-3	-4
Index, 1992=100	1989	1990	1991	1992	1993	1994	1995	1996	1997
Czech Republic	52	63	73	100	118	156	210	221	236
Estonia	N/A	N/A	N/A	100	90	215	382	459	544
Hungary	57	74	89	100	88	111	153	172	205
Poland	50	75	85	100	96	116	153	158	161
Slovenia	N/A	N/A	N/A	100	153	186	233	227	218

Source: UN COMTRADE database; and for Czech exports in 1989-92, Czech National Bank, Central Statistical Office, and Ministry of Industry, Trade, and Tourism.

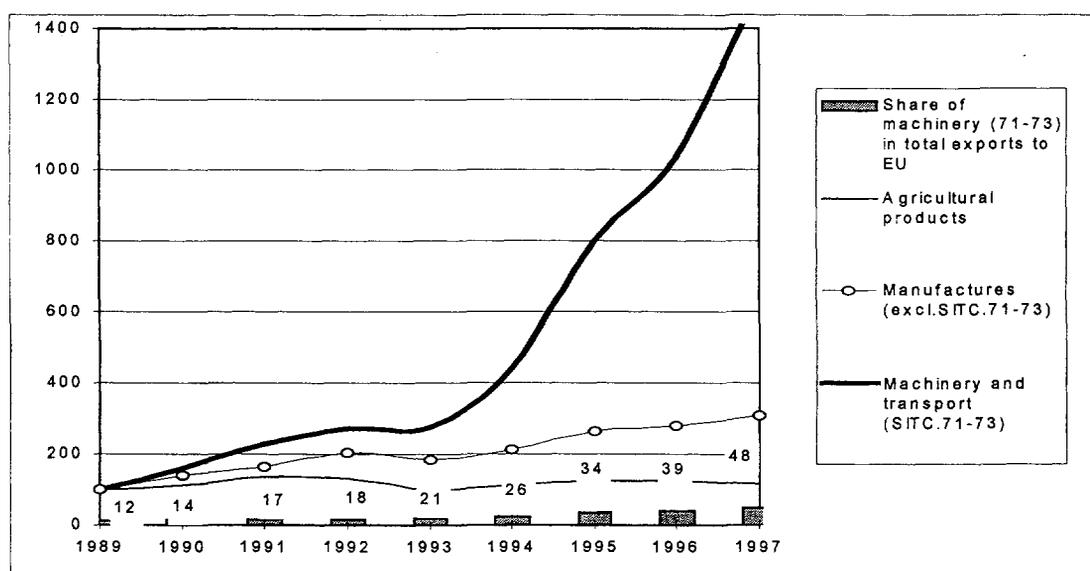
How does Hungary's export growth compare with other five first-wave entrants? As shown in Table 3.2, Hungary is the second largest exporter among economies of this group. Leaving aside Estonia's initially volatile reintegration into the EU markets, Hungary registered the highest growth rates over 1995-97. It caught up with the Czech Republic in terms of value of exports in 1997.

Export Basket: The Shift toward Manufactures

The expansion in commercial ties with the EU had a discernible impact on the composition of exports. First, the expansion of exports has been driven by manufactures: the share of manufactures in Hungarian exports to the EU rose from 55 percent in 1989 to 85 percent in 1997. The driving force in Hungarian exports has been machinery and transport equipment: their share reached 47 percent in 1997 (see Figure 3.1). Between 1992 and 1997, the value of these exports grew by 444 percent.

Second, contrary to a widespread perception, there was no collapse of agricultural exports. Although the share of agricultural products in total Hungarian exports fell from 31 percent in 1989 to 10 percent in 1997, the share of Hungarian exports in EU external imports of these products fell only slightly, by 0.08 percentage point between 1989 and 1997.⁷

Figure 3.1: Machinery and Transport Equipment against other EU-Destined Exports (1989=100)



Source: Derived from data reported by EU to UN COMTRADE database.

Change in Competitiveness in EU Markets

The opening of the economy, combined with increasing globalization of production triggered by reduced costs of transportation and information, usually leads to greater specialization and improved competitiveness. Because of a changed institutional environment and a favorable climate for foreign investment, the capacity of Hungarian firms to compete internationally has significantly improved. In fact, they have outperformed suppliers from other countries. The share of products made in Hungary in EU outside imports (excluding trade among EU members) increased each year between 1989 and 1997, except for 1993.

The time profile of shares in EU imports carries no surprise (Appendix Table 3.6). With the progress in industrial restructuring, with the elimination of energy subsidies, and with rising wages, performance in energy-intensive and labor-intensive products has declined.

⁷ The share changed over time. It increased to 2.1 percent in 1991, fell to 1.51 in 1995, and increased to 1.56 in 1997. Had Hungary maintained its 1989 share, its agricultural exports would have been larger by US \$70 million.

Hungary no longer seems to be the marginal supplier, highly vulnerable to vicissitudes in the business cycle, as it was in the 1980s. The weight of Hungarian products accounting for more than 5 percent of respective EU imports increased significantly: their share rose from 35 percent in 1989 to 44 percent in 1997 (Table 3.3). Another important indicator of Hungary's reduced vulnerability is the dramatic expansion of exports of manufactures whose share in EU imports is above 5 percent: they represented 35 percent of total EU-oriented exports by 1997.

Table 3.3: Significance of Hungarian Exports into the EU in 1989, 1993, and 1997

	1989	1993	1997
Number of product categories with a share in EU imports exceeding 10% (4 digit SITC. Rev. 1)	27	25	29
Value of exports (US\$ million)	654	845	4,418
Share in total EU-destined exports (in percent)	17.65	14.64	33.0
<i>Memorandum:</i> share of exports of products with a share in EU imports below 5% in Hungarian EU-oriented exports (in percent)	65	68	56

Sources: Derived from SITC. Four-digit data as reported by the EU to the UN COMTRADE database.

Although some engineering products that outperformed other suppliers in EU markets were already manufactured in 1989, the expansion did not consist merely in shipping more of the products already produced. Numerous changes in the nature and weight of these products, with winners and losers, can be observed. As for agricultural products, Hungarian suppliers have been successful in retaining and expanding their market share in some areas. All this points, again, to progress in economic restructuring, competitiveness, and diversification.

Factor Intensities of EU-Oriented Exports over 1989-96

According to the Heckscher-Ohlin Theorem, commodity trade patterns reflect differences in comparative advantage, as determined by different factor endowments among countries. A country tends to export goods that use relatively abundant factors—an outcome of a competitive market mechanism efficiently allocating resources.

Considering Hungary's large pool of relatively low-cost labor and its moderate climate favoring agriculture, one would expect dominance of labor-intensive and natural resource-intensive products. Adding to that an abundance of highly skilled labor relative to Hungary's GDP per capita, the human capital-intensive group should account for a sizable allotment within labor-intensive products.

Developments during the initial stages of the transition corroborate these expectations but with some twists. The export expansion was initially driven mainly by unskilled labor-intensive manufactures. The share of unskilled labor-intensive products reached a peak in 1993 and then fell gradually to 17 percent by 1997; that is, to below the pre-transition level (Table 3.4). The share of human capital-intensive products increased sharply in 1994-95, and then again in 1997. The share of natural resource-intensive products decreased, due mainly to the relative decline in exports of agricultural products.

Another development that seems to defy predictions based on Hungary's initial factor endowments is the steady growth in the share of technology-intensive products. Such products are capital intensive, and capital is a scarce factor relative to labor. While one might expect that, in the early period, some of the capital-intensive pre-transition firms could redirect their sales of engineering products to EU markets, such expansion of sales was not likely to last long. This did not happen in Hungary: the share of technology-intensive products has been steadily expanding, from 19 percent in 1989 to 44 percent in 1997. By contrast, it is interesting to note that Poland's

share of equivalent products contracted over 1992-95, and that Slovenia's share remained flat. Clearly, Hungary's success in attracting high-quality flows of foreign investment has contributed to this outcome.

Table 3.4: Composition of Hungarian Exports to the EU, by Factor Intensity, 1989-97

Relative Factor Intensity Groups	1989	1990	1991	1992	1993	1994	1995	1996	1997
Natural resource intensive	46.2	41.5	39.3	34.1	30.8	28.9	25.1	21.9	16.5
Unskilled labor intensive	18.8	21.1	22.6	24.8	26.5	23.0	19.2	19.3	17.1
Technology intensive	19.3	21.1	22.5	23.0	25.3	28.9	34.6	36.9	44.1
Human capital intensive	12.9	14.2	13.3	15.7	15.1	17.0	19.1	20.1	22.2

Source: Derived from the UN COMTRADE database, as reported by the EU.

As a result, low value-added natural resource-intensive products and unskilled labor-intensive products now account for only 34 percent of the Hungary export basket, while high value-added technology-intensive and human capital-intensive products command 66 percent. The dramatic acceleration of exports of engineering products, machinery, and capital equipment over 1994-96 has been responsible for this change.

Indeed, calculations of Hungary's Revealed Comparative Advantage (RCA) indices in EU markets further bolster these observations.⁸ While both technology and human capital-intensive products were initially at a comparative trade disadvantage, that situation has reversed. The RCA index of skilled labor products first exceeded unity in 1990 and increased to 1.46 in 1997 (Appendix Table 3.7). Although from a lower base, technology-intensive products have recorded even more impressive gains. On the other hand, exports of natural resource-intensive products have lost comparative advantage in these markets, while that of unskilled labor-intensive products has been on the decline.

Changes in the Level of Processing

Hungary's export offer has moved toward capital and technology-intensive products, but has it become higher value-added in terms of processing of commodities? To address this question, we use a classification of 48 commodities developed by the World Bank for analyzing different levels of processing.⁹

According to this classification, the share of primary and intermediate stage products in 48 commodity chains has been declining since 1989, while the share of final stage products has significantly increased (Table 3.5). This shift toward final stage products has also been reflected in shares of EU external imports. Taking the averages for 1989-92 and 1994-97, final stage products comprised the only group that increased its presence in EU markets. In fact, the share of final stage products in EU imports increased spectacularly, by more than 30 percent between 1989 and 1997.

⁸ A country's revealed comparative advantage in a product "j" is defined as the ratio of the share of "j" in the country's exports to the share of the product "j" in world trade. A value for this index below unity indicates a comparative disadvantage. If the index takes a value greater than unity, the country is considered to have a "revealed" comparative advantage in the product. In this particular case, Hungary has a revealed comparative advantage in a product if the share of that product in Hungarian exports exceeds its share in EU imports.

⁹ The main processing stages are primary (unprocessed), intermediate (semi-fabricated), and processed. For instance, the primary stage of a vegetable chain consists of fresh vegetables, while the processed stage includes preserved vegetables.

Table 3.5: Changes in Hungary's Exports to the EU, by Stage of Processing, 1989-97

	1989	1997	Average 1989-92	Average 1994-97	Change in percent, 1997 vs. 1989	Change in percent, 1994-97 vs. 1989-92
Share of primary stage products	19.8	18.3	19.0	17.4	-7.8	-8.6
Share of intermediate products	37.3	26.0	33.0	27.4	-30.3	-17.1
Share of final stage products	42.9	55.7	48.0	55.3	+29.8	15.2
Share of commodity chains in total exports to EU	35.2	15.1	31.4	17.6	-56.8	-43.9
Memorandum: share in EU imports						
Primary stage products	0.28	0.32	0.31	0.31	14.3	0.0
Intermediate stage products	2.35	2.27	2.62	2.41	-3.4	-8.0
Final stage products	1.62	2.16	2.03	2.18	33.3	7.4

Source: Derived from data in UN COMTRADE database.

The Hungarian export basket has visibly moved to higher value-added in terms of processing. An increased portion is processed domestically. As costs are internationally competitive, there is nothing wrong in exporting primary commodities; nonetheless, the movement up the processing chain is a clear sign of a more sophisticated and mature industrial structure.

Environmentally Dirty Products in Exports to the EU

Environmentally dirty industries tend to concentrate in countries where environmental control measures are less stringently applied. Since more demanding measures impose higher costs of compliance, countries with relatively lax environmental regulations tend to have a higher concentration of dirty industries. Less developed countries have less demanding compliance rules, and one would expect them to have revealed comparative advantage in markets for dirty products.

Contrary to what one might expect, however, the share of environmentally dirty products¹⁰ in Hungary's EU exports has not increased following the collapse of central planning—as has been the case in EU exports of other first-wave EU candidates, such as Poland and Slovenia. To the contrary, the Hungarian share began declining rather precipitously in 1991: it dropped from 25 percent in 1990 to 12 percent in 1997 (Table 3.6). Hungary's specialization in exports of environmentally dirty products to the EU has thus decreased. The country has also lost comparative advantage¹¹ in the trade of those products. These facts suggest that microeconomic restructuring in Hungary has contributed to the shift to environmentally cleaner products and technologies. This does not imply that it will not be costly for Hungary to meet the EU environmental standards as discussed in Chapter 10.

Table 3.6: Selected Features of Hungary's Dirty Exports to the EU, 1989-97

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Exports (US\$ million)	954	1,224	1,208	1,251	1,025	1,355	1,829	1,738	1,658
Share in exports to EU (percent)	25.7	25.3	20.8	19.1	17.8	18.7	18.3	15.5	12.4
Share in EU "dirty" imports (percent)	1.33	1.54	1.54	1.60	1.47	1.69	1.72	1.77	1.63
RCA	1.70	1.78	1.55	1.46	1.43	1.44	1.24	1.17	0.96

Source: Derived from the UN COMTRADE database, as reported by the EU.

¹⁰ The identification of environmentally dirty industries has been derived from Low and Yeats (1992).

¹¹ The value of RCA fell below unity in 1997

The Role of FDI in Restructuring and Export Performance

The Hungarian experience since 1990 provides strong evidence of the advantages of opening to foreign capital. As demonstrated by the dramatic shifts in the composition of exports and by Hungary's successful reintegration into international markets, investments by multinational companies (MNCs) and, to a lesser extent, outward processing have led to rapid modernization and readjustment of industrial capacities.

Although a relatively small economy among the former centrally planned economies, Hungary was, until 1994, the largest recipient of FDI. Surpassed by Poland in 1994, Hungary regained its top position in 1995 due to privatization agreements; it was the third largest recipient (after Poland and Russia) over 1996-97. In the 1990-96 period, Hungary and Poland received more than 50 percent of the cumulative FDI inflows to the region. In terms of annual flows relative to GDP and FDI per capita, Hungary has been the top recipient of FDI flows each year over the 1990-97 period (Table 3.7).

Foreign firms have played a dominant role in industrial restructuring. They are much more foreign trade-oriented than are domestic firms, thus making a relatively larger contribution to Hungary's reintegration into the world economy. Although firms with foreign capital generated 47 percent of total net sales and accounted for 29 percent of total employment in 1996, their shares in exports and imports were 60 and 64 percent, respectively. In 1997, these shares increased to 73 percent for exports and 72 percent for imports.¹²

Table 3.7: Cumulative FDI Inflows in Terms of Per Capita and in Relation to GDP

Cumulative inflows per capita										
	1990	1991	1992	1993	Average, 1990-93	1994	1995	1996	1997	Average, 1994-97
Estonia	0	0	55	163	55	305	440	513	620	476
Czech Republic	12	61	153	216	111	301	549	683	809	586
Hungary	29	168	308	531	259	639	1,068	1,256	1,439	1,101
Poland	2	10	27	71	28	119	213	329	411	268
Slovenia	0	0	56	112	42	154	239	328	476	299
Cumulative inflows as share of GDP										
Estonia	0.00	0.00	2.17	6.64	1.66	12.20	16.59	18.89	22.03	3.85
Czech Republic	0.38	2.48	5.86	7.97	1.99	10.41	16.15	19.10	21.81	3.46
Hungary	0.98	5.55	9.71	16.01	4.00	18.87	29.40	33.98	38.26	5.56
Poland	0.16	0.56	1.36	3.37	0.84	5.39	8.48	12.06	14.48	2.78
Slovenia	0.00	0.00	0.88	1.77	0.44	2.36	3.27	4.19	5.67	0.98

Source: *Global Development Finance* (1998), and *Economic Survey of Europe* (1998).

An important feature of FDI in Hungary is its large scope in terms of sectors covered and the actual number of foreign-owned firms. Although manufacturing received the largest FDI inflows (US \$4.2 billion) over 1992-96—accounting for 40 percent of the total foreign investment stock in 1996—other sectors of the economy, namely public utilities and energy (the 1995 “big” privatization), also attracted FDI (US \$1.5 billion).

The contribution of foreign firms to integrating domestic production capacities into global networks of production and distribution can be easily observed.

¹² All data are taken from Hamar (1998).

- First, considering that they account for almost three fourths of Hungary's foreign trade turnover, and that this share has been rapidly increasing, foreign firms are largely accountable for the spectacular improvement in Hungary's export performance in EU markets. Indeed, the successful development of a number of product groups can be easily traced to production activities of MNCs. These include, above all, automotive parts (Volkswagen and Audi piston engines accounted for 9 percent of total EU-destined exports in 1996) and electronics.
- Second, there is abundant evidence suggesting a rapid progressive incorporation of manufacturing capacity located in Hungary into global production networks, usually of large multinationals. Among medium and large firms in Hungary, there are no purely Hungarian-owned private companies. The top 100 Hungarian companies include a number of easily recognizable subsidiaries of multinational corporations.¹³ Furthermore, estimates of intra-industry trade suggest that the number of such companies is higher than in some EU members (e.g., Finland, Greece, and Portugal).

The experience with FDI in Hungary should, therefore, dispel fears that a preferential trading arrangement with the highly developed EU might lead to a catastrophic relocation of domestic industries.

Conclusion: A Demonstrated Capacity to Withstand Competition in a Single Market

The Hungarian economy has become tightly integrated into the EU; in terms of trade, as noted above, it is even more integrated than some EU members. Contrary to some predictions voiced at the outset of the transition, reintegration into international markets has not confined Hungary to the status of mere supplier of low value-added raw materials. To the contrary, the transition period has witnessed Hungary's growing specialization in increasingly sophisticated engineering products.

Indeed, changes in the composition of Hungary's EU-oriented exports have been much more extensive than in other transition economies—indicating an advanced process of economic restructuring. It appears that export growth has not been driven by marketing higher volumes of older products. Export offer has become more diversified. The share of high value-added products has been increasing, while that of unskilled labor-intensive products has been declining. Contrary to what one might expect, the share of environmentally dirty products has also been declining.

The findings of this section empirically support the conclusion that Hungary's economy is well prepared to cope with the competitive pressures of a single market. The challenge facing Hungary is to maintain conditions friendly to both foreign and domestic investment, and to macroeconomic stability.

CONTESTABILITY OF DOMESTIC MARKETS

The openness of the economy to foreign investment and import competition determines the contestability of domestic markets. Contestability of domestic markets entails not only issues

¹³ See the top 100 list in *The Wall Street Journal Europe's Central European Economic Review* (July and August 1998) compiled by Dun & Bradstreet Hungaria Inc. Among the 20 largest firms in terms of sales, at least six companies are part of large multinational corporations. These include IBM Storage Products (#2); Volkswagen's Audi Hungaria Motor (#6); General Motor's Opel Hungary (7); Philips (#12); General Electric Lightning (#15); and Japan's Magyar Suzuki (#16). Many of the top 100 are majority owned by multinationals (e.g., a white-goods producer Lehel Hutopeggyar, #39, which is owned by Sweden's Electrolux).

of market access for products, as embodied in tariffs and narrowly conceived non-tariff barriers. It also encompasses the market access implications of domestic policies and (environmental and other standards, phytosanitary measures), as well as the conditions for/protection of foreign investment. Higher levels of contestability usually generate higher rates of economic growth and better export performance.

While Hungary has been a leader among transition economies in opening its industry and services to foreign capital, it has been somewhat more hesitant in opening its foreign trade regime. As a result, there is a contrast between an unusually high degree of openness to international capital inflows, on one hand, and a less liberal approach toward goods inflows, on the other. Considering Hungary's relatively small size and that it has already achieved a high degree of openness—with foreign trade accounting for more than 40 percent of GDP—an argument can be made that Hungary would benefit enormously from unilateral liberalization.

Foreign Trade Policies: Gradual and Uneven Liberalization

The Collapse of Central Planning. State monopoly over foreign trade, together with central allocation of convertible currencies and the requirement to surrender hard currency earnings, left little room for trade liberalization under central planning. With the dismantling of central planning in 1987-88, the state monopoly over foreign trade was abolished. Nonetheless, in contrast to Poland's stabilization *cum* transformation program, liberalization of Hungary's foreign trade and exchange rate regime was done gradually. It was to be implemented in 20 to 25 percent increments over a 4-year period, beginning with liberalization of capital goods imports in 1989. With the erosion of central controls, the process was eventually accelerated. In 1990, rationing of imports of intermediate goods was abandoned, as were quotas on a number of consumer goods, albeit perhaps somewhat reluctantly and not completely.

Nonetheless, the change in market access was enormous. In 1987, not a single sector was open to competition from imports (or for that matter, any competition at all), whereas by 1990, around 70 percent of domestic production faced external competition.

Liberalization through Regional Trade Agreements. Preferential trade agreements have provided another powerful force for liberalizing the foreign trade regime. The two most relevant agreements are the European Agreements (EA) and Central European Free Trade Agreements (CEFTA),¹⁴ which envisage free trade for industrial products by the early 2000s. Imports of manufactures from the EU account for almost 74 percent of Hungary's total manufactures imports. Together with imports from CEFTA and EFTA, well over 80 percent of imports will be tariff free in terms of 1996 imports.

EA. Since the EU is Hungary's largest natural trading partner, by far the most significant agreement was the EA, signed in December of 1991. The interim trade agreement, which went into effect on March 1992, eliminated duties on about one third of all industrial products imported from the EU—mainly imported inputs used by domestic industry. Beginning in 1995, however, Hungary's tariff concessions on industrial products went into effect: tariff rates on EU industrial imports are being slashed by 15 percent a year until 2001, when, with some minor exceptions, they will be zeroed on all industrial products.

¹⁴ The Central European Free Trade Agreement (CEFTA), signed in 1992, provides a framework for bilateral agreements among six states: the Czech Republic, Hungary, Poland, Slovakia, Slovenia (which acceded in 1996), and Romania (which did so in July 1997).

CEFTA. The tariff cuts introduced under CEFTA-sponsored bilateral agreements have gone further and faster than those under the EA.¹⁵ By 1997, already more than 90 percent of Hungarian tariff lines of industrial products had been tariff zeroed. (On industrial imports from Romania, which did not join until July 1, 1997, this share is around 75 percent). For the remaining 10 percent of industrial products, including footwear, steel, paper, some rubber products, and vehicles, tariffs will be abolished on January 1, 2001.¹⁶ Yet, CEFTA members already have preferential access, as rates are well below most-favored nation (MFN) tariff rates. They are now at 30 percent of MFN rates in trade with the Czech Republic, Poland, Slovak Republic, Slovenia, and Romania. These tariff rates will decline further in 1999, and most of them will be zeroed by 2000.

Preferences are not limited to industrial products; they also entail agricultural trade governed by a set of multilateral preferences and supported by bilaterally agreed-upon tariff cuts. In all, agricultural preferences affect around 80 percent of Hungary's agricultural trade with CEFTA countries, which amounted to US\$482 million in exports and US\$97 million in imports.

Temporary Slippage in Trade Liberalization: The 1995 Stabilization Package. The 1995 stabilization package included short-term measures designed to curb the twin fiscal and current account deficits. These measures marked a temporary departure from the path of gradual liberalization in access to domestic markets, which has so far characterized Hungary's transition. The package included an extra 8 percent temporary surcharge on imports, except energy and machinery.¹⁷ In addition to the import surcharge, *ad valorem* customs and administrative fees—incompatible with WTO/GATT rules prohibiting the linkage of fees to the value of a shipment cleared by customs—as well as a value-added tax of 25 percent, were levied on all imports; the effective surcharge was thus significantly larger. The effective rate of surcharge reached its peak of 15 percent (on duty-free imports) in 1995 but subsequently declined until June 1997, when it was abolished.¹⁸

Nontariff Measures. The pervasiveness of nontariff measures negatively affects foreign trade. The non-tariff barriers (NTBs) coverage ratio—that is, the percentage of imports into Hungary subject to NTBs—amounts to 19.5 percent. By industrial country standards, this ratio is not out of line (for the EU it amounted to 16.5 percent in 1994, before the WTO/GATT tariff regime for agricultural products was implemented). While NTBs are more prevalent in Hungary than in the EU, the types of NTBs used are much less diversified. Hungary relies mainly on quantitative restrictions in the form of discretionary (non-automatic) licensing and quotas, both types accounting for approximately 60 percent of NTB-affected imports.

The NTB-affected products include sensitive manufactures, such as textiles and garments, some chemicals, steel, and cars. Hungary imposes two types of quantitative

¹⁵ More precisely, the CEFTA system has a multilateral and a bilateral component. The multilateral component comprises commonly agreed preferences, whereas the bilateral one comprises those negotiated bilaterally and not extended to all CEFTA members.

¹⁶ There are some exemptions. For instance, at the request of Poland, duties on automobiles will be zeroed a year later, on January 1, 2002.

¹⁷ The import surcharge was subsequently lowered to 7 percent (July 1996), 6 percent (October 1996), 4 percent (March 1997), and 3 percent (1997). It was eliminated on July 1, 1997.

¹⁸ Hungary charged a 6 percent customs fee which was then reduced to 2 percent in 1996. On January 1, 1997, the fee was abolished on imports from WTO-member countries. Thus, the effective surcharge on duty-free imports was 15 percent in 1995, 10.75 until October 1996, 9.5 percent until December 1996, 7.5 percent until March 1997, 5 percent until April 1997, and 3.75 percent through June 1997.

restrictions: one is a uniquely Hungarian *global quota on consumer goods*; the other entails import licensing.

Global quota on consumer goods. Despite recent reductions, the list of products subject to the global quota remains quite extensive. The quota was set at US\$630 million in 1991 and subsequently raised to US\$750 million. With the removal of all agricultural products as a result of the Uruguay Round agreements, its value fell to US\$518 million in 1995. The Government further reduced the coverage in 1998 and plans to gradually eliminate it over time, although no deadline has been set. The global quota strikes one as a vestige of central planning. Its existence dates back to Hungary's accession to the GATT in 1973. As one Hungarian economist notes, "... the global quota is the last remaining openly discretionary and outright protectionist element in Hungary's foreign trade regime."¹⁹

Moreover, the quota seems to be a redundant instrument with little purpose. In some cases, one may explain quantitative restrictions in terms of political economy. This is likely in the case of cars, where the desire to attract foreign direct investment during the early stages of the transition overrode purely economic considerations.²⁰ But maintaining quotas on jewelry or canned fish cannot be so easily explained. A quick removal of the global quota would go a long way toward dealing with remnants of micromanagement in foreign trade.

Export and import licensing. A second tool of managed trade consists of licenses, which cover both exports and imports. For exports, the rationale for licenses is not always clear. Leaving aside arms and other products that threaten public safety, the list contains harmless agricultural products, some metal ores, gold, and silver. Among agricultural products, goose and duck liver are subject to quotas imposed by the EU. But this does not appear to be the case for other products, such as durum wheat. Overall, around 6 percent of exports were subject to the non-automatic license requirement in 1998.²¹

The list of products subject to non-automatic licensing is much more extensive on the import side, although it directly affects a smaller percentage of imports.²² The list contains fish and fish products, some chemicals, textiles and clothing, some wood products, footwear, precious metals, vehicles, and arms. Neither national security considerations (arms trade) nor the protection of domestic producers appears to be the reason for maintaining licensing. On the latter point, for instance, caviar is not domestically produced. If import licenses are being imposed to administer the global import quota, all the more reason to eliminate the global quota.

In all, while some products seem justifiably subject to controls (e.g., arms, hazardous products, national treasures), others do not. Their presence provides opportunities for rent-seeking activities and may thereby unnecessarily complicate the political atmosphere.

Reverse Discrimination in Imports: Higher Cost to Producers and Consumers

Preferential trade arrangements always spur discrimination against suppliers from third countries. Most favored nation tariff rates and other border charges levied on imports from non-preferential trading partners determine the level of discrimination. The potential for trade

¹⁹ Csaba (1996).

²⁰ The elimination of the global quota may be problematic for certain goods because of agreements with multinational companies.

²¹ Ministry of Foreign Trade, Industry, and Tourism (1998).

²² *ibid.*

diversion from non-preferential to preferential trading partners increases with the magnitude of the preferential margin, that is, the difference between MFN and preferential tariff rates.

Since reductions in MFN tariff rates under the Uruguay Round proceed at a slower pace than those under preferential agreements, the level of discrimination remains significant. A measure of this discrimination lies in the difference between a simple average MFN rate (8.2 percent for industrial products) and a preferential rate. In 1997, for imports from the EU and EFTA countries, this difference was 6.2 percent. For founding members of CEFTA, the margin of preference was even higher, amounting to 7.3 percent. As a result, the average supplier from a third country is unable to market its products unless its cost is at least 6 percent lower than that of an EU supplier, or 7 percent lower than the CEFTA suppliers.

The margins will remain substantial even when tariff concessions negotiated under the Uruguay Round are phased in. Consider the following. When Hungary joined the WTO in 1995, it chose to bind its MFN tariff rates significantly higher than those of the EU. Average post-Uruguay Round weighted rates and bound rates on industrial products are both twice as high as in the EU (Appendix Table 3.8).²³ The largest absolute differences in MFN weighted rates are for transport equipment (10.6) percent and non-electric machinery (6.1) percent. Leaving aside agricultural products, for which tariff levels are difficult to estimate, the absolute differences in bound rates between the EU and Hungary are slightly smaller.

The increase in the level of discrimination following both the implementation of trade components of agreements with the EU (March 1992) and the establishment of CEFTA (1993) has not led to a substantial increase of preferential partners in Hungarian imports. Their share in total imports was relatively stable, averaging 70 percent over 1992-97. Thus, it would seem that there was none of the trade diversion that typically accompanies reverse discrimination.

Nonetheless, the tariff reverse discrimination should be reduced. Large margins usually contribute to higher import prices. This is especially true in markets for sophisticated manufactures, which are often dominated by two or three suppliers. If all of these suppliers were in preferential countries, competition among them would be sufficient to keep down the price. More often than not, however, there are also firms from third countries. If only one firm were in the EU, the price paid by a Hungarian importer would likely be higher by up to the difference between the relevant MFN and preferential rates. In other words, an EU supplier (or the Hungarian intermediary) obtains the rent at the expense of Hungarian users of imports. Since Hungarian MFN rates are higher than those in the EU, the reduction of the former to EU levels would slash the rent to that implied by the level of protection in the EU. Moreover, the alignment of MFN rate with those in the EU will bring market conditions in Hungary closer to those that would prevail when it becomes a full member of the EU.

TRADE POLICIES AND EXPORT PERFORMANCE

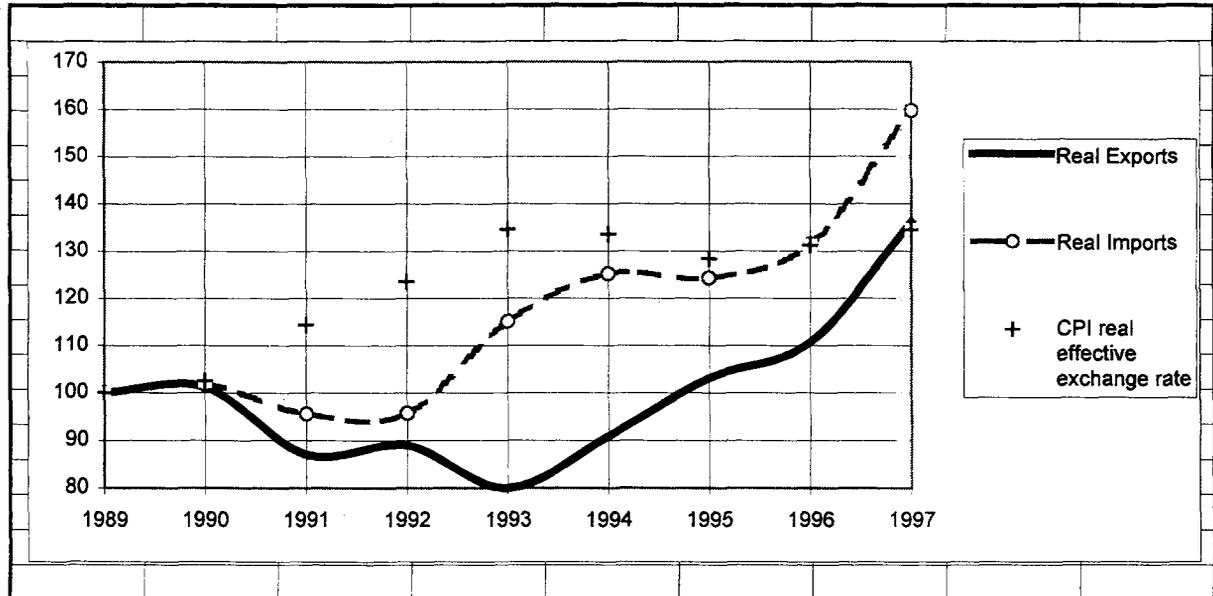
Hungary's foreign trade policy raises a question about its links to export performance. Empirical research strongly suggests that all development success stories over the past two decades have been based on strong export orientation combined with low or falling barriers to imports.²⁴ Hungary, however, recorded its largest export expansion during the temporary reversal

²³ Given significant changes in the composition of imports since 1989, the use of 1989 import figures to derive weights for tariffs raises objections. Rates weighted by more recent imports would probably be different. But since in 1996 the simple average MFN tariff rate on industrial products was higher than that in the EU by the factor of 1.7 (8.7 versus 5.0 percent), the general conclusion holds.

²⁴ See Sachs and Warner (1995).

in foreign trade liberalization following the 1995 adjustment program. It is also interesting to observe that the export expansion began one year before the 9 percent devaluation of the forint. Hence, one might draw the conclusion that Hungary is an exception to the general rule.

**Figure 3.2: Real Effective Exchange Rate and Developments in Foreign Trade, 1989-97
(1989 = 100)**



Source: International Financial Statistics, and staff estimates.

One explanatory factor is that Hungary has, in fact, attracted foreign investors by keeping them immune from the vagaries of its foreign trade policies. A duty drawback mechanism has allowed exporters to disregard tariff rates on imports of inputs for exports; other provisions have maintained duty exemptions on imports of capital equipment. If an investor wanted to avoid burdensome customs procedures, then there were *de jure* free trade zones located outside of Hungary's customs territory. Many investors have done so. The share of firms from free trade zones in total exports increased from 11 percent in 1995 to 19 percent in 1996 and to 26 percent in 1997.²⁵ Together with outward processing, the share of exports generated from sources shielded from the vicissitudes of Hungary's foreign trade policy have amounted to 47 percent of total exports.²⁶ This demonstrates that liberalism vis-à-vis foreign firms has significantly contributed to the export expansion.

On the other hand, it seems that the foreign trade measures in the 1995 stabilization package had a negative impact on the export response of small and medium enterprises. Import users among such firms incurred losses because they pay more for imports. Although the drawback mechanism allows them to recoup extra taxes on imports, this mechanism is costly to use and creates a considerable administrative burden in terms of processing information for customs. The transaction costs may be too high to warrant the extra effort involved in getting a refund on exported portion of imports. Thus, these arrangements are usually not attractive to small firms.

²⁵ Author's calculations from data in Hamar (1998) and Ministry of Trade, Industry, and Tourism (1998).

²⁶ The share of exports based on outward processing was 21 percent. See Ministry of Trade, Industry, and Tourism (1998).

CONCLUSIONS AND KEY RECOMMENDATIONS

Considering Hungary's spectacular export success in highly competitive EU markets, staying the course appears to be the best possible policy option for a pre-accession strategy. Indeed, economic reforms have established a business-friendly environment. Services provide good support for foreign trade activity. The banking sector appears to be strong. Inflation has recently fallen to a single-digit level and the policies in place ensure its continued decline. Finally, tariffs on imports of industrial products from preferential and MFN partners have been either reduced or eliminated.

The continued competitiveness of Hungarian firms, both domestic and foreign owned, ultimately depends on competition at home from imports and domestic sources alike. This, in turn, is critically dependent on a liberal trade and investment regime. Although Hungary has a liberal investment regime, conditions in market access are unnecessarily difficult for MFN suppliers. The task of a good pre-accession strategy should be to liberalize the MFN foreign trade regime for industrial products and adopt the same tariffs as the EU for MFN industrial products. In addition, the authorities should reduce the scope of nontariff measures.

Nontariff measures. By the standards of Central European transition economies, the NTB coverage of imports in Hungary is high. The global quota on consumer products should be abolished. Its maintenance contributes to higher prices for import users by reducing competition; it also invites lobbying efforts for protection.

Furthermore, the Government should review products subject to non-automatic licensing in exports and imports. Items that do not meet the test of environmental hazard, national security, or preservation of cultural treasures should be removed from the list.

Tariff measures. Tariff rates on industrial products are substantially higher in Hungary than in the EU. In order to ease adjustment to future membership and improve economic growth performance during the pre-accession stage, Hungary should consider adopting the EU's (preferably post-Uruguay Round) MFN tariff schedule for industrial products. As a result, the average (simple) MFN tariff rate on industrial products would fall from around 8 to around 4 percent.

This measure would have several advantages. It would level the playing field for MFN suppliers to both Hungarian and EU markets. It is simple and easy to implement. There would be little, if any domestic opposition from import competing sectors, which already face formidable competitors from the EU. Furthermore, the measure could counteract the threat of fading FDI as free trade zones lose their attractiveness.²⁷ Finally, it would require no formal notification to the WTO of change in statutory rates: Hungary could simply lower its applied rates to match those in the EU without changing statutory and binding rates.

²⁷ Hungary has adhered to the Pan-European system of cumulation of rules of origin, which removed all duty drawback schemes by the end of 1998. Products from free trade zones will lose preferential access to Pan-European markets if duties paid on imports of inputs are reimbursed. Pan-European markets include those in the EU, EFTA, NAFTA, Bulgaria, and the Baltic states.

4. FINANCIAL SECTOR DEVELOPMENT

INTRODUCTION

Among transitional countries, Hungary has been at the forefront of financial sector reform, and today it has one of the most developed financial systems in Central and Eastern Europe. Banks and insurance companies have been restructured, recapitalized, and privatized, mostly through sales to strong foreign strategic investors. The share of the private sector in total bank equity exceeds 80 percent; foreign intermediaries own 60 percent of the banks, 90 percent of the insurance companies, and 70 percent of the brokerage houses. Institutional investors such as mutual funds and pension funds have grown steadily in the past five years. Hungary's equity market has grown dramatically in size and has become much more liquid. Hungary has also made substantial progress in harmonizing financial laws and regulations with those of the European Union. It is fair to say that the first order of transition issues in the financial sector have, for the most part, been resolved.

The transformation of Hungary's financial system is, however, not complete. Although the banking system has substantially improved in terms of services offered and the quality of its assets, it has not grown in size over the past decade (Table 4.1), and has focused its lending almost exclusively on the premier companies. Small and medium enterprises, agricultural firms, households, and municipalities still have difficulty gaining access to funding. The insurance industry has grown, but from a very small base, and still remains small by international comparison, as indicated by total assets of only 4 percent of GDP. The same holds true for mutual funds and pension funds: although they have grown rapidly in the past five years, they remain small by international comparison, with combined assets of only 4 percent of GDP in 1998. Finally, the effective size of the equity market (the free float) is only 12 percent of GDP, after deducting the holdings of large strategic investors and the residual holdings of the Government. In addition, except for 1996 and especially 1997, the equity market remains a minor source of finance for corporations—the growth in market capitalization has been due mainly to privatization and price changes, rather than to new share issues.

Table 4.1: Assets of Financial Institutions and Market Capitalization, 1990-98
(percent of GDP)

	1990	1993	1994	1995	1996	1997	1998
Banks	79.9	74.1	70.4	65.8	65.6	66.3	65.5
Insurance companies	2.9	3.2	3.4	3.5	4.2	4.1	n.a.
Mutual funds	0.0	0.6	1.1	1.2	1.8	2.9	3.3
Pension funds	0.0	0.0	0.0	0.1	0.3	0.7	1.3
Market capitalization	0.8	12.9	20.2	21.8	34.7	59.9	53.4
Equities	0.8	2.3	4.2	5.8	12.4	35.8	29.5
Bonds	0.0	10.6	16.1	15.9	22.3	24.1	23.9
Public debt		90.4	88.2	86.4	72.8	63.9	60.3

Sources: National Bank of Hungary, Budget Securities Exchange, Ministry of Finance.

To a large extent, the remaining institutional deficiencies of the Hungarian financial sector are developmental in nature. It will take time for banks and institutional investors to grow to the levels found in mature market economies, for new financial instruments to develop, and for corporations and other borrowers to gain access to more diversified sources of finance. There is, however, room for further improvement in the regulatory and institutional framework, to enhance the financial system's ability to support economic growth and withstand external shocks and volatility. Moreover, there is a need to fully harmonize the regulatory framework with that of the EU.

DEVELOPMENT OF THE BANKING SECTOR OVER THE PAST DECADE

Background

Reform of the command economy in industry and agriculture began in the early 1970s, but the financial sector remained under tight Government control until the end of the 1980s. The general modernization of the system started in 1987, with the breakup of the insurance monopoly and the introduction of a two-tier banking system. This system involved the creation of three state banks — Hungarian Credit Bank (MHB), Commercial and Credit Bank (K&H), and Budapest Bank (BB) — to handle the commercial banking business of the central bank. The system expanded rapidly both in assets and number of institutions in the next three years, but there was no competition among banks, and sectoral concentration remained high.

Qualitative development, however, trailed market expansion and undermined the ability of the banks to intermediate prudentially. Factors undermining the sector in the early 1990s have included: (i) the inherited bad loan portfolio; (ii) low initial capitalization of banks; (iii) profits that were exaggerated (accrued but unpaid interest, inadequate provisioning), and then paid to the Government in the form of taxes and dividends; (iv) political influence in credit allocation; (v) lack of personnel with strong banking skills; (vi) lack of modern banking infrastructure; and (vii) weak prudential rules and supervision.

The start of the transition in 1990 resulted in very strong shocks to the real sector of the Hungarian economy, with negative spillovers to the banking sector. There was an abrupt drop in exports to traditional CMEA markets, as well as increased competition from higher-quality imports flooding domestic markets. Many enterprises experienced a sharp drop in profitability, and stopped paying banks and other creditors as a result. Legislative reform in the early 1990s began to reveal the problems in the banking sector, as banks were unable to comply with the new laws and regulations. The new Banking Act of 1991 introduced basic prudential concepts such as loan classification and provisioning, and limits on large exposure; and the new Accounting Act introduced much more stringent international accounting standards. But most of the banks were unable to comply with the stricter prudential regulation. As the weaknesses in the sector became increasingly apparent, the Government introduced a very tough Bankruptcy Code in 1993 (initially including a 90-day automatic trigger for bankruptcy in cases of overdue payment). This forced the banks to stop the practice of rolling over unpaid loans at maturity.

As the level of enterprise arrears to banks skyrocketed, it became clear that the system could not stay afloat without Government assistance. The first two interventions—the 1991 guarantee and the 1992 Loan Conciliation Program (see Box 4.1)—were not of sufficient size or adequately designed, and failed to resolve the core problems facing the banking system. While costing around HUF 120 billion (4 percent of GDP), the measures did not require a change in the management of the banks or reform of their operations. These emergency measures thus sent the wrong signals to bank and enterprise management, by indicating that bailouts would be costless to them.

Box 4.1: Bank Restructuring Challenges and Responses

1987-1991 Early Development

An expanding banking sector with growing signs of problems: (i) lack of bank regulation, management expertise, ownership control, accountability; (ii) obsolete information systems; (iii) high demand for bank finance by state-owned enterprises (SOEs); (iv) lending to SOEs as demanded by the Government.

1991 Guarantee Granted Retrospectively

Challenge: HUF 20bn. bad loan portfolio revealed

Diagnosis: Inherited bad export-import contracts from prior regime

Response: Government guarantee granted retrospectively for contracts in question. The guarantee was exercised immediately by banks and overdue loans written down.

1992 Loan Conciliation and Carve-out

Challenge: HUF 103bn. bad loan portfolio revealed

Diagnosis: Some bad loans inherited, others generated by SOEs.

Response: Bad loans carved out from banks, 90 percent of face value paid by the Government and 10 percent of the loss absorbed by banks. Bad loans transferred to a newly established state-owned institution with a mandate for a market driven work-out.

1993-1996 Bank and Debtor Conciliation

Challenge: Most large banks insolvent. In addition to bank arrears, enterprises have additional huge tax and social security arrears. Non-performing assets estimated at HUF 200 to 300bn.

Diagnosis: Enterprise management responsible for arrears, and bank management responsible for non-performing portfolio (loans and investments). Both internal and external control over banks is weak and regulations not enforced.

Response: Restructuring program, known as Bank and Debtor Conciliation (BDC), amounts to HUF 300bn. (In addition, direct restructuring of a dozen large enterprises costing HUF 50bn. carried out independently from the BDC.) Program is voluntary, but 7 state-owned banks and one private bank join the BDC scheme. Key elements of BDC: (i) contracts with bank management for in-depth restructuring; (ii) re-classification of assets using BIS standards; (iii) recapitalization of banks up to 0 as of January 1, 1994, then to 8 percent capital adequacy by end of 1995; (iv) separation of individual problem entities into a good and a bad bank; (v) restructuring of the good bank to form the core bank with a view toward privatization; (vi) bad bank portfolio transferred to and worked out by a subsidiary of the core bank. Management of troubled banks replaced. Strategic investors play a key role in final bank restructuring and recapitalization. Large troubled SOEs treated individually.

1997-1998 Private Banks in Trouble

Challenge: February 1997 run on Postabank, a majority privately owned bank. In 1997, the bank failed to stabilize its operations in spite of several Government interventions (e.g., direct capital infusion of HUF 14 billion), suspension of reserve and capital adequacy requirements (CAR). In June 1998, bank management replaced and in-depth restructuring started. The capital required to absorb the losses and stabilize the bank amount to an estimated HUF 150 billion. Realbank, a small private bank, experiences a solvency crisis.

Diagnosis: Troubled bank portfolio generated by management misconduct, low internal prudential standards, lack of owners' control, and weak supervision and audit regulation. Dispersed private ownership does not provide strong control over the management. Postabank, the second largest at the end of 1997, is judged too big to fail and cannot be sold without restructuring. Thus, state intervention and at least temporary nationalization of the bank is unavoidable.

Response: Postabank management is replaced and state recapitalization is implemented. In-depth bank restructuring is underway with, *inter alia*, asset reclassification and separation of good and bad assets carried out in the second half of 1998. The National Deposit Insurance Fund (NDIF) takes over and recapitalizes Realbank by HUF 3 billion at the end of 1998. However, the bank's failure to stabilize and divest leads NDIF to ask that it be liquidated in early 1999.

Using the lessons learned from previous interventions, the Government introduced a third bank restructuring program, known as the Bank and Debtor Conciliation Program of 1993-1995. This program imposed much stricter conditions on the banks, which were required to modernize their systems of control, organization, and operation, and to fully replenish their risk provisions. The loan appraisal, risk,

and asset classification procedures were modernized. In some cases, management was replaced. Finally, the Government implemented a strategy to sell state-owned banks to strong strategic investors.

Recapitalization followed by privatization became the major form of bank resolution in Hungary after 1993. The overall process was not cheap: between 1991 and 1998, about HUF 650 billion worth of bad loans were restructured in several rounds, at a total cost of HUF 460 billion (around 10 percent of GDP), mostly in the form of Government consolidation bonds. Although this cost was to some extent recovered by the subsequent privatization,¹ there are well-grounded arguments that Hungary paid too much, considering the moral hazard elements in the scheme.² However, other alternatives would also have been expensive, as moral hazard is hard to avoid with any approach to bank restructuring. In any case, the program was successful, with all but a few specialized institutions (the development banks, export-import bank, and mortgage bank) being privatized by the end of 1997. The fact that the newly privatized banks are, for the most part, well capitalized and managed supports the conclusion that rehabilitation, combined with privatization to strategic investors, is an effective way to restructure a country's banking system.

Banks have generally been sold to strong investors, primarily large foreign financial institutions (Table 4.2). The only exceptions were OTP and Postabank, which were, respectively, partially sold through a public share offering and private placement. All Government shares in commercial banks have been sold, except for small minority stakes in BB and K&H. Postabank became majority state owned in the process of recapitalization in 1997-98.

Present Structure and Performance of the Banking System

At the end of 1997, the banking system consisted of 36 commercial banks, 7 specialized banks (2 development banks, one mortgage bank, 3 building societies, and one export-import bank), and about 250 savings and credit cooperatives. Although the three largest banks (OTP, MKB, and K&H) still hold about 40 percent of the banking sector's assets, competition in all aspects of banking has increased significantly. Both the decline in the market share of the largest banks (Figure 4.1), and the general drop in the Herfindahl of concentration (Figure 4.2) demonstrate the heightened competition, which has been

Table 4.2: Present Foreign Ownership in Largest Banks

Banks	Foreign Investors June 1998	Foreign %
OTP Savings Bank	Foreign Investors (GDR)	31.7
MKB Foreign Trade Bank	Bayerische Landesbank Girozentrale	66.9
	Deutsche Investors-und Entwicklungs GmbH.	8.0
	Bank Für Arbeit und Wirtschaft AG.	10.4
	Other Foreign Investors	14.7
K&H Credit Bank	Irish Life Plc.	23.1
	Kreidietbank N.V.	23.1
	EBRD	18.2
Postabank	Österreichische Postsparkasse	4.1
	EA_Generali AG.	2.2
	Other Foreign Investors	1.4
CIB Central- European International Bank	Comit Holding International S.A. -Banca Commerciale Italia Group-	95.0
	Credit Bank of Japan, Ltd.	5.0
ABNAMro	ABN Amro Bank N.V., Amsterdam	99.7
BB Budapest Bank	EBRD	32.6
	General Electric Capital Corporation	27.6
	Other Foreign Investors	9.7
Unicbank	Raiffeisen Banking Group Austria	95.2
Bank Austria Creditanstalt Hungary Co.	Creditanstalt AG., Austria	100.0

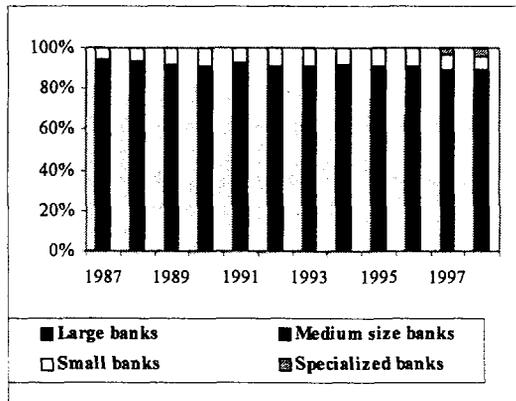
Source: Bank and Stock Exchange Almanac 1997-98.

¹ The revenues from bank privatization in the 1994-97 period have been estimated at around 1 percent of GDP. The private strategic investors provided an additional 0.7 percent of GDP in equity to comply with prudential regulations (Varhegyi, 1997).

² Bank management was in charge of evaluating the magnitude of the losses, and had a built-in incentive to overestimate losses and make the capital infusion bigger than needed.

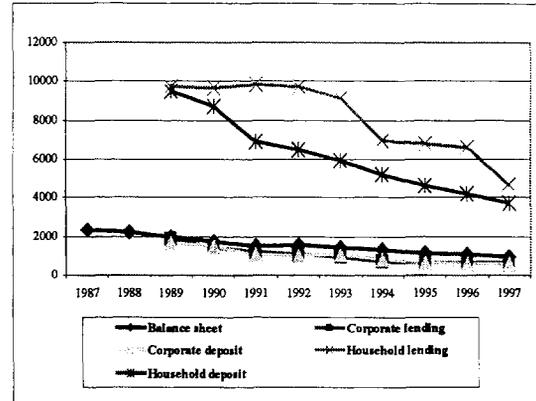
particularly strong in the provision of bank services to households. For example, the share of the national savings bank (OTP) in retail deposits has fallen from 95 percent in 1987 to around 50 percent in 1997. Moreover, by the end of 1997, more than two million plastic cards were in use, and the number of ATMs had grown to more than 1,500.

Figure 4.1 Market Shares by Bank Size
(% of total assets)



Source: NBH.

Figure 4.2 Market Concentration – Herfindahl Indexes

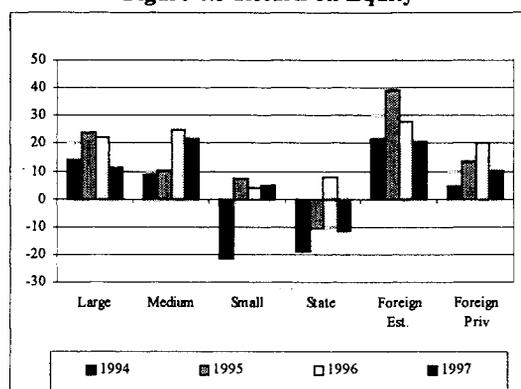


Source: NBH.

More recently, the Hungarian banking sector has experienced a noticeable improvement in the breadth and quality of financial intermediation. Many banks began to seek new markets because they realized that their scope for expansion within their existing customer range was limited. As mentioned above, many have entered into the retail deposit business, and have begun to identify promising new customers from second-tier companies. Enterprises have been offered upgraded payment systems and faster business and operational procedures. Electronic services, accessible through remote terminals, have also been gaining in importance. The stronger financial position of the major banks has also been recognized: Moody's announced upgraded ratings for Budapest Bank, K&H, MKB, and OTP in July of 1998. (Smaller banks, however, may not be able to face this increasing competition, and further consolidation of these banks cannot be ruled out.)

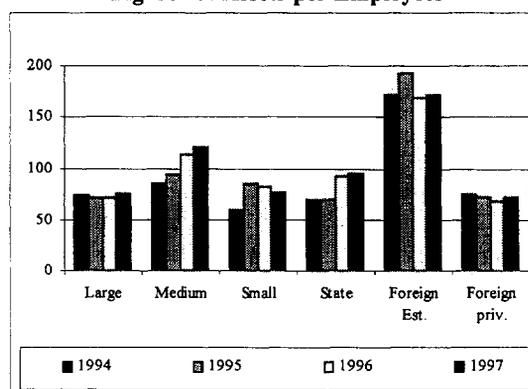
Key bank ratios indicate the strong performance of those banks established *de novo* by foreign strategic investors. Their return on equity and ratio of assets per employee (a measure of labor productivity) have been the highest among all types of banks (figures 4.3 and 4.4), whereas banks that remained in state hands show the worst performance. Banks that were privatized have generally improved their profitability, but still underperformed relative to the banks established by foreign investors. It will probably take some time before the privatized banks achieve a similar level of performance. Not only did these banks have to cope with staffing problems, but they had to invest in new technology and equipment to upgrade their management systems and acquire the capacity to compete in new markets (e.g. retail). These efforts may help explain why the average operating costs of the privatized banks have remained high (at around 4 percent of average assets—roughly twice the OECD average) and why their average return on equity declined in 1997.

Figure 4.3 Return on Equity



Source: NBH.

Figure 4.4 Assets per Employees



Source: NBH.

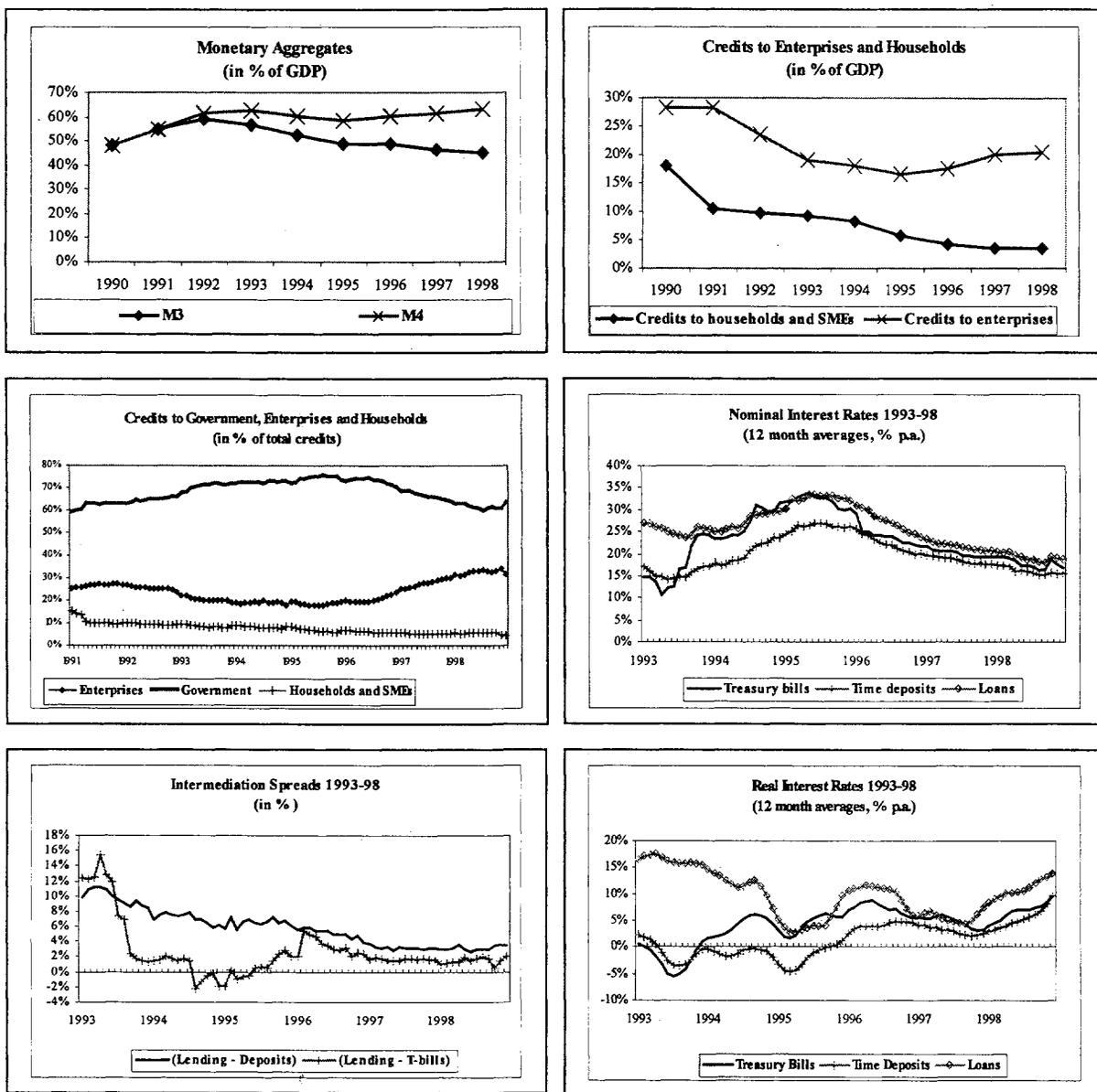
Although the privatization of former state banks is not yet reflected in their cost and profit ratios, it is important to note that their financial situation is robust, as indicated by the improving quality of their assets and their increasing CARs. The share of classified assets (loans, investments, and off-balance sheet items) in total assets declined from 29 percent in 1993 to 7 percent in 1998. The share of loss and doubtful loans (the two worst categories) in the total loan portfolio declined steadily, from 26 percent in 1993 to 3 percent in 1998, indicating that lending by the privatized banks is not affected by political considerations, and tends to follow stricter guidelines and procedures. The average risk-weighted CAR of the large (mostly privatized) banks increased from 7 percent in 1993 to an estimated 13 percent in 1998. Although it is still lower than the 17 percent average CAR of medium (mostly *de novo*) private banks, its growth reflects the strong capital backing from their foreign strategic investors.

Resource Mobilization and Allocation by the Banking System

Improvements in the structure and efficiency of the banking system after 1995 coincided with a major fiscal adjustment during the same period (chapters 1 and 2), resulting in sharp changes in the evolution of money, credit, and interest rates. As shown in Figure 4.5, high inflation and negative real interest rates on deposits during 1992-1995 led to weak mobilization of resources by the banks, as suggested by the sharp fall in the ratio of M3 to GDP (from 60 to 50 percent). Bank credits to the private sector declined even more during this period, as banks dramatically increased their holdings of Government securities.

The banks adopted this strategy because nominal and real interest rates on Government paper increased dramatically, frequently exceeding the average lending rate (Figure 4.5). Holdings of Government paper were even more attractive, considering the high risk of lending to enterprises during this period of enterprise restructuring and bank consolidation. The unusual structure of interest rates was the result of massive Government borrowings to finance large deficits, weak competition in the banking system, and a very deficient market for Government securities. In particular, the national savings bank, OTP, still had considerable monopoly power in both the retail and Government securities markets; it was able to enjoy a very large spread between its low deposit rates and the high yield on Government securities. This was also the period, however, when the banks started losing resources, as indicated by the growing difference between M3 and M4 which is equal to M3 plus Government and NBH securities held outside the banks).

Figure 4.5 Money, Credit, Interest Rates, and Spreads



Source: NBH.

The fiscal adjustment initiated in 1995, and the parallel improvements in the market for Government securities, resulted in a gradual fall in Government borrowing costs and a more usual interest rate structure. The improvements in the securities market resulted from the entry of foreign investors, as well as from a number of institutional measures that improved the Government's direct access to non-bank domestic investors.³ By early 1998, holdings of Government paper by foreign investors amounted to 4 percent of GDP, or slightly less than one third of the stock of Government paper held outside the banks.

³ These included the replacement of tenders with a more transparent and well-publicized auction systems, increasing competition in the primary dealer system, the introduction of retail brokers, and more advertisement for the sale of state bonds.

Resource mobilization by the banks stopped deteriorating as a result of higher real interest rates on deposits and the perception of more stable banking institutions, but also because the banks started channeling their resources away from Government securities and into prime enterprises. After many years, credit to enterprises started increasing as a share of GDP, and the increasing competition among banks also led to a steady decline in the spread between lending and deposit rates (Figure 4.5). Nonetheless, it is noteworthy that resource mobilization by the banks has not yet improved, despite higher real interest rates on deposits. Note also that credit to households and to small and medium enterprises (SMEs) has declined further, and that the access of agriculture and municipalities to the financial market has remained difficult (section 4).

Banking Supervision

The failure of two banks (Postabank and Realbank) and six brokerage houses in 1998 has revealed underlying weaknesses in the supervision of banks and capital market operations (which have operated under a common chief executive since January 1997). The failure of the brokerage houses coincided with a period of stress in the securities market, but the bank failures were simply the final outcome of problems well known to supervisors. Their failure to act in a timely manner has resulted in losses amounting to more than 1 percent of GDP.

An important issue in Hungary is the legal authority of the supervisor to both issue and enforce prudential regulations. Although the Basle Core Principles suggest that supervisors should have the right to establish prudential guidelines, in Hungary only the Government, not the supervisor, has the right to issue binding regulations. More importantly, the power of the supervisor to take appropriate timely disciplinary action is constrained. For example, the legal framework which does not clearly authorize intervention in a bank based on the results of inspection, but only on the basis of audited accounts—creates delays.

Hungary must strengthen the banking sector laws, regulations, and institutions, to enable the supervisor to enforce prudential norms without political interference. The European Directives, which guide the integration of the banking sectors of EU members, state that integration means freedom of establishment (branching), and freedom to provide cross-border services without further authorization, on the principle of home country supervision of host country activities. Thus, Hungarian banks will also enjoy the rights of single passport—as long as Hungary's banking regulations fully comply with EU standards, and the host country accepts the Hungarian supervisor as a reliable partner, able to share information with supervisors from other countries. Clearly, a great deal depends on strengthening supervision.

Until 1999, Hungary prohibited universal banking and it still has not adopted the EU regulations necessary for supervision of financial groups on a consolidated basis. In terms of both structure and action, the larger Hungarian institutions are behaving as financial conglomerates. For example, 15 out of 100 brokers in Hungary handle 70 percent of the business, and 14 out of the 15 are controlled by another financial institution. There are several hundred pension funds, but 60 percent of the business is controlled by the subsidiaries of four insurance companies. Although the Act on Credit Institutions contains rules for consolidated supervision of financial groups, the meaning of consolidated supervision differs from that set forth in the relevant EU directive. The basic distinction lies in the definition of a holding; the Hungarian provisions only cover groups in which the parent company is a bank, whereas the EU directive refers to financial holdings.

Although banking and capital market supervision now operate under a common chief executive, the effective integration of the two branches has yet to take place. Moreover, there is significant overlap among insurance companies, pension funds, and asset managers in terms of business, ownership, and control, but they are supervised by three different and poorly coordinated agencies—and implementing consolidated supervision at the intermediary level is difficult when the supervisors are not well coordinated. The authorities might want to consider combining insurance and pension supervision, as has been done for banking and securities, as an interim step toward some form of integrated supervision. Another way to ensure greater coordination would be to create a capital market council combining the chief supervisors of different areas of the capital market, and legally empowering the different supervisors to share information. In 1999, Hungary will permit full universal banking as required by the EU Directives. Issuing the appropriate regulations and developing the capacity to undertake consolidated supervision is important not only to meet the EU requirements, but also to protect the integrity of the financial system.

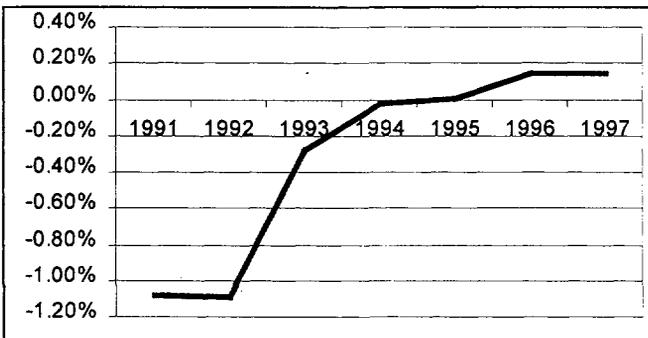
THE INSURANCE SECTOR

Prior to 1986, Hungary's insurance sector consisted only of the national insurance company, Allami Biztosító (AB). In 1986, the Hungaria Insurance Company was spun off from AB and became a state monopoly for automobile and industrial insurance, while AB retained its monopoly in housing insurance. Garancia Insurance was formed as a subsidiary of OTP Bank in 1987. Atlasz, Generali, and Providencia Insurance, established between 1987 and 1989, are all joint ventures with foreign insurance companies. Between 1990 and 1995, 15 additional insurance companies were established.

Behind the impressive institutional development in the early 1990s, however, a profound crisis was unfolding. The two state monopolies, both undercapitalized and with close to 100 percent share in their market segments, had been growing because of tax incentives and protected markets. But they did not improve their products, portfolios, or productivity, and were unable to respond to the problems of: (i) huge inherited losses (ii) lack of reserves to cover the growing risk in motor liability insurance (Hungaria), and (iii) no inflation adjustment in property insurance in spite of growing inflation (AB).

By the end of 1992, 10 out of 15 the largest insurance companies were insolvent, after losses that year of HUF 32 billion—the equivalent of 1.1 percent of GDP, or almost half of the annual premium (Figure 4.6). As a result, the insurance sector was restructured and the two state monopolies were sold to foreign insurance companies, which absorbed the inherited losses through recapitalization. To make this possible, significant adjustments were made in insurance premiums; existing unprofitable insurance contracts were gradually replaced; new products, such as life insurance, became the driving force of sector development; and European prudential standards were introduced and enforced by the Insurance Supervision. Unlike the situation in the banking sector, the restructuring of the insurance sector took place outside of public purview and involved no public support.

Figure 4.6 Insurance Sector Profit/Loss (percentage of GDP)



Source: State Insurance Supervision.

Today, there are 49 insurance institutions, of which 20 are joint stock companies and the remainder are mutuals. Of the stock companies, 18 are primarily foreign owned and have roughly 90 percent of the

market. During the phase of reconstruction and privatization in the first half of the 1990s, the industry as a whole lost money, but since 1995 the companies have been increasingly profitable (Figure 4.6). Nonetheless, reserves remain low by EU standards.

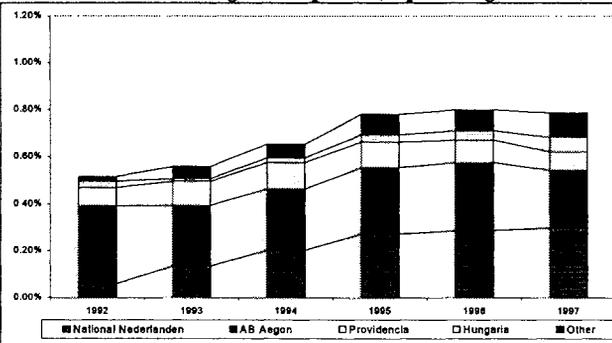
The industry is dominated by five firms, leading to an oligopolistic structure. Without adequate competition, the insurance companies have not been pressed to be efficient. Gross spreads and operating costs are both high, with operating costs at roughly twice the international average. Competition will increase both internally and externally after EU accession, when Hungary will have to allow trade in financial services and customers gain the freedom to purchase their insurance from companies registered outside Hungary. If the Hungarian companies do not decrease their operating costs and improve their custom relations, they will have a difficult time competing.

Many of the insurance firms in Hungary are too small to achieve adequate economies of scale and risk management. Most of these are mutuals, which constitute a small segment of the insurance industry but present a disproportionate problem for supervision. It would be wise to encourage these firms to merge, by imposing higher capital requirements and other regulatory measures.

The insurance industry is still relatively small, as indicated by an annual premium of about 2.6 percent to GDP in 1997, far below the EU average of 6.8 percent or 10 percent in the United States. Life insurance is particularly small, accounting for only one third of the total premium, or less than 1 percent

of GDP (Figure 4.7).⁴ The industry has significant growth potential, primarily in the field of life insurance, which has been growing at a rapid 16 percent annual real rate in recent years. Although this growth is in principle desirable, it has occurred in part due to preferential tax treatment—one third of the annual premium can be deducted from taxes, as long as this and other deductions for savings do not exceed one third of taxes due. Other countries also provide tax incentives to encourage the savings component of life insurance, but Hungary's treatment is arguably excessively generous by international standards. There are well-known reasons to provide tax incentives, but such incentives should be matched to the incentives offered in the second pillar of the pension system; namely, tax exemption of contributions and earnings but taxation on payout. This is the most commonly used approach in OECD countries to encourage savings for retirement.⁵

Figure 4.7 Change in Composition of the Life Insurance Market Gross Premium of Largest Companies (in percentage of GDP)



Source: State Insurance Supervision.

CAPITAL MARKETS

The development of Hungary's capital market started in 1990, with the opening of the Budapest Stock Exchange (BSE), the enactment of the first Securities and Investment Act,⁶ and the establishment

⁴ On the other hand, as a share of the stock of household savings, life insurance is closer to international averages, since households' financial wealth is also lower than in more mature economies.

⁵ The third, voluntary pillar of the pension system also provides a very generous tax incentive in the form of tax credits. The tax incentives for third pillar contributions should also be equalized with the tax treatment of second pillar contributions.

⁶ Prior to this, a small commodities exchange had already opened, some municipalities had already issued bonds to finance investments in telephone and gas supply, and the first tradable state securities (treasury bills) had already been introduced.

of the State Securities and Exchange Supervision Agency. Today, the capital market possesses all major market and regulatory institutions. Investment funds started operating in 1992; a central clearing house and depository (KELER) was established in 1993; and a state debt management center (issuer of state securities) and a primary dealer system for state securities have been in operation since 1996. In addition to the BSE, there is an over-the-counter (OTC) market that exceeds BSE in trading volume, due to its advantages in the government securities' market as a result of its primary dealer system and its faster clearing and settlement times.

The traditional indicators of size and liquidity suggest that Hungary's capital market is relatively well functioning. As shown in Table 4.3, market capitalization is around 54 percent of GDP and the total turnover ratio has increased considerably, indicating that the market has become much more liquid. These indicators reveal an impressive market development within a very short period, but it is important not to overstate the true extent of such development. For one thing, the equity market capitalization amounts to little more than half of total market capitalization, or around 30 percent of GDP, and the free float (excluding the holdings of Government and large strategic investors) amounts to 12 percent of GDP. In addition, trading is still dominated to Government paper and the shares of a few large corporations. Finally, the increase in market capitalization has been due mainly to privatization and price increases, and less to new share issues.

Table 4.3: Market Capitalization and Turnover Ratios, 1990-98

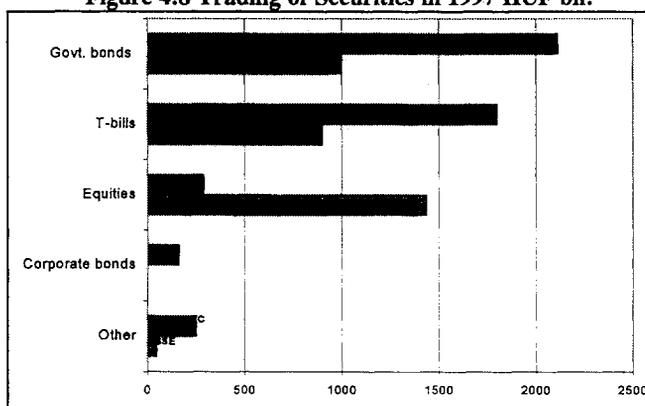
	1990	1991	1992	1993	1994	1995	1996	1997	1998
BSE Total									
Capitalization (% of GDP)	0.8	2.1	6.9	12.9	20.2	21.8	34.7	59.9	53.4
Turnover/Capitalization (%)	37.3	18.9	16.7	40.6	23.9	20.7	47.9	131.7	253.2
Equities									
Number of shares listed	6.0	20.0	23.0	28.0	40.0	42.0	45.0	49.0	55.0
Capitalization (% of GDP)	0.8	1.5	1.6	2.3	4.2	5.8	12.4	35.8	29.5
Turnover/capitalization (%)	37.3	25.7	12.7	22.4	31.5	26.6	57.5	93.9	229.2
Other Listed Securities ¹									
Capitalization (% of GDP)	0.0	0.6	5.3	10.6	16.1	15.9	22.3	24.1	23.9
Turnover/capitalization (%)	-	0.5	5.3	15.8	9.6	10.4	29.3	160.4	289.4

¹ Primarily Government securities.

Source: Budapest Stock Exchange.

As shown in Figure 4.8, trading in state securities dominated the BSE until 1996, when the primary dealer system was established, and still dominates the OTC markets (60 and 80 percent of turnover, respectively). Though Government borrowing has been declining since the stabilization program of 1995, the outstanding stock of Government debt is still large (60 percent of GDP), and the annual refinancing flows also remain large. The most active investors in Government securities are still the banks, but favorable interest rates (5 to 6 percent in real terms) have also attracted domestic and foreign institutional investors, as well as individuals (Appendix, Section 5). The increased holdings of foreigners and retail investors in the second half of the 1990s contributed significantly to the decline in the Government's borrowing costs. The corporate bond market, however, remains negligible at HUF 38 billion, or only 0.2 percent of GDP, with

Figure 4.8 Trading of Securities in 1997 HUF bn.



Source: BSE.

two blue chip corporations accounting for two thirds of the bonds issued. The key impediments to corporations issuing bonds are the high cost of issuance, the high rate of inflation (increasing the risk premium for long maturities), the lack of a swap market, and the absence of ratings by an independent agency.

Equity trading started in June 1990, when IBUSZ company shares were listed on the Budapest and Vienna stock exchanges. Equity trading has picked up since Hungary's economic turnaround in 1995, but only 53 companies are listed on the exchange; trading in a dozen companies accounts for three quarters of BSE activity; and two thirds of the stock market's liquidity is provided by foreign institutional investors. The number of listed companies may soon increase due to a new securities regulation, which stipulates that after January 1999, companies must apply for listing on the BSE before making a public share offering larger than HUF200 million (US\$1 million). The recent introduction of a new category of shares (C class) will enable SMEs to comply with the regulation, while disclosing much less information than the class A and B companies. There is, however, some justified concern that the new C class shares may be illiquid with very little trading in these shares.

Institutional Investors

Investment in securities is dominated by domestic and foreign institutional investors. Domestic institutional investors comprise investment funds, pension funds, and insurance companies. The first investment funds were established in 1992, but did not grow substantially until after 1995. By the end of 1997, there were 56 investment funds and 25 fund managers. The net asset value of these funds amounted to HUF 320 billion (3 percent of GDP) by the end of 1998. The five largest funds (including Budapest, OTP, and Creditanstalt Investment Fund) account for 75 percent of the market. The investment funds have invested about 70 percent of their portfolios in Government securities and 14 percent in equities. This market segment is still constrained by laws that limit the ability of domestic persons to invest abroad and limit foreign funds from selling their products in Hungary.

The pension fund sector comprises both voluntary (third pillar) funds, operating since 1993, and mandatory (second pillar) funds, operating since January of 1998. The assets managed by third pillar funds had reached HUF 60 billion (0.6 percent of GDP) by the end of 1998. Although the growth of these funds is certainly not negligible, faster growth might have been expected, given the very generous tax advantages given to third pillar contributions. Nonetheless, total pension fund assets are expected to grow more rapidly due to the introduction of the second pillar, reaching around 5 percent of GDP in 2002; 80 percent of this will be in second pillar funds. These estimates are based on the large number of workers already enrolled in the second pillar (1.3 million workers had joined by the end of 1998), and the fact that it is mandatory for new entrants into the labor force. Voluntary and mandatory pension funds are managed mainly by banks and insurance companies, and the system is highly concentrated.

As previously mentioned, foreign portfolio investment has played a crucial role in Hungary's capital market development. Foreign institutions entered the market in late 1995, purchasing state bonds, and by mid-1998 they had increased their holdings of Government paper to 18 percent of the total amount traded, or 4 percent of GDP. At the same time, due to the country's improving fiscal situation and the fall in real interest rates, foreign investors started turning to equities. By mid-1998, foreign holdings of equity amounted to an estimated HUF 800 billion, the equivalent of 8 percent of GDP, or nearly two thirds of the free float in equities. Contagion from the Russia crisis resulted in a sharp reduction in foreign holdings of (especially Government) securities in Hungary, but by early 1999, foreign holdings had been nearly restored to their pre-crisis levels (Chapter 1).

Brokerage Firms

At the present time, Hungary has more than 100 brokerage firms. Although its banking and capital market segments have never been clearly separate, universal banking was formally introduced in January 1999. Since commercial banks are allowed (under the 1991 Banking

Law) to establish and own up to 100 percent stake of a brokerage subsidiary, 13 out of the 15 largest brokerages are owned by commercial banks, which handle more than 70 percent of trades. The breakdown of the annual trade volume on the BSE according to ownership of the brokerage house is shown in Table 4.4.

	1994	1995	1996	1997	1998 Q1
<i>Domestic bank or insurer</i>	57.4	46.1	33.7	39.0	33.0
<i>Foreign banks</i>	29.0	36.5	51.9	46.8	46.6
<i>Domestic private person</i>	8.7	12.8	10.2	7.7	9.7
<i>Domestic enterprise</i>	1.9	0.7	0.5	1.7	1.9
<i>Other foreign</i>	0.2	1.0	0.8	0.8	0.7

Source: Hungarian Banking and Capital Market Supervision (ÁPTF).

In 1998, the equities market experienced high volatility: the index rose from 8,000 in January to 9,000 in July, dropped to 4,000 in September, then rose again to 6,000 in November (Chapter 1). This overall decline revealed certain weakness in the brokerage business that had not been apparent in the buoyant period of the market (1996 and 1997); namely, that some of the smaller brokers lacked appropriate information technology and risk management systems, and that their actions in fund management have been somewhat questionable. Margin requirements were not appropriately enforced, and some brokers co-mingled the clients' and firm's funds in a careless or fraudulent manner. As a result, and with falling share prices, a sizable group of brokerage firms experienced losses. Six brokerage firms failed, and it is possible that other small brokers also may have serious financial problems.

Since security investments are in the early stages in Hungary, most investors do not have enough information or experience to be able to distinguish among brokerages, thereby making supervision even more important. The recent failure of the six brokerage houses revealed the difficulties of a small supervisory staff covering so many firms. If capital requirements for a broker were higher (at, say, HUF 200 million rather than HUF 20 million), many small firms would not be able to meet the standards and would be forced to merge. That would result in fewer and larger firms, more able to afford the needed investment in information technology and risk management, thereby reducing the burden on the supervisor.

THE CHALLENGES AHEAD

The traditional view is that there are two models of finance: the continental European model, based on bank finance, and the Anglo-Saxon model, based on direct market finance. In recent years, with changing market conditions, this distinction—always something of an exaggeration—has become less important. Even in continental Europe, market finance is coming to play a more important role, as more large European firms have found it cheaper to issue securities than to borrow from banks. In terms of a model for the future, Hungary should think of building a balanced system, relying on both markets and intermediaries.

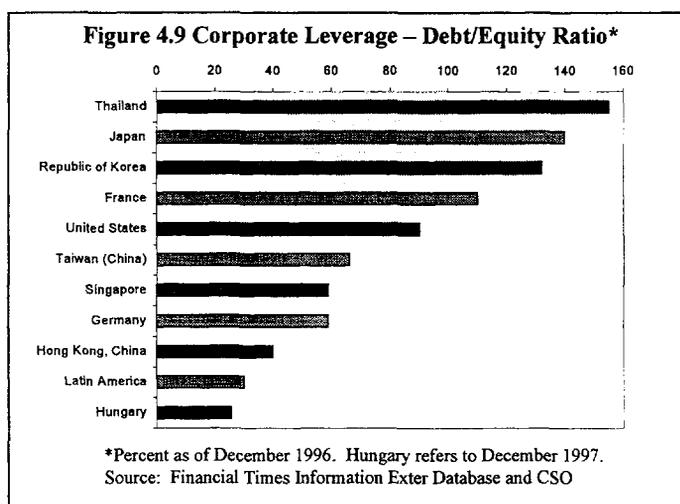
A balanced market would consist of three pillars: banks, contractual savings institutions, and the securities markets. These markets should serve a broad range of clients, whereas today only a relatively small group of borrowers can gain access to funds. Various measures are needed to build balanced markets. The Government can help build the supply of term finance by encouraging the growth of institutional investors; tax incentives encourage savings in this form. The new mandatory pension

scheme, together with the rapid growth of life insurance, will over time create a much larger demand for securities, and how that money will be invested will depend in large part on regulations. Gradually broadening the range of instruments that institutional investors can hold will both improve yield in the longer run and stimulate the growth of the equities markets. Over time, some of the largest firms may migrate to broader European exchanges, leaving the medium-sized firms to be financed on the BSE. Encouraging rating agencies to evaluate some of the medium-sized firms will help them to sell securities.

Risk Management

Although the increasing integration of world financial markets has the potential to enhance the productivity of capital and to improve economic efficiency, it also exposes domestic financial systems to shocks and distress when capital flows become volatile. Not surprisingly, countries with a large base of domestic savings and with sound and deep financial systems can withstand greater shocks. One of the prime lessons to be learned from the recent financial crisis in many countries is that both the level and structure of finance can be a source of financial fragility. A country's financial system is more exposed to shocks when Government and private sector debt are excessive (relative to GDP, corporate earnings, and equity); when the share of short-term debt is high; and when foreign financing flows, including both debt and portfolio flows, are large.

Hungary has been able to substantially reduce the risks affecting domestic financial institutions. As discussed in Chapter 1, there has been a substantial reduction at the macro level in the total external debt and the public debt relative to GDP. This is the result not only of the reduction in fiscal and current account deficits, but of the use of large privatization revenues to retire debt. The share of short-term debt is not excessive, but it has risen somewhat. Furthermore, foreign direct investment, which is much less volatile than foreign portfolio investment, has been more important (57 percent of the total) than the latter.



The financial system has also become much more robust as a result of the Bank Consolidation Program and the sale of most domestic banks to strong international intermediaries. Finally, the corporate sector is, by international standards, conservatively financed (Figure 4.9), with most of the debt held by large corporations. Approximately 60 percent of the corporate indebtedness is short term, but because overall indebtedness is so low relative to equity and earnings, total short-term debt is small and manageable. In sum, from an overall macroeconomic standpoint, and from a banking and corporate standpoint, the level and structure of finance in Hungary seems sound.

But despite improvement in the indicators of financial risk, Hungary experienced a real financial shock during 1998. Portfolio investment by foreign institutions in Hungarian equities and Government bonds had reached substantial volumes in mid-1998—around US\$6 billion, the equivalent of 12 percent of GDP and two thirds of foreign reserves. As a result of the financial problems experienced by other countries, particularly Russia, some foreign portfolio investors decided to exit the equities and bond

markets. This precipitated a very large decline in bond and equity prices, pressures on the forint, and a US\$1 billion loss in foreign reserves.

Although pressure in both the exchange and Government securities markets was well contained and quickly abated (chapter 1), it is now clear that having an open capital market exposes a country to destabilizing capital movements. The size of the movements is likely to be smaller, and their impact on institutions reduced, if the financial institutions are well managed and deeply capitalized. The Hungarian financial sector was able to recover quickly and looks fairly robust today. However, as discussed below, there remain two areas of weakness: (i) financial supervision has been neither strong nor independent of political interference; and (ii) the smaller institutions in each financial subsector pose a small but not insignificant problem.

Credit Distribution

Hungary's financial system provides a full range of services to the Central Government, the city of Budapest, and large corporations. Payments and depository services, insurance, and brokerage service for small clients have improved substantially in recent years. Nonetheless, it is still relatively difficult for small and medium firms, farmers, and municipalities to raise money, either by borrowing from banks or by issuing securities; and it is still difficult for households to borrow money for housing purchases or construction. Yet, the total economic activities of these groups is substantial. Agriculture accounts for 6 percent of GDP, and the value of residential houses accounts for nearly 40 percent of the capital stock; small and medium enterprises with fewer than 300 employees account for half of corporate value added; and municipal spending is equivalent to 13 percent of GDP, compared to 43 percent for the Central Government. Hence, entities without access to external funding account for a very large percentage of economic activity and investment. Growth in the economy will lag unless these financial imbalances are overcome.

The Hungarian economy is dominated by a relatively small number of large firms, with 150 firms accounting for 40 percent of corporate turnover. As funding for the Government has declined in the second half of the 1990s due to reduction in the deficit, funding for the larger corporations has increased, from both domestic and foreign sources. The 100 largest corporations now account for 87 percent of the stock of financial claims by the corporate sector.

Aside from the Central Government, the large corporations, and the city of Budapest, other entities have little recourse to institutional finance. Total external financing to individuals, SMEs, and municipalities amounted to about only 5 percent of all external funding in the late 1990s. Residential construction is usually financed on a cash basis and is therefore constrained by the availability of personal savings, whereas small corporations are almost entirely equity financed, with debt accounting for only 16 percent of their funding. Furthermore, their equity is provided not by the markets, but by private financing raised by the owners. For these firms, retained earnings are by far the major source of financing. In a recent survey, 70 percent of small firms stated that funding was the most important constraint to their development.

There are several possible reasons that credit is not more widely distributed. Part of the problem may be simply developmental. It is easier to finance large entities, both public and private, because they can provide better information, the intermediation costs are proportionately smaller in dealing with large transactions, and large enterprises are generally less risky. Hence, there is a tendency in most financial systems to serve the larger customers first. However, there are still some institutional and policy-based impediments contributing to loan concentration. For example, creditor rights exist in law but are difficult to enforce. Property registries are inadequate, though they are slowly being improved. And the constraints on land holdings reduce the value of land as security for agricultural loans. The high rates of

inflation during most of the 1990s may also help to explain the concentration of credit. Inflation discourages financial intermediation in general, and long term lending in particular. Without long term lending, it is difficult to engage in non-subsidized mortgage finance.

Some of these constraints on external finance may be eased in the coming years. First, inflation has declined steadily and is expected to continue to decline to average EU levels over the medium term. Low inflation should encourage more mobilization of financial savings and long term lending, including mortgage lending. Second, the corporate market is also becoming highly contested, interest rate spreads have declined, and lending to the large firms has become less profitable. Thus, several banks are now targeting retail customers for lending as well as deposits. Third, institutional investors (e.g., pension funds) are becoming more prominent in Hungary; as in other countries, they will eventually invest a small fraction of their funds in venture capital financing. These funds have constituted a major financing source for growing firms in the United States. But despite progress in these areas, creditor rights need to be strengthened, restrictions on property sales need to be removed, and registries need to be improved. Such changes will make it possible for banks, contractual savings institutions, and the stock exchange to serve most mid-market firms.

For those very small enterprises that banks cannot serve, the Government is now considering a microcredit scheme. Such programs have become common in other countries, and methods for their successful operation have been developed. Viable microcredit schemes initially provide very small loans, seldom more than US\$500, with the loan size growing as the entrepreneur develops a successful credit history. Very small firms often cannot provide collateral; hence, such lending is often based on projected revenues. Microcredit programs are expensive to administer. While some administrative costs may be subsidized in the first years of operation, most programs aim to become financially viable within a few years. Thus, interest charges should be comparatively high to reflect the higher risk and administrative costs of such lending.

Many Governments have attempted to overcome market impediments by establishing specialized financial institutions to serve particular markets. However, like markets, governments have found these impediments difficult to overcome. Furthermore, experience shows that such institutions, when administered on non-market principles, become political tools and end up with problem portfolios. If the Government of Hungary decides to implement a microcredit scheme, therefore, it should ensure that the scheme is administered according to market principles (e.g., with interest rates reflecting costs and risks, and with proper collateral), and that it is subject to periodic independent evaluations.

Housing Finance

The stock of Hungary's dwellings consists of about 4 million units, more than 93 percent of which are owner occupied. The present challenge is the timely rehabilitation and replacement of older dwellings, rather than expansion of the housing stock. Annually, about 40 thousand new units plus the refurbishment of many older dwellings, would be needed to maintain the housing stock. Nonetheless, only 28 thousand units were built in 1997.

One issue of concern is that housing development depends on personal financing—more than 80 percent of new units are built without any institutional finance. The share of state subsidies has fallen from 20 to 8 percent of total housing finance,⁷ and the share of bank loans to housing has dropped from 10 to 1.5 percent (Figure 4.10). The stock of housing loans dropped from 10 to 5 percent of the banks' loan portfolio between 1991 and 1997; such loans represented less than 5 percent of households' annual

⁷ Only two thirds of the subsidies supported new development; the rest was spent on old housing loans.

income in 1997—much lower than in Britain (77 percent), the United States (69 percent), and France (45 percent).

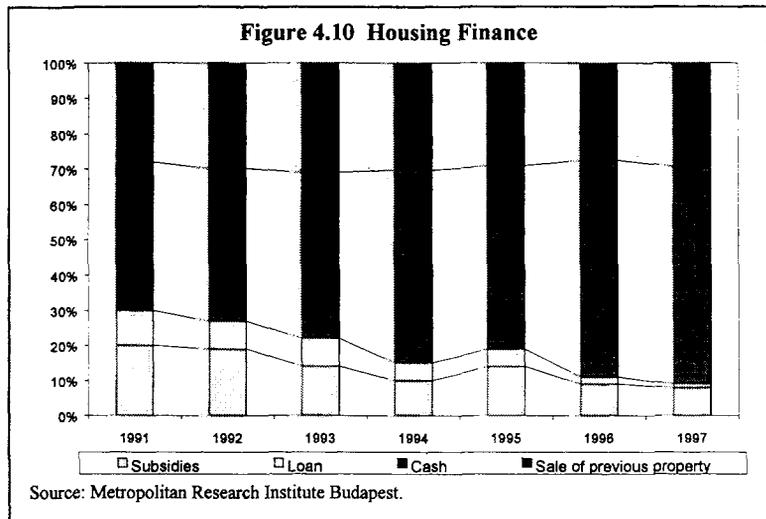
Neither the housing market nor housing finance is well developed in Hungary. Loans are not available to finance the construction of new houses, the refurbishment of old houses, or the purchase of existing establishments. Most commercial banks are not equipped and not willing to enter the housing market. One bank (OTP) dominates housing finance, with more than 80 percent of

the market. On the demand side mortgage interest rates from commercial banks were 28 percent per year at the end of 1998, implying real interest rates above 16 percent. Thus annual interest payments on a housing loan (assuming a loan amount of three times the borrower's annual wage, roughly what would be needed to buy or build a house) would almost equal the borrower's total wage—a situation that makes such borrowing unaffordable. The high interest rate is due partly to inflation risk, but is also partly a consequence of the difficult procedures for mortgage foreclosure. From the borrower's standpoint, locking in such high spreads (the spread between mortgage money and the prime rate) could prove very costly, particularly in a world of declining interest rates. Institutional impediments to the development of housing finance include the inability to displace sitting tenants, as well as the underdeveloped nature of the property market and property registries needed to prove clear title.

To provide some remedy, the Government has introduced a contractual savings scheme modeled after the German system, which provides a new method of housing finance. Households contribute to savings funds, which are significantly subsidized (40 percent in 1997, dropping to a 30 percent subsidy with a ceiling of HUF 120,000 savings per household per annum). Three home saving funds were established in May 1997, and an additional one in October 1998. By that month, about 365,000 home savings contracts had been signed, with deposits equal to HUF 14.8 billion, plus HUF 4 billion in state subsidies. The rate of return for the funds, including the subsidy, is estimated to be around 15 percent per annum, about the same as the present term deposit rate. Lending will start in about 4 years. However, the financing power of this scheme will be modest—suited to financing small refurbishments rather than new construction. Moreover, such schemes are likely to remain small in terms of the potential for housing finance. But since many banks are now developing lending services for retail clients, they are becoming interested in offering home mortgages. In this context, resolving both the institutional and interest rate issues mentioned above will make a far greater contribution to housing finance. The growth of pension funds could also contribute to the development of housing finance in the medium term, since these funds could become important holders of mortgage-backed securities.

Municipal Finance

Although Hungary's municipalities achieved political independence in 1990, they still lack real economic sovereignty. During 1997, 57 percent of their expenditures (amounting to 13 percent of GDP), were financed by transfers from the Central Government, 40 percent by local revenues, and only 3 percent from banks and the capital markets. OTP has a monopoly in serving the municipal market, with 95 percent of municipalities as clients.



Municipalities carry out about 40 percent of public investment, and this percentage is likely to increase in the future. In the course of integration with the EU, huge infrastructure investments will be needed, with wastewater treatment alone costing an estimated HUF 800 billion (US\$2 billion). Transfers from the EU may reach up to 2 percent of GDP per annum (around US\$1 billion) if the municipalities can provide the needed cofinancing, which under the present formula is 20 percent of project cost (it is expected to rise to 50 percent in future years). However, the municipalities will be unable to absorb the transfers unless they develop their capacity to generate their own resources and borrowing capacity.

Municipal borrowing capacity is constrained, however, by the fact that most are not good credit risks: they are small and lack sound financial management; they have limited resources acceptable to lenders as collateral; and have little financial capacity for debt repayment, which is tightly regulated by law.⁸ The Central Government has made it clear that it will not guarantee the debts of the municipalities. Although present regulations do allow municipalities to issue general obligation and revenue bonds, high inflation and uncertainties about utility tariffs have discouraged the issuance of such instruments. Moreover, no more than 50 communities are sufficiently large to enter the bond market. Nor have municipalities developed regional associations of sufficient size to provide cost-efficient service delivery (known as special districts in the United States). Finally, many municipalities have been unwilling to borrow, since they believe they might eventually be eligible for Government subsidies to finance the same investment.

To overcome these difficulties, municipalities must develop good borrowing practices. They must borrow to fund investment, not current expenditures, ensuring that the investments are sound and can cover borrowing costs, often on a non-recourse, project financing basis. Where this is not appropriate, they must ensure that municipal revenues will be adequate to service debt payments. Given the small size of so many Hungarian municipalities, they should join together to form special purpose entities large enough for the efficient provision of some services. Legal changes may be necessary to ensure that such entities are vested with appropriate powers to enter into contracts, to borrow, to levy fees for service, and to pledge project revenues as security against loans. Government policies should encourage the securitization and trading of municipal loans. Establishing a national data base on municipal finance would provide creditors with transparent, reliable, and standardized information. This would, among other things, provide information on subnational debts, including guarantees and contingent liabilities, as well as on the collateralized assets of local governments.

Given that few municipalities will be able to access the bond market directly, the Government should consider establishing a specialized bank for municipal finance, as exists in several other European countries. However, many of the problems mentioned above will not be resolved simply by creating a specialized bank. Should such an entity be established, it should operate on market principles, lending only for viable projects able to generate the revenue needed to service debts, or to local entities with adequate revenue sources. The Government should not guarantee local borrowing, and all lending should be on market terms. Funding, and risk and project management including service pricing, should support market sustainability of the project, the municipality, and the financial intermediary.

⁸ The Municipal Bankruptcy Law creates a clear course of action to be followed in case of financial failure of a municipality, and makes clear that losses must be absorbed by creditors without Government bailout. This rule has been followed in 8 bankruptcy cases since 1995.

EU and OECD Compatibility

Although Hungary has made substantial progress in meeting EU and OECD standards, some minor redrafting of laws and regulations is required in several areas to ensure full compliance. These include the treatment of foreign branches, ceilings on deposit insurance, cross-border trade in financial services, capital adequacy, and the regulation of capital movements.

Treatment of foreign branches. While branches of foreign banks do not require a separate legal personality, they do have to be entered into the companies' registries as separate entities. Branches of foreign banks have to comply with Hungarian banking regulations independent of the parent company, even though the latter is liable for any outstanding debts of the branch in the case of liquidation. Hence, foreign branches in Hungary are more like subsidiaries, and such status does not meet EU requirements. Under EU rules, foreign banks must be allowed to set up branches without special capital requirements, thus enjoying the non-resident status of their parents. This has a number of implications. When a foreign bank operates as a branch, the limitation of its risk depends on the capital of the parent, putting at some disadvantage domestic banks with small capital. Second, deposits are treated as obligations of the parent. This would violate the Hungarian Act on Foreign Exchange, which presently restricts residents from holding deposits abroad. A change in the foreign exchange rules is scheduled to be made by the time of EU accession.

Deposit insurance. Hungary will have to gradually increase the level of deposit insurance, from the present compensation limit of HUF 1 million to ECU 20,000 (the equivalent of HUF 5 million). Although raising this limit would imply more protection relative to the level of average wages (in comparison with the average EU ratio) and potentially greater moral hazard problems, not raising the limit would put Hungarian banks at a disadvantage relative to banks in other parts of the EU. Hungary intends to implement the higher level of protection over a five-year period.

Cross-border trade in financial services. Hungary does not yet permit cross-border trading in financial services, as required by the EU. While Hungary does not have to conform to EU regulations until the date of joining, it does need to decide whether the opening should be gradually implemented or done all at once at the time of joining. Opening the market will certainly increase competition and reduce spreads, particularly in those market segments that are not presently contested, such as the insurance sector. Continued gradual liberalization in services seems advisable, so that the firms are gradually exposed to a more competitive environment. It would be useful for the Government to make clear to firms the schedule for opening trade in financial services.

Capital adequacy. Though in several ways Hungary's capital adequacy requirements are more stringent than the EU's Capital Adequacy Directive (CAD), they still need to be harmonized with the latter. The CAD imposes new capital requirements for the market risks (e.g., position risks) contained in the trading book that must be kept by every financial institution as of January 1999. Many definitions used by the CAD, however, simply do not exist in Hungarian law, or have a different meaning. The Government is supposed to issue decrees that would contain detailed rules on the trading book and the capital requirements for the risks contained therein, as well as detailed rules of performance of individual portfolio managers. However, because of the date set by the EU for the implementation of universal banking, it is feared that there will not be enough time to prepare these decrees.⁹

The issue of capital adequacy also arises in the case of the savings cooperatives, a group of more than 240 small institutions presently covered by the banking law. Many savings cooperatives do not meet

⁹ The decrees are detailed rules on trading book risks. They will likely be issued in mid-2000 and enter into force in early 2001.

the capital requirements for financial institutions because of their small size. Only if these institutions were integrated, as is done in some European countries, would the group's capital be adequate. The Government should consider ways to encourage the merger of many of the smaller cooperatives. One way to ensure this would be to raise the minimum capital from HUF 100 million to HUF 300 million. This would bring the cooperatives in line with the capital requirement of the EU's Second Banking Directive of the EU, which requires minimal capital of Euro 1 million (equal to HUF 250 million).

Capital movements. While undertaking recent significant liberalization, to fully meet the requirements of the EU, as well as the agreements reached with the OECD, further liberalization of capital movements will be required. The Government has scheduled full liberalization of long-term capital movements for late 1999, barring adverse changes in the international financial environment. Given the somewhat fragile nature of the world's financial markets at the end of 1998, controls on short-term movements are to remain in force. Indeed, the Government should move cautiously on further liberalization of short-term capital, in particular in HUF-denominated money market operations—the most volatile part of the market. By the time of entry into the EU, however, Hungary needs to have established an economy that can operate with open capital markets. Also in keeping with EU standards, Hungary must eliminate anonymous accounts that can potentially be used for money laundering.

CONCLUSION

In the field of finance, Hungary is in the forefront of reforms among transition economies. Its legal framework for banking has been greatly improved and harmonized with that of the EU (with the exceptions noted above); and its banks have been restructured and sold, for the most part, to strong foreign strategic investors. After an initial period of heavy losses, the insurance sector is relatively healthy, and the capital market has developed rapidly in both size and liquidity. The recently enacted pension reform is expected to result in the rapid growth of pension fund assets, further boosting the development of the domestic capital market.

Important aspects of reform, however, still need to be addressed. The recent failure of Postabank, one of largest bank -- for years rumored to be engaged in unsound practices—indicates that supervision still needs to be strengthened and made more independent of political pressure. In banking, insurance, and brokerage, there are too many small and weak firms. Higher capital requirements would lead to mergers of these small units and help reduce institutional risk in the market. While credit risk management has improved substantially, expertise and sophisticated regulation of market risks (e.g., foreign exchange, interest rate, and stock market risk) still requires improvement. Hungary has maintained some control over capital movements; given the volatility of capital markets, such controls have probably proved positive. Capital controls will be difficult to maintain, however, as Hungary becomes more integrated with the EU. Thus Hungary will need to replace overt controls with stable macro and financial policies that discourage volatile capital movements. Access to funding needs to be improved for certain classes of small borrowers. Here it is less clear what needs to be done, for this is in part a developmental problem that only time and experience will rectify. However, bringing inflation under control and working to clarify property rights in agriculture and housing will certainly help. Some changes in laws and regulations are also needed to bring Hungary's financial sector into conformity with EU specifications. However, the overall assessment is that the Hungarian financial system, in terms of laws, regulations, and institutional strength, will be ready for the country's entry into the European Union.

5. ENTERPRISE SECTOR IN TRANSITION

Industry accounts for one quarter of the economy's GDP (down from about half during the socialist era), and manufacturing is the most important industrial subsector. Despite Hungary's aging and slightly declining population, aggregate savings have been sizable, and—augmented by sustained capital inflows—have financed investments in recent years amounting to 20 to 25 percent of GDP, to modernize the country's capital stock. Utilities are also undergoing major changes: they are being privatized and refurbished and their regulatory regimes are undergoing reform. This chapter describes developments in the unregulated manufacturing enterprises. Utilities and regulatory issues are discussed in chapter 6.¹

LOOKING BACK

The Political Backdrop

Even during the previous regime, entrepreneurship was not absent in Hungary's economy. Aware of the serious information problems of running a centrally planned economy, the authorities accorded many enterprise managers sufficient autonomy. Enterprise managers knew their business, having risen through the ranks, and were accustomed to operating with little Government oversight.

Although most firms were run without the state's heavy hand, the market was not allowed to operate freely. Resources were misallocated, both because relative prices were distorted and because there was no mechanism to redirect one firm's surplus to another in need of resources. Investment was consequently misallocated across firms, and inappropriate technology (embedded in the machinery) was often selected. Non-market alternatives such as cross-ownership and holding companies were considered a possible remedy, but except for the ownership of commercial banks by industrial firms, such ownership patterns were rare.

Capitalism was not wholeheartedly embraced when Communism collapsed. Hungarian economists and public alike distrusted privatization because of experiences with self-dealing and asset stripping during the late 1980s. Moreover, the earlier debates about how to make central planning work better had heightened awareness of alternative ownership and governance structures. So while the Government was not averse to privatization per se, most Hungarian economists argued that passive, dispersed private owners would not oversee enterprise managers any more effectively than the state had.² The Government therefore sought responsible owners from the outset, and eschewed voucher and other mass privatization schemes. Selling a controlling stake to insiders was also rare: although managers and employees could buy the shares at a 5 to 10 percent discount, there were fewer than 100 instances when they bought a majority of a firm's shares. Selling a controlling stake to foreigners was the logical alternative to selling to insiders or to mass privatization.

¹ This chapter is based on Toth (1998), Hamar (1998), Csaba (1998), Borszeki (1998), and numerous other secondary sources.

² Janos Kornai, the prominent Hungarian economist who was influential in ensuring managerial autonomy, made a *volte face* in 1989 when he argued for privatization, saying, "Let us *not* give unrestricted power to the manager of the state-owned firm."

Creeping Privatization; Meandering Asset Sales

The economy began to develop a private sector while still under Communism. While larger enterprises remained state-owned, small firms could be privately owned beginning in the 1960s. Although most industrial assets were owned by 2,400 large state-owned enterprises, the numerous small private firms (which grew to 50,000 firms by 1989) revived the entrepreneurial culture long after it had been eradicated in the rest of the CMEA countries. This entrepreneurial yeast raised Hungary's economy anew after the CMEA collapsed. Hungary's GDP trough during the transition induced recession of the early 1990s was shallower than other transforming economies,³ although Hungary's subsequent recovery was initially slower. Even more impressive, the private sector, which accounted for some 20 percent of GDP in 1990, now accounts for 80 percent.⁴ Table 5.1 shows the evolving ownership of manufacturing firms in recent years.

**Table 5.1: Ownership of Manufacturing Firms
(percentage of registered capital)**

Form of ownership	1992	1993	1994	1995	1996
State	55.2	39.2	29.3	19.9	14.4
Municipal	8.8	1.6	1.6	1.0	0.9
Individual		8.8	9.4	10.1	9.5
Domestic company		15.0	17.9	18.2	19.4
Employee	0.1	1.0	1.5	1.4	1.2
Foreign	20.5	30.9	37.1	46.7	51.1
Cooperative	3.6	2.6	1.9	1.4	1.2
Other		0.9	1.3	1.3	2.3

Source: Borszeki (1998).

The state divestiture of assets, however, occurred in fits and starts. Several hundred state firms were turned over to the municipalities; when the state property agency (AVU) was formed in March 1990, it took control of 1,857 state-owned firms (1,700 were industrial, the rest agricultural). These state enterprises were incorporated and eventually privatized.

The Privatization Process

Responsibility and authority for privatization were split among AVU; the state holding company (AVRt, set up in 1992 to assume the functions of the ministries overseeing the firms); and several state asset management agencies. The AVRt owned some 174 firms in 1992, including banks, infrastructure companies, and major chemical, pharmaceutical, mining, and steel enterprises. [Although the agencies arguably knew most about the enterprises they owned, they did not play a central role in shaping the privatization agenda.

³ Although Poland's trough was similarly shallow, it was less focused on industry than was Hungary's (whose industrial output halved), and its recovery was faster because private farmers quickly respond to prices. Slovenia's trough was about 28 percent lower than the initial rim, partly because of the breakup of Yugoslavia and the resulting disruption of economic ties; while the decline was far greater (ranging between 40 and 70 percent) in the FSU countries, where farms were collectives and basic market infrastructure was lacking.

⁴ While these numbers are widely reported, their source and reliability are unclear. National income accounts do not distinguish economic activity by ownership. The numbers are very likely from reports to the tax authorities and refer to sales (or value added) by ownership of reporting entity.

Firms were sold mainly for cash through auctions and tenders, although about 7 percent of state assets were sold using compensation certificates⁵ which were distributed among victims of the fascist and communist regimes. Municipalities accepted these certificates as payment when apartments were privatized; instead of extinguishing them, municipalities either sold these certificates in the secondary market for cash or used them to buy shares in firms.

Because of a running dispute between the Central and the municipal governments about what each owned, the sale of major utilities was delayed until 1995. Municipalities wanted to own firms with operating surpluses and were reluctant to acquire loss-making utilities that required subsidies (e.g., district heating, municipal tram and bus services). These disputes delayed privatization when the sale could have reduced the operating losses. Privately owned utilities could have more easily raised prices in step with inflation, collect unpaid bills, and raise the funds needed for highly profitable investments such as replacing rusted water mains, or e-insulating heat distribution pipes.

In 1996, the state asset management agencies transferred about HUF 65 billion worth of shares, representing minority holdings in 40 privatized companies, to the Health and Pension Funds.

Privatization Scoreboard

Although the AVU had divested roughly 75 percent of its initial holdings by mid-1995, this amounted to only 35 percent of the state's stake because AVRt held the large firms: electricity, gas, airlines, railways (a huge loss-maker), telecommunications, banking, and some chemical firms. Many of these larger firms were Hungary's largest loss makers and required subsidies to cover operating cash deficits. The losses stemmed from controlled prices, the repercussions of the CMEA's collapse, and operating inefficiencies.

Privatization got its final and much needed boost in 1995 when, as part of the stabilization package supported by the Bank, the Government drastically reduced the list of firms it would continue to own (to the railways, postal service, and national parks). As part of this effort, APVRt (which succeeded the AVRt) was merged with the AVU and given a clear mandate to sell some HUF 1.3 trillion worth of equity⁶ (out of HUF 1.6 trillion it held). Also as part of this effort, the Privatization Law was amended in June 1997 to allow the sale of all but the golden shares⁷ in 18 firms previously considered strategic, including the savings bank (OTP) and the telecommunications company (MATAV). Majority and minority holdings in 116 firms, and golden shares in 27 others, will remain in the hands of the state. By the end of 1997, HUF 790 billion worth of equity had been sold (in addition to what was transferred to the social security funds and municipalities). The Hungarian power transmission company (MVM) is now the only large firm left to be privatized (for a discussion of utilities, see chapter 6).

⁵ The agency accepted certificates at face value (HUF 1,000) indexed to the price level. Certificates were issued in different years as the Government acknowledged the demands of various groups. The certificates traded in the secondary market at a discount; as arbitrage kept the discount from the indexed value uniform, the discount from the face value depended on the certificate's vintage.

⁶ Some HUF 1,227 billion was in majority equity holdings in 171 large firms, and HUF 40 billion in 259 small and medium-sized firms with fewer than 500 employees. APVRt also had HUF 356 billion in minority equity holdings in 145 large and HUF 7 billion in 176 small firms. In addition, APVRt had HUF 162 billion as (book value of) equity in 77 large and 513 small firms in the process of being liquidated.

⁷ A golden share, which cannot be sold, allows the Government a disproportionately large vote in a firm's annual meeting. It was introduced to allow the sale of firms in which the Government wanted a say in major decisions but not in day-to-day operations.

Spending the Receipts

In consideration of the restructuring needs of the newly privatized firms, they were given 20 percent of the privatization receipts as a grant. The remaining proceeds, net of the privatization agency's direct sales expenses (roughly 5 percent of revenues), went to the Government budget.⁸

The meager privatization revenues of the early 1990s provided little temptation for profligacy. However, the 1995 decision to privatize almost all remaining state-owned firms triggered a heated debate over spending the receipts. The Government decided that it would have been imprudent to spend the *non-recurring* privatization receipts on *recurring* expenditures and transfers, especially when the stabilization package sought to keep the budget deficit sustainable. Thus, the bulk of the annual earnings from the receipts were used to reduce the outstanding debt (both domestic and foreign currency). The smaller future interest expense from the lower stock of debt allows a larger primary budget deficit (i.e., higher recurring expenditures and/or lower tax receipts) for any level of overall budget deficit.

As a result, Government debt fell from 86 percent of GDP in 1995 to 60 percent in 1998. Growth of the economy since 1995 accounted for some of the decline in the Government's debt to GDP ratio, but privatization receipts clearly played a major role.

The Role of Foreign Direct Investment

Hungarian firms had been allowed to link up with foreign (including non-CMEA) firms since 1968. Joint ventures with a Hungarian majority had been permitted since 1972, and foreign majority firms since 1988. Nonetheless, FDI and the number of joint ventures remained modest until the late 1980s, when inflows began to increase significantly, reflecting the westward shift of Hungarian trade after the collapse of the CMEA.

The early joint ventures enabled foreigners to assist local partners, usually state enterprises, in negotiating the legal and bureaucratic hurdles facing businesses. As the Hungarian private sector was allowed a larger role, foreigners increased their stake in their joint ventures, and began to integrate their Hungarian units with their operations abroad. Although the overall number of joint ventures has recently decreased (because the inactive ones were liquidated), new wholly owned subsidiaries have become the norm, not the exception. In 1992, foreigners usually had only a blocking minority stake, but this slowly changed over the years, and majority and wholly owned subsidiaries have become more common.

Origins and Recipients of FDI

Hungary attracted some US\$16 billion in FDI by 1997 (Appendix Table 7.1), and the average annual inflow of more than 5 percent of GDP between 1991 and 1997 is exceptionally high. About a third of this flows to wholly foreign owned firms, and the rest to joint ventures and partially foreign-owned domestic firms. Germany has been the largest source country for FDI *through privatization*, with roughly 35 percent of the

⁸ In the early years, buyers were allowed to pay over time. The privatization agency, using the accrual concept, recognized the committed price as revenue, and considered the deferred payment as a loan (E-loan). Commercial banks formally extended the loan, with a 3-year grace and a 15-year repayment term, at concessional rates, which were rediscounted at the central bank. The Government budget, however, is on a cash basis, and reconciling these differences is arduous. The amounts, however, were small until 1995, by which time the E-loan scheme had withered away. The cumulative total of E-loan sales was HUF 41.67 billion in April 1994.

total; the United States (20 percent) and France (12 percent) are other major sources.⁹ In 1998, a new foreign investment law gave foreigners the same protections as domestic firms, and there is no longer a distinction between affiliates and branches of foreign companies.

There are now some 30,000 firms with foreign participation; about a third of them—mostly the larger ones—are *wholly* foreign owned. Furthermore, the proportion of the wholly foreign firms will likely rise because they account for almost two thirds of all newly incorporated firms (1997 data). Such a change suggests a shift toward well integrated multinational operations rather than arm's length Hungarian subsidiaries.

FDI has been most widespread in manufacturing (particularly food and mechanical engineering, Appendix Table 7.2), where, by the end of 1996, more than half the assets¹⁰ were in firms with some FDI (up from one fifth in 1992). Within manufacturing, as shown in Table 5.2, *wholly* owned (91 to 100 percent) FDI firms have tripled in number, reaching 1,857 in 1996 and accounting for 70 percent of assets owned by foreign investors.

Most firms in the export promotion zones (more than three quarters of the exports from these zones are of electronic items) have some at least minority foreign ownership. Although firms with FDI are widely scattered across the country, they tend to be concentrated in the western part of the country perhaps because of the transport and infrastructure advantages. Firms with FDI also are more trade oriented, exporting almost half their sales, while non-FDI firms export only a fifth of their sales. These proportions are deceptive, however, because exports are often disguised as domestic sales to exporting firms. So domestic firms indirectly export more than the data suggest.

Table 5.2: FDI Ownership in Manufacturing Firms, 1992 and 1996

% FDI ownership	Number of Companies		Companies (%)		FDI (HUF billion)		FDI (% value)	
	1992	1996	1992	1996	1992	1996	1992	1996
<10%	9,151	14,291	78.8%	79.1%	0.3	0.7	0.1%	0.1%
11%-50%	1,111	1,009	9.6%	5.6%	42.3	77.2	21.4%	11.9%
51%-90%	677	813	5.8%	5.1%	65.7	116.7	33.3%	18.0%
91%-100%	681	1,857	5.9%	10.3%	89.2	453.2	45.2%	70.0%
Total	11,620	18,070	100%	100%	197.5	647.7	100%	100%

Source: Hamar's (1998) calculations using double accounting firms' balance sheet reports to Tax Office.

These findings should not be surprising: foreign investors rarely set up ventures in small, non-traded activities. So FDI firms are generally export (and import) intensive, and often fund suppliers facing funding or investment constraints. FDI firms also tend to be less labor intensive than domestic firms—although the difference may be less than the data suggest. Domestic firms may *show* fewer workers on their payroll due to the legacy of incorporated work units and the temptation to evade the high tax rates for pensions and social services.

⁹ Precise data are not available. The receipts are cumulated in HUF, but the shares would be somewhat different if adjusted for the exchange rate changes over the years. Also, the Netherlands would be listed as the source of a wholly owned Dutch subsidiary of an American parent.

¹⁰ These data are based on book values, and the accounting system ignores inflation, which fluctuated greatly and still has not declined below 17 percent annually. So one must be especially careful in drawing conclusions.

Benefits of FDI

Although profits accruing to the foreign owner may eventually be repatriated, FDI benefits the country (especially workers) through higher productivity and wages.¹¹ Higher productivity can come in three ways: (i) improved technology, (ii) better management, and (iii) access to credit. While firms without FDI can buy the same technically advanced machines, a foreign partner can help to choose and operate the best machine, and also help to improve the firm's efficiency and product quality through training of staff and management. Importantly, a foreign owner can overcome domestic funding constraints by easing access to foreign banks.

In addition, even though FDI firms are geographically concentrated in the western part of Hungary and around Budapest, the benefits are widely dispersed throughout the country. Domestic firms supplying the FDI firms are also located in other regions, and workers all over the country will benefit from the rise in wages resulting from increased labor productivity.

Both quantitative and anecdotal evidence suggest that FDI firms gain access to credit more easily than domestic firms. Although Hungarian firms have surprisingly little debt, Table 7.3 in the Appendix shows that firms with FDI have proportionately more long-term credit (and less short-term credit) than domestic firms do. The true difference may be even greater than the data show because the denominator (the book value of assets) is biased downward for domestic firms with older equipment. The difference in borrowing could reflect signaling rather than credit access per se: if lenders cannot evaluate the borrower independently, the foreign partner's presence may implicitly attest to the firm's viability.

FDI can also facilitate access to credit by domestic firms. An FDI firm could overcome any funding problems of a reliable domestically owned supplier by paying for purchases in advance. Appendix tables 7.3 and 7.4 suggest that this occurred. Table 7.4 shows that firms with some foreign ownership buy or sell proportionately more to, and from, domestic firms, and Table 7.3 suggests that domestic firms have more short-term debt to own capital.

Have Firms Restructured?

Most privately owned (both domestic and FDI) and state-owned firms have restructured their operations, although firms that have remained state owned have restructured the least. Of those that were privatized, many began restructuring well before they were privatized—although studies¹² have shown that the performance of privatized and state-owned firms differed less in Hungary than elsewhere in eastern Europe. What seems to really matter is FDI: firms with even *some* FDI restructured faster and more extensively than privately owned domestic firms.

While these findings point to the benefits of FDI, it would be wrong to deny the benefits of privatization, as FDI flows may have reflected direction, not the pace, of Hungarian reform, and the emphasis on private markets. Thus privatization was an important milestone marking the continuing evolution of firms.

Loss Makers in Utilities

The top panel of Table 5.3 shows that *gross losses in industry* rose alarmingly during the early years of the transition, from 0.6 percent of GDP in 1988 to 14.2 percent in 1992, before starting to fall. In this

¹¹ See related discussion on the labor market in chapter 7.

¹² See Pohl et al (1997), which uses survey data of about 1,000 Hungarian firms from 1992 until 1995.

measure, firms reporting profits are separated from each year's sample of firms, and the total losses of the remaining firms are scaled by GDP. When these gross losses are aggregated with the profitable firms (to yield net profits), the magnitude is smaller but the time pattern remains—marked deterioration until 1991, and an improvement thereafter.

Railways, the post office, and a few firms with controlled prices accounted for a large part of these gross losses. When this category is excluded, the magnitude declines substantially (middle panel in Table 5.3), although the pattern of steady improvement remains.¹³ These calculations were difficult to do for the earlier years, but the 1992-95 years show the differences.

Losses during this period seem widespread, with about half the firms reporting losses to the tax authorities in 1993. With high fixed costs, this outcome could be expected, since many firms were operating at less than break-even capacity when the CMEA broke up. Even if labor inputs were not fixed and purchased from separately incorporated work units, there was an understandable reluctance to stop paying for their services. Such behavior does not necessarily constitute poor management: profit-maximizing owners often continue to employ labor with firm-specific human capital during downturns that are perceived to be temporary. Furthermore, the equipment in the larger firms may have been chosen to exploit scale economies, and underutilized capacity implies losses because of large depreciation cost.

**Table 5.3: Enterprise Losses in Hungary
(percentage of GDP)**

	1988	1989	1990	1991	1992	1993	1994	1995	1996
Industry¹									
Gross losses	0.6	1.4	2.6	8.4	14.2	10.1	7.2	3.1	
Net profits	16.9	16.2	13.3	4.1	-6.1	-3.4	0.1	2.2	
Limited Industry²									
Gross losses					6.7	4.0	3.3	3.6	2.7
Net profits					-3.9	-0.7	0.4	1.2	2.8
Manufacturing									
Gross losses					5.6	3.3	2.3	1.8	1.6
Net profits					-3.5	-0.7	0.7	2.6	3.3

¹ Includes mining (ISIC category C); manufacturing (D); electricity, gas, and other utilities (E); construction (F); and transport and communication (I).

² Excludes transport and communication (category I, which includes railways and the postal system).

Sources: Csaba (1998), World Bank (1997), and Central Statistical Office.

Small and Transitory Operating Cash Deficits in Manufacturing

The picture is far less alarming, however, when (i) *manufacturing* alone (lower panel in Table 5.3), and (ii) *operating cash deficits*, not accounting losses, are considered.

Operating cash flows in adjacent years for a large and representative sample of manufacturing firms are shown in Table 5.4. Taking the highlighted block for illustration (1994-95), 4,890 firms reported results to the tax authorities in *both* 1994 and 1995; 10.7 percent of these firms had an operating cash deficit in 1994 and 12.2 percent had a deficit in 1995. Only 6.0 percent of the 4,890 firms had a deficit in *both* years. So about half the firms in deficit in any year had a surplus the next year.

¹³ For comparison with other CEE countries, see Table 7.5 in the Appendix.

Roughly 80 to 90 percent of the firms had an operating cash *surplus* during the years 1992 to 1996. Even in a normal economy, some firms operate with cash deficits. One cannot say whether the proportion of cash deficit firms was too high in Hungary; but the picture is vastly brighter than the bleak one depicted in Table 5.3. Of course, Table 5.4 does not weight firms by size, and larger firms may have suffered more. Still, one gets the impression that many firms with operating *cash surpluses* reported *losses* to the tax authorities.

Furthermore, roughly 4 to 7 percent of the firms changed from a deficit in one year to a surplus in the next (and conversely, some firms worsened). In other words, roughly half the firms with an operating cash deficit in any year had a surplus in an adjacent year, suggesting that *operating cash deficits were not persistent*: either the problems were quickly addressed by the managers, and/or a general economic updraft lifted the firm with it.

Thus, *manufacturing* firms were doing considerably better than *industry* losses suggest. Those losses resulting from controlled prices that were set too low are perhaps better viewed as transfers (albeit poorly targeted and distorting) to employees and customers than as the effects of restructuring. The next question is whether the pace of restructuring was influenced by the ownership.

Table 5.4: Manufacturing Firms' Adjacent Year Cash Flows

		1993			1995		
		Negative or zero	Positive	Total	Negative or zero	Positive	Total
1992	Negative or zero	7.3	4.1	11.5			
	Positive	13.6	74.9	88.5			
	Total	21.0	79.0	100.0 (n=4,367)			
1994	Negative or zero	7.9	6.9	14.8	6.0	4.7	10.7
	Positive	6.6	78.6	85.2	6.2	83.1	89.3
	Total	14.6	85.5	100.0 (n=5,150)	12.2	87.8	100.0 (n=4,890)
1996	Negative or zero				4.8	5.5	10.3
	Positive				3.7	86.0	89.7
	Total				8.5	91.5	100.0 (n=4,915)

Source: Toth (1998).

Restructuring and Ownership

Accounting losses may be merely embarrassing, but persistent operating cash deficits demand action. The manager of a cash deficit firm—regardless of whether state or privately owned—must obtain subsidies or loans, or restructure operations. Obtaining even subsidies or non-commercial loans entails effort and delays, which means unpaid bills and wages. So even state-owned firms (facing soft budget constraints) may have restructured, albeit more slowly than others. This section examines whether this was the case.

Data describing manufacturing firms for the period 1992 through to 1997 have been examined for four categories of enterprises: (i) wholly FDI owned; (ii) FDI of more than 10 percent (but less than 100 percent), even if the rest was state owned; (3) state controlled; and (4) domestic privately owned. The state could control firms with less than 50 percent direct holding because of cross holdings by other state-owned firms and/or golden shares. Two sets of data are examined. In the forward-looking set, the four categories are formed based on 1992 ownership, and the firms remain in each category *even when the ownership changed*

subsequently. In other words, the 1995 state-controlled category includes firms that may, by then, have been entirely FDI owned. In the backward-looking set, the four categories are based on 1997 ownership. Hence, the 1995 FDI-owned category includes newly established FDI firms, as well as state-owned enterprises in which foreigners subsequently invested. Tables 5.5 and 5.6 below show the main characteristics of the sample for each of these sets.

The analysis revealed a dramatic improvement in wholly FDI firms. Between 1992 and 1997, total employment in these firms increased by 40 percent, the average number of employees per firm doubled, sales more than tripled, and the firms invested heavily in new assets. The firms that were wholly FDI owned only at the end of the period (they may have been state owned before or recently created) also increased sales, but far less substantially, and they invested more modestly. Employment rose, but their average size was smaller than FDI companies in existence since 1992. This is as expected: restructuring first involves reducing operating costs by shedding redundant labor, then increasing sales and investing in new machinery, and only later adding new employees.

Table 5.5: Forward-looking Set, 1992-1997 (the same firms are followed over time; ownership category corresponds to that in 1992)

	FDI controlled		Min. 10 percent FDI		State owned		Private domestic	
	1992	1997	1992	1997	1992	1997	1992	1997
Total employment	23,000	32,000	96,000	69,000	380,000	105,000	40,000	16,000
Number of firms	781	542	1,789	1,340	1,360	543	7,721	4,866
Employment per firm	29.4	59.0	53.7	51.5	279.4	193.4	5.2	3.3
Sales per firm (HUF million; PPI adjusted)	179.0	571.8	220.8	441.3	744.5	1,242.6	37.3	46.6
Assets per firm (HUF million; nominal value)	209.5	831.2	288.1	792.0	877.7	2,389.7	30.0	60.0
Cash flow to assets	14.0%	31.8%	10.0%	26.1%	11.5%	19.6%	11.8%	27.1%
Cash flow to sales	16.4%	19.8%	13.0%	20.1%	13.6%	16.1%	9.5%	15.0%

Source: Central Statistical Office

Table 5.6: Backward-looking Set, 1992-1997 (the same firms are followed over time; ownership category corresponds to that in 1997)

	FDI controlled		Min. 10 percent FDI		State owned			Private domestic	
	1992	1997	1992	1997	1992	1993	1997	1992	1997
Total employment	43,000	75,000	152,000	124,000	13,000	23,000	26,000	113,000	117,000
Number of firms	662	1,773	1,018	2,182	59	98	146	5,606	15,751
Employment per firm	65.0	43.2	149.3	56.8	220.3	234.7	178.1	20.2	7.4
Sales per firm (HUF million; PPI adjusted)	297.7	470.3	612.8	490.4	336.3	449.3	378.4	61.4	53.2
Assets per firm (HUF million; nominal value)	378.2	736.9	835.6	957.0	493.5	695.5	661.0	52.1	74.0
Cash flow to assets	10.6%	30.6%	16.6%	23.4%	2.2%	5.4%	-0.4%	12.8%	17.9%
Cash flow to sales	13.5%	20.5%	22.7%	19.6%	3.2%	7.5%	-0.3%	10.9%	10.7%

Source: Central Statistical Office.

A partial stake is usually the first tentative step of a foreign investor, and so the partial FDI firms show a somehow different pattern than the wholly FDI category. Older firms (i.e., the forward-looking set in Table 5.5) behave much like wholly FDI firms: their sales doubled, assets increased, but the average employment has not (yet) risen. Data show a doubling of cash flow to assets and to sales, similar to the wholly FDI category, though at lower levels. The firms with a stake newly sold to a foreigner (backward-looking data), however,

show a less dramatic improvement, confirming the typical sequence of restructuring measures. An interested foreign investor begins with a small stake in a firm, perhaps to know it better, and sets out to cut costs first. This results in lower average employment, and perhaps slightly diminished sales (when unprofitable lines are discontinued). Investments in quality-enhancing machines and aggressive marketing later raise sales, and the foreigner increases his stake, making the company a wholly owned subsidiary, before investing massively and integrating its operations with units abroad. The backward-looking category of partial FDI firms includes those in the early stages of this process, and the reported measures capture this.

Any empirical examination of restructuring in the state-owned enterprises faces a selection bias, which makes cause and effect of improved performance difficult to separate. The most promising firms (those amenable to improvement because obsolete and inappropriate technology was not embedded in the machinery) may have been privatized, with the rest remaining state owned. This would mistakenly attribute improvements exclusively to changes in ownership without also considering the adaptability of technology inherited from the CMEA era. Large SOEs may also have spun off their more adaptable assets. There is some evidence of this: firms that remained state-owned were smaller in sales and assets, but more importantly, were far less efficient (measured by cash flow to sales and to assets). The improvements in state-owned firms with adaptable technologies are captured in the backward-looking data of the non-SOE categories.

The number of SOEs fell between 1992-97: 817 were liquidated or merged, while 397 were privatized. Labor shedding came as a consequence of liquidations and mergers, as well as restructuring of the privatized companies. Although the average employment in firms that remained state owned throughout fell by 20 percent, that decline was the result of firms splitting rather than restructuring. Total employment (after an apparent increase in 1993, perhaps because unincorporated firms were registered as SOEs) did not change. Even so, between 1993 and 1997 their total PPI-adjusted sales rose by 25 percent—more than what private domestic firms achieved. It is, of course, impossible to tell whether the increased sales of the SOEs was the result of their own efforts or simply the result of a rising tide of economic growth. What is clear is that SOEs, despite their many problems, held their own.

Private domestic firms reduced their average employment, but they were comparatively smaller to begin with. Sales rose, but less than in state-owned firms, and investment was not as substantial (the data are suspect because of inflation). There is a far greater proportion of these small private firms entering and going out of business (only 40 percent of private firms in the 1992 sample remained in business in 1997, and only one third of the firms in 1997 existed in 1992).

In the 1992-97 period, all categories of firms show an operating cash surplus (although some firms within each category may have had a deficit), with the exception of state-owned firms in 1997. Cash flow to assets is a crude rate of return measure; it roughly doubled for all categories (forward-looking data, Table 5.5), blurring any differences among them (this outcome may be particularly prone to measurement errors because of the differences in their capital vintage and the lack of inflation adjustment). The backward-looking data show a deterioration in firms that remained state owned throughout; as mentioned before, this may reflect their non-adaptable, obsolete technology rather than the incentive effects of ownership per se.

The main result that stands out is the strong and powerful effect of FDI. Even those firms where the foreign stake was modest and the remainder was state owned benefited from the association. Although private domestic companies restructured their operations and improved performance, their results were significantly lower than firms with partial FDI. Finally, it appears that state-owned firms also improved, and did so even before they were privatized. Firms that remained state owned throughout restructured the least of all categories and showed the least improvement.

Tough Bankruptcy Laws Peripheral to Restructuring

Although Hungary's tough 1992 Bankruptcy Law has received considerable attention, it may not deserve much credit for enterprise restructuring. As described in earlier sections, firms began to restructure well before the 1992 Law took effect, and Table 5.4 on operating cash flows shows no dramatic subsequent improvements in 1993 or 1994.

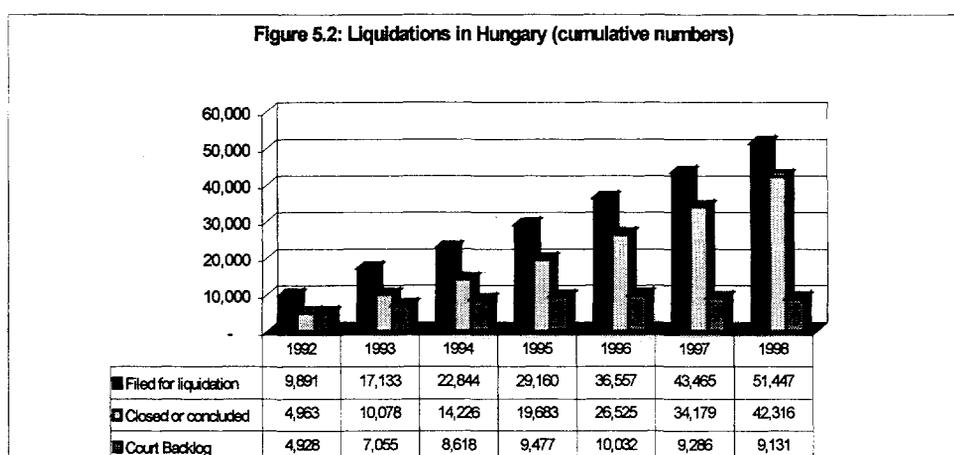
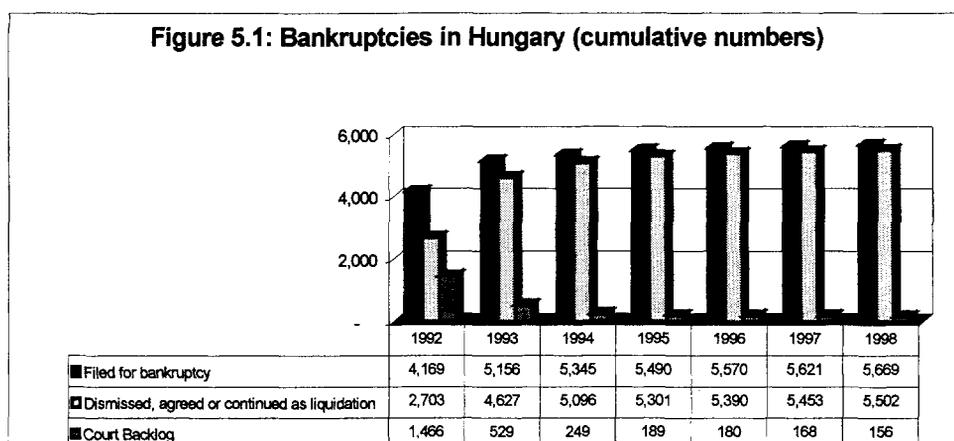
Contrary to general belief, a bankruptcy law, allows, but does not force, firms to restructure. A filing for bankruptcy (i.e., reorganization or liquidation) is just that: no further operational changes necessarily follow unless the creditors demand it. New loans after filing go to the head of the creditor queue; so new loans would be profitable if the firm had an operating cash surplus—even if it were insufficient to service its old debt. Thus, new creditors could profit at the expense of the old unless there is sophisticated court oversight to prevent this. Thus, the combination of a good Bankruptcy Law and overwhelmed courts could prove dangerous by softening the hard budget constraint. Fortunately, Hungarian banks were steeped in problems of their own (described in the chapter 4) and consequently had little to lend; moreover, foreign lenders were more selective in their lending.

Although careful observers¹⁴ accept this reasoning, the large number of bankruptcy filings is often confused with restructuring. The 1992 Bankruptcy Law allowed both financial reorganization and liquidation; its most striking feature was that managers were subject to criminal penalties if they did not file for bankruptcy within 90 days of payment delays. While debtors could file for either reorganization or liquidation, creditors could file for liquidation only. Courts were quickly swamped: more than 5,000 reorganization and 17,000 liquidation cases were filed by the end of 1993. The law was amended in September of 1993 to remove the mandatory filing requirement (and to correct flaws such as the requirement of unanimous creditor approval of a reorganization). Although new filings for bankruptcy procedures slowed after this, the court backlog for liquidation proceedings remained large: the number of unresolved liquidation cases doubled during 1992-96, to more than 10,000. Only after 1996 did the log jam begin to decrease (see figures 5.1 and 5.2 below). One possible explanation is that firms continued to operate even after filing for liquidation.¹⁵

The suppliers, not the borrowers (despite the criminal penalties) or bank creditors, initiated most of the filings. This is not surprising: a filing forces the creditor bank to immediately recognize that old loans are bad, and to fully provision for potential losses. So under-capitalized banks (and most Hungarian banks had negative true net worth) subject to closure by banking supervisors would not be likely force the debtor into filing for bankruptcy.

¹⁴ Gray et al (1996) examine a sample of 112 bankruptcy cases and concludes that while the courts and trustees improved, this "did little to further either deep restructuring or the exit of ailing firms."

¹⁵ Although the firm as a whole may have an operating cash deficit, some activities may generate a surplus, and continuing these is to everyone's advantage. In the Hungarian case, the structure of the liquidator's fees may have been partially responsible for firms continuing to operate: liquidators obtained 2 percent of the liquidating firm's gross receipts and only 5 percent of the sales price.



Source for Figures 5.1 and 5.2: Central Statistical Office.

Anecdotal accounts buttress the reasoning that the Bankruptcy Law had little effect on restructuring. When creditors demanded operational changes (especially in the larger state-owned firms with operating cash deficits), the Government prevailed on more accommodating (bank) lenders to buy off the harsher creditors. As the process became politicized, banks quickly gave up their prerogative as creditors to ensure that borrowers restructured their operations.

The Bank Consolidation Program was announced in December 1993, along with the Debtor Consolidation Scheme. These programs were presumably created to resolve the enterprise debts to banks and state creditors, but only about 2,000 out of 8,000 eligible firms took part. These initiatives were soon acknowledged to be failures. The conventional bankruptcy process, meanwhile, hobbled along: after the initial hearings, the courts accepted some 60 percent of the reorganization petitions and 25 percent of the liquidation cases for further examination, but most of these involved small firms. Liquidations proceeded slowly (averaging 2 years).

TAKING STOCK

Hungarian enterprises have adjusted to operating with no subsidies, and to facing world prices for their inputs and outputs. They have been privatized and restructured, although not necessarily in that order.

The aggregate investment has been at healthy levels; there is every reason to think that these investments have been well allocated and that the machines and other capital have been adequately modernized.

A Thumbnail Sketch

The following discussion, supported by Appendix tables 7.6 to 7.8, provides a snapshot of the Hungarian enterprise sector: who owns the enterprises, how they are funded, and their linkages.

Population and Ownership of Enterprises

Of the one million or so registered enterprises, almost 70 percent are unincorporated limited partnerships (shown in line 8 of Table 5.7 below) which are commonly used to reduce taxes. The modest increase in the total number of enterprises masks a tripling of limited liability firms (small and closely held), and a doubling of joint stock companies since 1992.

Table 5.7: Registered Firms, 1992-1997

Legal forms	1992	1993	1994	1995	1996	1997
1. Limited liability company	82.5%	85.1%	86.6%	87.8%	89.1%	90.2%
2. Joint stock company	2.5%	2.8%	2.9%	2.7%	2.6%	2.5%
3. Cooperative	11.9%	10.1%	8.1%	7.1%	6.1%	5.3%
4. SOEs and organizations with obligation of transformation	2.5%	1.3%	0.8%	0.7%	0.5%	0.4%
5. Other	0.6%	0.7%	1.6%	1.7%	1.7%	1.7%
6. Number of enterprises with legal entity (1+2+3+4+5)=100%	69,386	85,638	101,591	116,945	136,917	158,662
7. Corporations and other organizations without legal entity	10.4%	12.5%	13.6%	15.5%	18.3%	21.4%
8. Sole proprietors	89.6%	87.5%	86.4%	84.5%	81.7%	78.6%
9. Number of enterprises without legal entity (7+8)=100%	676,804	786,879	900,382	936,312	912,673	839,602
Total number of enterprises (6+9)	746,190	884,915	1,001,973	1,053,257	1,049,590	998,264

Sources: For 1992-93—Hungarian Statistical Pocketbook (1994), Hungarian Central Statistical Office (1995), p. 144.

For 1994—Hungarian Statistical Pocketbook (1995), Hungarian Central Statistical Office (1996), p. 132.

For 1995-97—Hungarian Statistical Pocketbook (1997), Hungarian Central Statistical Office (1998), p. 120.

Most firms are closely held, as shown in Table 7.6 in the Appendix. While this is not surprising for small firms, it is for larger firms: more than three quarters of the mid-sized and large firms (defined as having over 100 employees) have three or fewer owners. Furthermore, a fifth of them have a single majority owner, and more than two thirds have a majority of shares held by three or fewer owners.

Some of these owners may themselves be firms; Table 7.7 in the Appendix shows the ownership links among the larger manufacturing exporters from two survey data sets for different years. About half the firms neither own, nor are owned by, any other domestic firm; only about 13 percent of the firms are both owned by, and own, other firms. Some of these ownership links may be legacies of the joint venture era or the subsequent spinoffs, and may wither over time. The overall impression, however, is that ownership is fairly concentrated, and that larger firms and those with FDI may own other firms.

Table 7.8 in the Appendix portrays the trade links between firms with interconnected ownership. Firms owned mostly by foreigners stand out, in that half of them trade mostly with their owners. By contrast, when the owner is a domestic firm, the trade links are substantially weaker, suggesting that such ownership

may now be a redundant legacy from the era when firms cemented supplier ties through cross-ownership—ties that have lingered after the firms reoriented their businesses).

Enterprise Finance

Hungarian firms are not, and never have been, heavily indebted. The total debt (including claims by tax authorities and other firms) to assets is a scant 38 percent; if only bank borrowings were considered, debt would account for less than 15 percent of firms' assets. The biases resulting from poor accounting (short-term debt is implicitly indexed to the price level, while firms' assets are not) would increase the measure, so the true leverage is even lower.

When measured from the balance sheet of creditor banks, the numbers (while different, because of differences in coverage) confirm the impression of low leverage. Corporate loans were about 26 percent of GDP in 1989; they approached 30 percent in 1991, before falling again to 20 percent in 1997, partly because of debt consolidation schemes. By international standards, these are relatively low numbers.

Low leverage may partly reflect a cultural and legal tradition, or it may be a consequence of problems in the banking system, and/or a consequence of taxation quirks described in Box 5.1.

Box 5.1: Hungarian Taxation and Its Effects

The corporate tax rate was drastically reduced in 1995, from 38 to 18 percent. Corporate tax revenues have greatly increased, leading some to suggest that Hungary is now a regional tax haven. This may not be the case because the lower nominal corporate tax rate may crudely—and only partly—correct for complicated and egregious features in the tax structure.

The tax code ignores inflation. The absence of indexation and the insistence on FIFO (first-in-first-out) (which understates the material costs of the goods sold) overstates taxable income. On the other hand, the effect of the tax structure on indebtedness—and vice versa—is complex, and inflation makes it more so.

Interest is a deductible expense, but nominal interest includes a substantial repayment of principal when there is inflation. The debtor's taxable income is excessively reduced, but if interest *received* were taxed at the same rate, inflation's effect on leverage would be neutral. This is not the case.

Personal income tax rates substantially exceed the corporate rate, providing an incentive to substitute personal for corporate borrowing (one possible explanation for low corporate leverage). Instead of the firm borrowing, owners (especially of closely held small and mid-sized firms) can borrow on their personal account and fund the company through equity. This incentive is even stronger considering that capital gains are untaxed even when they are realized, so owners can have firms buy back equity rather than distribute cash dividends (which are taxed at 20 percent), thereby converting taxable income into untaxed capital gains.

The quirky tax treatment of banking intermediation, however, complicates this further. Interest on bank deposits (and on Government securities) are untaxed. There is thus an incentive for firms to borrow through banks. However, bank intermediation is implicitly taxed through high reserve requirements.

The combined effect of all these features is difficult to analyze. Although some quirks may counteract the effect of others, it may be time to simplify and improve Hungary's tax structure.

SUMMARY AND CONCLUSIONS

Even under socialism, Hungarian firms were not subject to tightly controlled central planning. Managers, with few exceptions, were allowed to operate autonomously and developed many trade contacts with market economies, though international trade was subject to licenses and controls. Nonetheless, when

relative prices and the exchange rate became market determined after the CMEA's collapse, managers began to restructure their operations without waiting for instructions from the Government or for privatization.

The Government embraced markets warily when socialism collapsed, and was cautious in selling the firms it owned. Nonetheless, incentives had been surreptitiously introduced even before 1990, with larger firms spinning off units to managers and incorporating workers into work units so pay could be linked to productivity. This chapter has shown that, despite the slow transfer of ownership, enterprises' operational improvements were certainly not slow. The steady and widespread enterprise restructuring has left firms poised to grow profitably if the country's economic policies remain prudent.

Hungary's distinguishing characteristic is the magnitude and widespread political acceptance of FDI, which may be largely responsible for restructuring and operational improvements. The US\$16 billion that flowed in between 1990 and 1997, averaging more than 5 percent of GDP, has been one of the highest in the region, and the investments are widely dispersed. Firms with some FDI now account for more than half of the country's manufacturing assets, and a fifth of assets in public utilities. Such ownership has given a large number of Hungarian firms access to the technology, marketing, and other business expertise of multinational firms; and the resulting benefits are apparent in greater exports and profits. Even if FDI were to fall the benefits of the of past FDI would be sustained through the trade links that Hungary has been established with its European partners (see below).

Despite the favorable developments of the last decade, however, several problems remain. The ownership structure does not allow all firms to be well governed and funded. Firm ownership is very concentrated. Firms have surprisingly little debt, especially from banks, perhaps because of a combination of tax quirks and banking problems. Large firms with FDI (overseen by their foreign investors and partners) have few governance or funding problems and small firms may find the necessary funds through the supply chain. But mid-sized firms may face a problem. If they are closely held, raising funds through equity gives rise to the free rider problem of no shareholder having the incentive to oversee managers. Their leverage should be, but is not, high. One alternative pattern of ownership would be through mutual funds, but this requires reliable accounting and a well-functioning equity market, both of which would take time to develop. While the Government should not try to artificially increase corporate leverage, correcting problems in the financial system could foster the healthy growth of mid-sized firms.

The Government's role in enterprise restructuring after privatization is minimal. If the Government addresses some problems of tax structure and banking, and ensures that its macroeconomic policies are conducive, the enterprises that have been restructured should continue their healthy growth.

The crises in East Asia and Latin America underscored the volatility of international capital flows; some worry about what may happen if the FDI flood into Hungary abates.¹⁶ The exceptional and sustained inflow of foreign investment cannot last forever: inflows can be expected to cease when the marginal return on capital falls (as it inevitably must after the capital stock rises sufficiently). A gradual cessation of inflows would not pose a problem, but what if the flows cease suddenly and prematurely, or worse, are reversed?

Such an event is less likely in Hungary than elsewhere. Parallels with East Asia or Russia may be misleading: Hungary's foreign inflows have been mostly through FDI (i.e., equity), not loans, and corporate

¹⁶There was a hint of this when FDI fell in 1994, before surging in 1995. This was partly a recording artifact (a large 1994 privatization deal was booked in 1995), but there were also growing doubts about the exchange rate. The surge in 1995 reflected three factors: (i) the recording issue; (ii) the 1995 decision to privatize faster, especially the utilities; and (iii) the long-anticipated devaluation of the forint, which removed a source of uncertainty.

indebtedness is low. Foreign equity investors, unlike lenders, cannot collectively withdraw their stake, especially in firms not listed on the stock exchange. But even for listed firms, attempting to sell major positions would send stock prices plummeting, raising the expected return of retaining their Hungarian holdings and counteracting any panicky urge to withdraw. Even when the August 1998 Russian default caused the Hungarian stock market to drop by half, the data suggest that there was no major reversal of inflows (see chapter 1).

If inflows were to suddenly reverse, the economic effects may also be far less severe than elsewhere because FDI firms have been well-integrated with their parents. The foreign owners have sufficient confidence in the efficiency of their Hungarian operations to lend to prevent the loss of skilled workers, which would disrupt their worldwide operations. Such intra-company lending would compensate for the reversal of capital flows, and the effect on exchange and interest rates would be ameliorated. The employment effects would also be far less severe than if Hungarian operations were less well integrated.

Despite such compensating intra-corporate flows, aggregate inflows may fall, requiring a commensurate reduction in the trade deficit. The forint may have to depreciate in real terms; but it is difficult to predict by how much. Econometric estimates of the responsiveness of the trade deficit to real exchange rate changes suffer from more than the well-known identification problem: the structure of Hungarian manufacturing and trade has changed considerably, and estimates using data from earlier periods would prove misleading. Production may respond more quickly to changing relative prices within an integrated multinational firm than when unconnected firms seek new markets for their products.

It is for these reasons that FDI is often viewed as the best form of foreign investment, and Hungary is extraordinarily fortunate in this regard. The investment, and the benefits to Hungary flowing from them, will continue long after the inflows have ceased.

6. PREPARING INFRASTRUCTURE FOR EU ACCESSION

The infrastructure sectors—telecommunications, electricity, gas, and transportation—provide services that are critical to manufacturing, transportation, and commerce, and to increasing competition through the expansion of product lines and geographic spheres of distribution. The efficient functioning of these sectors is, therefore, vital to sustained economic growth and international competitiveness. During the last decade, wide recognition of the importance of infrastructure services has led to a major reassessment of public policy and of the proper role of the state in the provision of these services. Governments throughout the world have been actively pursuing institutional, regulatory, and structural reforms aimed at improving operating efficiency and service quality. Countries that have implemented such reforms have realized substantial economic benefits.

As one of the first countries in Central and Eastern Europe to embark on economic transition, Hungary has led the region in terms of restructuring and privatization of the infrastructure sectors—electricity, gas, and telecommunications. In fact, when Hungary began negotiations over accession to the EU, its institutional and structural framework was comparable to, if not ahead of, that of most EU countries.

In the EU and other parts of the world, however, there is now a clear movement toward deregulation and market liberalization. Accordingly, Hungary will still need to introduce a number of policy changes. The objectives of this chapter are to: (i) provide a diagnostic assessment of recent and ongoing structural and regulatory reforms in Hungary's infrastructure sectors; (ii) identify priorities for additional competitive restructuring and regulatory decontrol measures, their expected impact, and policies that would minimize the costs of deregulation and market liberalization; (iii) assess Hungary's progress in complying with EU accession requirements, and identify areas in need of special attention to meet these requirements; and (iv) identify the major regulatory issues that need to be addressed in the medium term by Hungarian regulatory agencies, along with a strategy for addressing these issues.

One of the fundamental tenets of this chapter is that undistorted and effective competition is a powerful force for achieving economic efficiency and for guiding technological change to serve the public interest. Nonetheless, the potential benefits of competition could be significantly undermined—or competition could prove harmful—if the same regulations that evolved in a franchise monopoly environment in other countries were applied too quickly and uncritically in Hungary. Applying such regulations to formerly state-owned infrastructure enterprises such as network utilities, for example, could have a negative effect if combined with the pressures of competitive entry. Despite Hungary's progress in opening these sectors to competition, additional policy changes are needed to harmonize regulation with open entry. This would enable the realization of more of the benefits of competition and free entry, while avoiding many of the problems that could arise from a mismatch between open entry and traditional regulation.

Another tenet of this chapter is that any program for restructuring the relationship between government and industry, and for developing effective regulatory policy, should be explicitly derived from the industry's underlying economic characteristics and the technological conditions of its production. Thus the government will need to articulate a set of principles concerning the role of the state in the infrastructure sectors. It will need to establish economically sound criteria to distinguish between those activities in which intervention by the public sector is warranted and those in which it is not. In addition, there is an urgent need to develop expertise in critical regulatory areas.

OVERVIEW OF RECENT REFORMS IN THE ELECTRICITY, TELECOMMUNICATIONS, GAS, AND TRANSPORTATION SECTORS

Electricity

Prior to 1992, the electricity industry was a vertically integrated utility. In January 1992, Magyar Villamos Muvek Trust (MVM) was restructured, corporatized, and partially unbundled into 8 power companies, 6 distribution companies (regional electricity companies, RECs), and one transmission company—collectively known as MVM Rt, or the Hungarian Electric Company, Ltd.—in preparation for privatization.

The six distribution companies were sold to foreign electricity companies in 1995; seven of the eight power companies (all except the nuclear power plant at Paks) were offered for sale in a tender document dated July 31, 1995. Only three generating companies were sold in the first wave, but three more were sold in 1997, leaving one small fossil plant (Vertesz) and the nuclear power company under the ownership of MVM Rt, which remains 99.8 percent owned by the state and 0.2 percent owned by municipalities.

By the end of 1997, 68 percent of the privatized power companies were foreign owned, as were 48.6 percent of the RECs, or 31.6 percent of the electricity supply industry as a whole. There is currently an active debate as to whether MVM should be further unbundled to separate generation from transmission, and whether part or all of the remaining state-owned companies should be privatized.

Telecommunications

In 1994, the Ministry of Transport, Communications, and Water issued a tender for local telephone service. As part of this tender, the country was divided into 54 separate local regions of which, in the first round, 25 of the areas were offered to prospective companies wishing to provide local wireline service. MATÁV, which had previously provided telephone service throughout the country, won the tender for five of those areas. In two other areas, MATÁV was awarded the franchise because there was no other bidder. As a result, MATÁV provides service in 36 of the 54 areas. In the other 18 areas, tenders were awarded to companies other than MATÁV. These [18?] regions represent about 12 percent of the population.

The concessions for local telephone service are for 25 years, beginning in 1995, and include exclusivity through 2002. In addition to local franchises, the government also awarded a nationwide concession for the provision of long distance and international voice telephony for 25 years, with exclusive rights until the end of 2002. MATÁV holds these rights.

MATÁV itself also underwent a significant transformation. It was transformed into a joint stock company at the end of 1991, and by the end of 1993, was 30.2 percent owned by MagyarCom (in turn

owned by Deutsche Telekom) and Ameritech. MagyarCom bought another 37 percent of the company in 1995. An initial public offering in November 1997 reduced MagyarCom's ownership to 59.6 percent and the state's to 6.6 percent. Subsequently, the state's holding in MATÁV was reduced to one golden share.

The state ownership share is held by the state holding company APV. According to the Ministry of Transport, Communications, and Water, there is no interaction among the regulatory bodies (discussed below) and APV; the regulatory bodies are independent of the operators; and there is no conflict of interest in their decision making process.

All other local telephone concession companies have been privately owned, since the beginning of their license period, by a variety of foreign investors, including Citizens Utilities, United Telecom and Alcatel (UTI), GE Capital, and CG Sat. Although the local telephone operators themselves are relatively small in comparison to MATÁV and its owners, they and their owners generally do not appear to be small, unsophisticated companies.

Natural Gas

The most important single participant in the Hungarian gas market is Magyar Olaj-es Gazipari Rt. (MOL), which was privatized in 1996. Unlike the other privatized energy companies, however, no Western companies own a strategic interest in MOL. It is 25 percent owned by the Hungarian government, 38 percent by Western institutional investors, and 37 percent by Hungarian and Western private investors. MOL is the sole producer of Hungarian gas, the sole importer of gas into Hungary, and the sole owner and operator of gas storage facilities. It is also the sole owner and operator of high-pressure pipelines, and the sole wholesaler of gas in Hungary. In addition, MOL has significant retail sales to industrial and electric generating customers. Direct sales by MOL accounted for 23 percent of total Hungarian gas consumption in 1997.

Hungary's six gas distribution companies (GDCs) were privatized in 1996, with the government selling 50 percent plus one share of the stock in each GDC, and allocating 40 percent of each GDC's shares to the municipality it serves. The remaining shares were given or sold at discounted prices to each GDC's employees. The government retained a golden share in each GDC, which gives it the right to name a member of its board of directors. Since the initial privatization, all municipalities except Budapest have sold their shares in the GDCs to those private investors who originally purchased the 50 percent plus one share interest in each. In each case, the GDCs were bought by a consortium of Western European gas companies.

Competition among the GDCs, and between the GDCs and MOL, is extremely limited. MOL and each GDC were licensed to serve their pre-existing customers and municipalities at the time of privatization. Thus, competition for those customers and municipalities is, in effect, prohibited by law. The GDCs and MOL can compete to provide service to a new industrial or electric generating customer, or provide service to a municipality that previously had no gas service. That competition is only physical with one exception. MOL and the GDCs are not required to provide third party access (tpa) to their facilities. The one exception requires MOL to provide tpa for domestic Hungarian production. That exception is at present purely theoretical, however, since MOL is currently the sole producer of Hungarian gas.

In 1995, the Hungarian government awarded exploration and production concessions to four international oil and gas companies: Coastal, Blue Star, Mobil, and Occidental. So far, however, none has

announced any promising finds, and MOL does not expect significant additional gas reserves to be located in the foreseeable future.

Since privatization, three or four new small GDCs have been formed by existing GDCs to facilitate cofinancing of the investment needed to provide gas service to a previously unserved municipality. MOL recently acquired an interest in the GDC that serves the region along the Romanian border. MOL has also expressed an interest in acquiring a Romanian GDC that serves the region along the Hungarian border. Those two regions include a large number of municipalities that do not now have access to gas.

Transportation

Hungary has made considerable progress during the last decade in reforming and commercializing transport operations. Regulation of intercity trucks (but not buses) has been liberalized in stages since the 1980s, and some 60,000 small private trucking companies are in operation. Hungarocamion, the international trucking company, was also recently privatized. However, state-owned trucks still account for about half of total truck transport. The national railway (MAV), intercity buses (VOLAN), inland navigation (MAHART), and Budapest urban transport (BKV) are still publicly owned and controlled, significantly subsidized, and not yet well positioned to compete in a market economy. Moreover, the Ministry of Transport, Communications, and Water Management (MTCWM), and the Municipality of Budapest, have still not adapted their roles to the needs of the market. The condition of the transport infrastructure, as well as equipment and organizational inefficiencies, are hampering economic growth and preparation for EU accession.

INTERNATIONAL POLICY DEVELOPMENTS

During the last decade, public policy toward the infrastructure sectors in both industrial and developing economies entered a new era of reform. Although the goals, pace, and process of reform differ among countries, the trend is unmistakable. These reforms have sought to minimize interference with economic efficiency and to expand the role of the market in areas of the economy where the strength of competitive forces is inadequate.

The dominant institutional arrangement in the network utilities in most economies was the monolithic organization—a single entity that controlled all facilities, operations, and administrative functions, and determined what services to provide to relatively captive customers. Such monolithic utilities typically lacked financial incentives and did not disaggregate information on profitability; they were (at best) production oriented and largely unresponsive to market demands, as well as hierarchical (if not bloated) in organizational architecture. It was therefore predictable that a state-owned network utility such as Hungary's would frequently fail to respond to the needs of consumers, but would instead be politically directed at the expense of efficiency and stimulation of the economy.

Due to technological and other fundamental economic changes, the conditions that generated this model no longer exist in most countries. Indeed, in the last few years, there has been an increasing awareness that the network utilities are not, in fact, monolithic industries, but rather encompass a number of distinct activities with entirely different economic characteristics. Electricity, gas, telecommunications, and railroads are vertical industries characterized by transportation and distribution networks linking upstream production with downstream consumption. These networks consist of a hierarchy of transmission links in electricity; national pipelines and regional distributional links in gas; transmission media, switching centers, and the local loop (the final mile) in telecommunications; earthwork, track,

signaling, and stations in railroads. Infrastructure networks entail substantial fixed costs that are largely sunk because the assets are of minimal value for other purposes. These characteristics of infrastructure networks mitigate against freedom of entry, especially when there are natural monopoly conditions as well as massive fixed costs.

On the other hand, the cost conditions relating to upstream production and downstream supply activities (electricity and gas), to certain portions of the network (interexchange services in telecommunications), or to the operation of services on the physical network (railroads), are less inimical to competition. Although there are important economies of scale and inevitably some sunk costs associated with these activities, they are small in relation to those encountered in network infrastructure.

There is, therefore, no question that substantial competition could emerge in many activities in these sectors if they were properly reorganized. As a result, governments throughout the world have taken steps to competitively restructure and deregulate their network utilities, to the extent consistent with technological opportunity and other elements of efficiency. The objectives of such restructuring and regulatory reform programs have included the injection of more innovative and efficient management, the reduction of public enterprise deficits and burdens of public subsidies, increased competition, and more responsiveness to the needs of enterprises.

Policymakers have taken two broad approaches to the restructuring of network industries. The radical approach has been to vertically separate the monopoly segments (transportation and distribution) of these industries from the structurally competitive ones (upstream production and downstream marketing). In electricity, generation is unbundled from transmission and distribution; in telecommunications, local exchange is split from long distance service; in gas, production is unbundled from transportation and distribution; in railroads, service is separated from track. The second approach, termed competitive access, consists of allowing integrated operations by the dominant incumbent under the requirement that it make its facilities available to other entities on a fair and equal basis.

Another key element of reform has been the shift of supply responsibility to private enterprises. In addition to fiscal gain, this shift has been motivated by mounting empirical evidence that because of their financial, technical, and managerial resources, private sector entities have a comparative advantage in keeping abreast of these technically and economically complex industries.

The worldwide trend toward competitive restructuring and privatization in the infrastructure sectors has been accompanied by far-reaching regulatory reform and deregulation. The main impetus for regulatory reform was the increasing recognition that government intrusion into pricing, investment, and other such business decisions imposes substantial economic costs. It discourages investment in innovation, shelters inefficiency, and promotes misallocation of resources by inducing departures of prices from marginal costs. Government intrusion into pricing also causes incentive breakdowns, and reduces the price and quality options that the public would be offered under unfettered market allocation. In addition, developments in the theory of industrial organization facilitated the formulation of policy that is more tolerant of factors that make for natural monopoly, while at the same time lessening the need for public intervention.

Both regulatory experience and new economic analysis also support the emerging view that where market intervention is called for, the appropriate measures are often significantly different from those traditionally employed. Recent policy developments call for a major reorientation of regulatory rules and procedures and offer two types of guidance to regulators. First, they provide an improved set of criteria to distinguish between those cases in which intervention is warranted and those in which it is not.

Second, where intervention is called for, they establish an improved set of guidelines for appropriate government intervention in the structure and conduct of firms. Such tools enable regulators to increase the public welfare effects of intervention.

Experience in the United States, United Kingdom, and other countries that have implemented substantive regulatory reforms confirms what theory predicts: decentralized, market-oriented decisionmaking—freed from unnecessary regulatory control and energized by market incentives—is the surest way to find and implement efficient, innovative solutions to problems in several sectors of the economy. As an illustration, Table 6.1 provides estimates of the welfare gains obtained from deregulation in the United States. As a consequence of deregulation, there have been fundamental changes in the way firms in the United States conduct business. By and large, these changes reflect efficiency-enhancing structural reorganization, increasing diversity in price-service options, greater responsiveness to consumer demands, and marketplace opportunities for innovation.

Table 6.1: Welfare Gains from Deregulation in the United States in 1990
(US\$ billions, 1990 values)

<i>Industry</i>	<i>Consumers</i>	<i>Producers</i>	<i>Total</i>	<i>Further Potential Gains</i>
Airlines	8.8-14.8	4.9	13.7-19.7	4.9
Railways	7.2-9.7	3.2	10.4-12.0	0.4
Road freight	15.4	(4.8)	10.6	0
Telecommunications	0.7-1.6	-	0.7-1.6	11.8
Natural gas	-	-	-	4.1
Cable television	0.4-1.3	-	0.4-1.3	0.4-0.8
Stockbroking	0.1	(0.1)	0	0
Total	32.6-43.0	3.2	35.8-46.2	21.6-22.0

Source: Winston (1993).

While most firms in countries that have implemented regulatory reform were quite successful in absorbing the shock of deregulation and operating in a competitive environment, others had difficulty adjusting and had to undergo major restructuring of their respective industries. Indeed, one of the necessary consequences of regulatory reform is that relatively inefficient firms may lose profitability and go into liquidation. Moreover, the post-deregulation period has been characterized by pressures to reduce pay scales toward those in the unregulated economic sectors, while increasing productivity through a more efficient use of labor. Such changes inevitably led to some labor displacement. These dangers, of course, are the natural concomitant of a freer competitive environment. Still, the available evidence indicates that, on average, regulatory reform and deregulation have yielded positive results for both producers and consumers

Box 6.1: Market Liberalization and Regulatory Reform in the European Union

In the European Union, market liberalization and reform of network utility regulations have been largely driven by the policy initiatives undertaken to complete the process of integration, and to fully implement the Treaty of Rome. In almost all member states, the dominant institutional arrangement in these sectors was a state-owned monopoly protected by regulatory restrictions on market entry. These market arrangements clearly reenforced the segmentation of national markets and thus presented a significant impediment to economic integration and the creation of a single market. Consequently, the EU urged member states to carry out a far-reaching and comprehensive review of their domestic regulatory systems and to undertake reform measures that would make the organization and structure of their public utilities more consistent with the aims of the Treaty of Rome. Subsequently, the EU issued a number of directives that contained explicit timetables for market liberalization and regulatory harmonization. For example, the most important requirement in the electricity sector is a Directive concerning rules of the internal market (effective in February 1997). Most member states were given two years to comply (although Greece has until 2001). Taken as a whole, the measures adopted by the EU can be grouped under two main headings: the actions taken against member states to encourage competitive access to particular markets; and the reappraisal of criteria for implementing competition rules in the regulated sectors.

CURRENT AND FORTHCOMING SUBSTANTIVE REGULATORY ISSUES

Hungary's present system for regulating network utilities is, in many ways, commendable. The regulatory system has made possible successful privatization transactions in electricity, gas, and telecommunications; and foreign investors appear confident in the durability and enforceability of their contracts. Although there are disputes about price regulation, the companies seem, in general, content with the prices—they presumably made allowances in their bids for the possibility that prices might be held below the statutory level for political reasons. While it should be possible to strike a satisfactory balance between the competing interests of domestic consumers and foreign investors, this may be at the expense of greater liberalization and competition. In this regard, investors take considerable comfort from Hungary's commitment to negotiate membership in the EU, and hence to implement the legal and institutional changes needed to strengthen the market economy and the rule of law. Now that a large part of the network utilities have been privatized, the conditions required for EU accession remain one of the most potent factors shaping regulatory reform.

But no matter how successful the process of restructuring, experience will highlight further opportunities for improvement. The emerging regulatory problems in the Hungarian network utilities that are enumerated below, are also endemic to infrastructure sectors everywhere and largely reflect issues that arise after privatization, particularly when combined with unbundling.

Having completed a successful privatization and restructuring program in major infrastructure sectors of the economy, Hungarian policymakers must now undertake the difficult tasks of: (i) rebalancing traditional rate structures to prepare for competition within the European Union; (ii) establishing an effective interconnect policy to ensure non-discriminatory access of competitors to essential infrastructure facilities; (iii) designing competitively neutral mechanisms to promote universal service; and (iv) adopting measures that harmonize competition with regulation, remove impediments to adequate returns to the operators, and create a level playing field.¹

¹ It should be noted that during the last year, considerable progress was made in addressing several of these issues. For example, tariffs were substantially rebalanced and current pricing policy was made broadly consistent with revenue adequacy.

Tariff Rebalancing

There are continuing inefficiencies in the present system of regulation related to the level and structure of tariffs for electricity, gas, and hot water, which are inter-related and explained primarily by distributional concerns. Prices for basic telephone services are also highly unbalanced.

Electricity

Price caps are on audited costs as of January 1, 1997. Thereafter, prices will be updated in line with inflation, allowing for an efficiency factor. The inherited system of subsidies and cross-subsidies was designed to protect domestic consumers from excessive price rises, though political interests favored some groups more than others (e.g., gas consumers over district heating). At the same time, Hungary's high inflation also induced the government to hold down these energy prices as part of their counter-inflation strategy.

A comparison of the evolution of real household prices for electricity in Hungary and the United Kingdom is quite revealing. While Britain and Hungary started from quite similar initial positions in 1970, prices in Britain were hit by the oil shocks, while those in Hungary drifted steadily downward, so that by 1990 they were less than one-third the level in the United Kingdom. Competition and regulation gradually reduced prices in Britain (but by not nearly as much as fuel costs have fallen), while adjustments of prices toward costs gradually raised prices in Hungary (though prices remain below the level implied by the system marginal price). In 1997, household prices in Hungary were slightly over half the price in the United Kingdom.²

Both subsidies and cross-subsidies can most readily be preserved with the single buyer model, in which the network owner is the sole interface between upstream producers and downstream customers. This means that any subsidy at the production or wholesale level can be passed through intact to the final consumers. At the same time, the inability of final consumers to contract directly with producers means that almost any structure of relative prices can be sustained (though there are problems if domestic prices are too far below commercial or industrial prices, as small businesses may succeed in obtaining supply at domestic tariffs).

In Hungary, the wholesale price is being kept below both the price that would prevail in a competitive pool, as well as the cost of imported power, for three reasons. First, the price is being heavily influenced by the average cost of written-down plants, rather than the marginal cost of building new plants, even though Hungary has embarked on a substantial program of replacing existing plants. On grounds of efficiency, the average cost of a new plant ought to be used to set the average price. This has, in fact, not happened in Hungary: the average price paid to generators on January 1, 1997 was 5.80 HUF/kWh, while the average price paid to new CCGT entrants (in prices of the same date) was 8.4 HUF/kWh, or some 45 percent higher. Second, the average costs exclude the return on capital of a large part of the asset base. The average cost of power from the nuclear power station at Paks was 3.55 HUF/kWh, and MVM (the transmission company) estimates that recovering 8 percent on its written-down asset value would require a further 1.52 HUF/kWh (thus bringing its cost up to 5.07 HUF/kWh), in turn raising the average cost of electricity by 6 percent.³ The full cost of transmission is above the 0.5

² With the pricing adjustments of 1999, this ratio has clearly changed.

³ By January 1999, the average price for electricity from Paks increased to 5.89 HUF/kWh while the average producers' price (excluding Paks) was reduced to 8.00 HUF/kWh.

HUF/kWh currently allowed, and the 8 percent return on assets would require a further 0.14 HUF/kWh, though the effect of the tight price cap has been to induce MVM to reduce costs.

Third and finally, electricity is produced jointly with hot water in most plants; the price received for hot water appears to be too high, effectively subsidizing the cost of producing electricity. This effect is likely to be small, as the revenue from sales of heat appears to be less than 15 percent. Nevertheless, if the price of hot water were to be reduced by 25 percent, then the cost of electricity would rise by perhaps 3 percent.⁴

Telecommunications

For historic and other reasons, rates for local calling and access are low relative to underlying long-run costs, while long distance and international rates substantially exceed long-run costs. As of 1997, the business connection charge stood at HUF 90,000, more than triple the price for residential customers. This disparity although reduced in 1998, indicates that the business rate is above cost, the residential rate is below cost, or both.⁵

Distorted telephone rates impose significant costs by providing wrong economic signals to the users of the telephone network. Low rates for local calling overstimulate local usage, while long distance calling is repressed because of excessive rates. In addition, unbalanced rates create incentives for bypass.

Whatever their rationale, such unbalanced tariff structures are not sustainable in a competitive environment. Entrants will be impelled by the profit motive, regardless of their efficiency, to divert the overpriced business. At the same time, they will be unlikely to relieve incumbent operators of the financial burden of serving customers whose tariffs do not compensate for the costs of service. The outcome of this situation will be the end of cross-subsidies, with incumbent operators losing their ability to cross-subsidize underpriced local services, including network access, with revenues from overpriced services such as international calling. Therefore, either new sources of subsidy must be found, or the rates that were below incremental costs must be raised to compensatory levels.

Incumbent operators claim that existing rate structures do not allow them to compete fairly with their wireless rivals, and their problems will only be aggravated after wireline competition is introduced. As Hungary moves toward a fully liberalized telecommunications market, its rate structure must be rationalized. Such rebalancing will surely be necessary—both for the operators and for the public interest—as competition approaches the end of the protected monopoly period, as international callback and other arbitrage mechanisms spread, and as value-added services become closer substitutes for basic services.

Policymakers in Hungary need to plan now for a smooth transition to competitive pricing. That is the only way to avoid serious dislocations for the industry and its customers. The primary issues concern the standards to apply in rebalancing (e.g., revenue neutrality, adjusted revenue neutrality, or profit neutrality); the pace of rebalancing; and the continued promotion of universal service in a competitive environment. It should be noted considerable progress has been made in these areas during the last year.

⁴ These estimates are only rough approximations at best, given the inherent difficulties of allocating fixed and common costs in a way that is not arbitrary and has a strong foundation in economic logic.

⁵ By 1999, for MATAV customers the business connection was reduced to HUF 60,000 with a plan for a further reduction to HUF 40,000. At the same time, the residential connection was reduced to HUF 21,000.

Tariffs are in the process of being significantly rebalanced. Beginning in January 1, 1999, pulse-based tariffs have been replaced with a time-based system. Moreover, the new pricing regulations likely to be implemented by 2000 will substantially reduce cross-subsidies, mitigate the local access deficit problem, and facilitate more efficient peak load pricing.

Gas

Even though the government increased the residential price of gas by 800 percent over the last decade, the price remains too low. The ratio of residential price to industrial price in Hungary is 1.3 to 1. Determining the appropriate relationship would require detailed analysis of cost data, but the typical cost-based relationship between the residential and industrial price of gas is approximately 2 to 1.

It costs much more per unit of gas to provide residential service than to provide industrial service. Part of the difference is attributable to differences in the temporal pattern of demand by the two types of customers. Home heating accounts for most of Hungary's residential demand, and this demand is extremely erratic. It is very high on the coldest days of the winter—the days in which MOL and the GDCs experience their peak demand. By contrast, industrial customers have more predictable, even demand. Moreover, some industrial customers receive gas on an interruptible basis, and industrial customers can be interrupted when unusually cold weather causes residential demand to reach extremely high levels. As a result of these differences, residential customers account for a disproportionate amount of the capital MOL and the GDCs must invest in pipes that are large enough to accommodate peak day demand. For the same reasons, they also account for a disproportionate amount of MOL's costs of storing gas. In addition, service to residential customers requires the GDCs to invest in a network of small, low-pressure distribution lines that are not needed for industrial customers.

An even larger part of the difference between the per unit cost of serving residential and industrial customers has to do with the costs of metering, billing, and collecting from customers. These costs are much larger, per unit of gas provided, for residential than for industrial customers. Moreover, the GDCs' costs of serving residential customers are probably considerably higher than the analogous costs of most Western GDCs. Most North American and Western European GDCs now use remote meter reading and send their bills through the postal service. The Hungarian GDCs, in contrast, rely on manually read meters and door-to-door collection, both of which are more costly.

Providing a service below its cost invariably distorts decisionmaking and reduces the allocative efficiency of a market. If residential customers are offered gas service at a subsidized rate, some will choose gas service over an alternative, even though gas is actually more costly to society. For instance, the District Heating Association claims that the subsidized residential gas price is encouraging some of their customers to switch to gas when the actual social cost of district heating is below the social cost of residential gas service. Provision of subsidized gas service also distorts the decisionmaking of existing gas consumers. The demand for gas is characterized by some price elasticity, even for existing residential gas consumers. Thus, for instance, a residential consumer who buys gas at a price below cost will waste gas by underinvesting in insulation and in weather-stripping of doors and windows.

The subsidized rates now paid by residential gas consumers in Hungary cannot be sustained indefinitely. At least three factors will force up residential rates over time: (i) the depletion of price-regulated domestic reserves; (ii) the government's commitment to allow MOL and the GDCs the opportunity to earn an 8 percent return on their investments; and (iii) the ultimate availability of competitive supply alternatives to industrial customers. The latter eventuality will eliminate the viability

of any system of cross-subsidization in which the suppliers use excess revenues from above-cost industrial rates to offset inadequate revenues from below-cost residential rates.

Hungary may want to retain a special subsidized rate for extremely poor consumers. Many North American and Western European regulators use such a mechanism to supplement their cash-based welfare programs. However, Hungary should eliminate its present broad subsidized rate to all residential consumers as quickly as possible. The extraordinarily rapid rate of increase in residential gas consumption underlines the need for prompt elimination of the residential gas subsidy. This subsidy can be eliminated by taking three steps: (i) increasing the GDCs' rates to the level necessary to allow them the opportunity to earn the promised 8 percent return; (ii) deregulating the price of Hungarian gas, coupled with an offsetting increase in the production royalty MOL pays the government; and (iii) reducing the industrial price to the extent that it is now above cost and providing a cross-subsidy to the residential price.

At present, the regulated prices of gas for all classes of consumers do not vary with the level of demand for gas service. Consumers pay the same price for a unit of gas on a warm summer day, when MOL and the GDCs are operating far below capacity, and on the coldest day of the winter, when MOL and the GDCs are operating at full capacity and curtailing service to industrial customers, and when MOL is maximizing its withdrawals both from producing wells and from storage. There is also an urgent need for reform with respect to that characteristic of the present rate structure. It costs much more to provide a unit of gas at a time of system peak demand than when the system is operating well below capacity. System peak demand determines the magnitude of the required investment in virtually all capital assets of MOL and the GDCs, including gas wells, pipelines, storage facilities, and compressor stations. Peak demand also has a major effect on some operating costs, e.g., the cost of injections and withdrawals from storage, of compressor fuel, and of curtailing service to industrial customers. The Hungarian rate structure should be changed so as to confront all consumers with the fact that providing a unit of gas when the system is operating at peak capacity costs much more than providing a unit of gas when the system is operating well below its full capacity.

There are several ways of changing a rate structure to reflect temporal differences in the cost of providing gas service. Ideally, prices should be set on a real-time basis; i.e., the price of gas should vary continuously with changes in cost. There are, however, many major impediments to adopting such an idealized system; e.g., the cost of metering required for its implementation is prohibitive at present. Fortunately, there are also surrogates for real-time pricing that significantly improve the accuracy of the price signals consumers receive and can be implemented easily and inexpensively. The government should take the first step in this direction by adopting a rate structure that requires firm industrial customers to pay more for gas in the winter, when peak demand is likely to be high, than in the summer, when the system is always operating well below its peak capacity.

Interconnection Policy

Emerging experience from several countries indicates that the removal of legal barriers to competitive entry is not, in itself, sufficient to create effectively functioning competition among network utilities. Competitors must have access to essential network facilities (the transmission grid in electricity; the switching centers and local loop in telecommunications; the pipeline system in gas; the track in railroads) on non-discriminatory terms if they are to have a reasonable opportunity to compete. Explicit regulatory intervention may be required to ensure such access. This is particularly true in situations where essential facilities are owned or controlled by incumbent operators. One of the primary challenges facing Hungarian regulators, therefore, is to set a level and structure of access prices to promote dynamic

efficiency through efficient entry and investment decisions, while enabling network owners to obtain a fair return on their invested capital. Access regulation should ensure that there is sufficient pressure on the owner to operate the network in an efficient manner, but that network construction is not unnecessarily duplicated.

The definition and implementation of an access regime is not a matter that can be settled once and for all; rather, it is an ongoing process. Nor is it a process that can be guided by simple rules—there are inevitably difficult issues that must be resolved. The regulatory authorities will need to: (i) articulate a set of fundamental principles to govern regulation of access and interconnection; (ii) establish clear guidelines by which the behavior of bottleneck monopolists and their rivals should be judged; and (iii) develop a fallback set of standards to apply should private negotiations fail and disputes about predation through competitive access arise.

In today's fast-changing technological and marketing environment, it is difficult to predict what collection of basic network elements will prove essential to the efficient provision of some desired service by some supplier. Thus, the opportunities for competition to work effectively and stimulate innovation would be enhanced by the availability—on an unbundled and non-discriminatory basis—of any basic network element, or any collection of functions, that may be needed by prospective competitors.

Competitively Neutral Mechanisms for Funding Universal Service

In Hungary, as in most countries around the world, traditional public policy toward the infrastructure sectors has led to prices with systematic elements of cross-subsidization. Nonetheless, as noted above, both economic theory and regulatory experience suggest that it is impossible to maintain significant cross-subsidies in the structure of prices for long, in the context of open entry and no remedial policies, whether or not that would seem desirable to policymakers. With market liberalization, therefore, either new sources of subsidy must be found, or rates that were below incremental costs must be raised to compensatory levels.

Following deregulation of key sectors in the United States, for example, substantial effort was put into the design of competitively neutral mechanisms to foster desirable social goals and positive economic externalities. The need to adopt support mechanisms that are both explicit and sufficient to advance certain publicly articulated universal service principles, and to assist consumers who would otherwise be disadvantaged, is even more pronounced in Hungary, in view of the less privileged socioeconomic characteristics of users of infrastructure services.

Experience with universal funding mechanisms in the United States and the European Union offers important lessons. In the context of a specific country, however, the policy approach to pursuing universal service goals should be sensitive to the country's political and institutional endowment, its fiscal condition, consumer incomes and preferences, and the industry's economic characteristics. Policymakers in Hungary will need to understand how these factors affect the optimal design of support mechanisms. They will need to consider, for example: (i) whether support for universal service should be funded out of general tax revenues, or perhaps out of a broadly based tax on revenues derived from the industry's products and services; (ii) the extent and scope of subsidies; and (iii) methods for delivering the subsidy without distorting competition.

Competitive Pricing Flexibility

For Hungary to receive the benefits of market liberalization, infrastructure operators must be permitted to compete with flexible prices and terms. In order to cover their fixed costs, sunk cost, the costs of various obligations, and the revenues promised by privatization agreements, as well as to best serve the interests of the overall economy, operators need to be permitted to vary prices among users and classes of users in accordance with the value and marginal costs of service. Within the boundaries determined by the avoidance of cross-subsidization, the need to set some prices aggressively low in order to retain business means that other prices should be permitted to compensate to secure adequate returns.

OVERVIEW OF THE TRANSPORT SECTOR

Hungary's transport infrastructure and operations are extensive, but not of sufficient quality or efficiency to meet the needs of the evolving service economy. There are 30,000 km of national roads, but about 45 percent of them are in unsatisfactory or poor condition in terms of surface condition, and 35 percent in terms of bearing capacity. MAV has about 8,000 km of track (the same density as the EU), but about 40 percent of it has speed restrictions due to its poor condition. In addition, a significant part of the fleets belonging to MAV, VOLAN, MAHART, MALEV, and BKV are obsolete and need to be replaced.

One important structural consideration is that transport demand is changing, as it is throughout the Central and Eastern European countries (CEECs), due to the decline of heavy industry, growth of the service economy, reorientation of trade toward the West, and rapid growth of motorization. Total demand for transport has declined, but the need for high-quality transport services has increased. New, specialized small and medium-sized enterprises (SMEs) are replacing heavy industries. These are linked with distant partners throughout Hungary and the EU, so that activities which formerly took place within the walls of a large factory now occur over great distances. All these factors favor road and air transport at the expense of rail transport, except where distance, high point-to-point density, and environmental or safety considerations justify rail.

Hungary's market reforms over the past decade are consistent with creation of an internal market within the EU, based on the principles of liberalizing competition and harmonizing regulations. The premise of this chapter is that EU accession puts pressure on Hungary to expedite further reforms, and thus provides an opportunity to overcome obstacles. This can be accomplished not by requesting derogations that protect inefficient state-owned enterprises (SOEs) in the transport sector, but by expediting privatization and competitive restructuring of those SOEs, and by investing only in areas that have high priority relative to other transport needs.

Acceptance of the *acquis communautaire* means that Hungary must adapt its transport enterprises and infrastructure to EU norms. The EU foresees substantial transport investment as a way for members, particularly peripheral members, to adapt to decentralized production and an urban service economy, close the income gap (as happened to Spain, Portugal, and Ireland), and overcome the physical divisions between East and West. In pursuit of this objective, the EU has identified the TEN (Trans-european networks), the road and rail corridors for priority investment, three of which pass through Hungary. In particular, the EU proposes that ECU 4.6 billion be invested in an identified backbone transport network, and ECU 4.8 billion in an additional network. One 1996 study by DG7 estimated Hungary's road and rail investment needs at ECU 12.9 billion.

This approach calls for the following comments:

- i) Investment in the three TEN corridors represents only a small part of Hungary's transport investment needs, particularly given the poor condition of existing infrastructure and fleets.
- ii) It is recommended that the transport system be considered from the demand side (reductions in travel time and improvements in service quality) rather than the supply side (km of track or motorway built). This is the clear lesson from improving border crossings, where low-cost improvements saved as much travel time as major motorway investments. It is also the lesson from the improvement of the Budapest – Vienna rail line, where the promised two-hour travel time was not achieved because of slow travel in the vicinity of stations. Surveys of actual freight and passenger travel times should be carried out where this information is not known.
- iii) Similarly, efforts should be continued to improve the market orientation, efficiency, and operational independence of all transport organizations, with a view to privatizing remaining SOEs as soon as possible. This could lead to significant improvements in service quality without major investment. Moreover, major physical investments risk being misused or under-maintained if the SOE is inefficient.
- iv) It is recommended that Hungary prioritize all its transport investment needs, including the three TEN corridors, using traditional cost/benefit techniques; and prepare an investment and financing plan. In general, market reorganizations, including management development and budgetary controls, maintenance/rehabilitation, replacement of obsolete vehicles, and staged construction have significantly higher economic priority than the construction of new motorways or high-speed rail lines. Deviations from the plan should only be considered where concessional financing is offered. (In this regard, it was estimated at the Helsinki Conference that only 9 percent of transport investments in the accession countries would be financed by grants, while 8 percent would be financed by private investors, 11 percent by loans from international financial institutions (IFIs), and 72 percent by national budgets.) It is important to establish these investment priorities in an objective manner before pressures and euphoria build in the months approaching accession.
- v) Particular care should be taken where both road and rail investments are proposed in the same corridor, because of the risk of an expensive duplication of transport capacity.
- vi) It is important not to overlook urban transport needs, which are not included in the TEN proposals but play an increasingly important role in a service economy.

TOWARD EU ACCESSION: SUMMARY AND RECOMMENDATIONS

Hungary's infrastructure sectors (with the notable exception of transportation) have been privatized, restructured, and placed under regulation in a manner consistent with best practice and reflecting genuine creativity in serving the public interest. In short, there is much to applaud in these sectors, from their new market-oriented structures to the skills and vitality of those who crafted, operate, and regulate the sectors. These reforms place Hungary in a leading position transition countries, and in advance of many countries in Western Europe.

We have, however, identified several opportunities for further competitive restructuring and regulatory reform. If these reforms are implemented, they would result in significant new gains in economic performance.

Electricity

The legal framework and the regulatory institutions have won the confidence of foreign investors, both in the privatization stage and in response to invitations to tender for additional capacity. The present system is still, however, in transition, as it must adapt to the requirements of the EU Directive on Electricity (and other EU standards for safety, environmental emissions, etc); and it has not yet weathered its first regulatory review, when the price cap may be reset. Despite significant progress during the last year, prices remain below efficient levels, and the structure of prices remains unbalanced, with continuing (although no longer large) cross-subsidies paid to domestic consumers. Gas and district heating prices are also distorted, further complicating rational fuel use and investment decisions. These inefficiencies are rooted in distributional concerns, which are defensible, as the inefficiencies are probably of modest size. Further market liberalization may increase the pressure to cut costs, and would most likely put pressure on any remaining subsidies. As these subsidies are politically and distributionally justified, liberalization needs to be carefully designed to ensure that the rents are not transferred from consumers to shareholders, at least not without adequate recompense. It should be possible to do this without great difficulty; indeed distributional considerations are not a compelling argument against liberalization, nor against improving the efficiency of price signals in the industry.

The EU Electricity Directive does not seem to unduly constrain Hungary's choices, and Hungary could choose to keep much of the present structure more or less intact. The main argument for the Directive is that it provides a unique opportunity to undertake further liberalization in an already largely privatized industry, and this opportunity appears worth taking.

If competition proceeds in response to a more liberal interpretation of the Electricity Directive, and with the encouragement of the government, then a number of regulatory issues will need to be addressed. The most immediate is that competition puts pressure on Hungary to align tariffs with costs; if the larger commercial and industrial customers have access to competitive markets and are indeed cheaper to serve than residential customers, then some rebalancing of the rates may be necessary. This should not pose regulatory problems, provided the different components of the costs of serving customers are clearly identified (generation at different times of the day, transmission, and distribution). Nonetheless, subsidies to residential customers may need to be made explicit if the financial viability of the distribution companies is to be sustained—especially where there are major differences in the costs of serving high and low-volume customers.

If generation is liberalized and if the transmission part of MVM is required to operate on market principles, then issues of the location of power stations and the coordination of investment in transmission and generation may become acute. At present, with MVM responsible for assessing the system's long-term demands and for authorizing expansion, this coordination can be readily handled and the full costs of providing different degrees of transmission reinforcement can be systematically compared. The decentralized market approach requires the careful design of locational signals to guide the location of new power stations, and it raises issues of regulation and governance concerning the national grid, which may now require incentives to provide quality transmission services in response to new generation.

The simplest way to provide these incentives may be to follow the model of the British electric utility NGC, which has to provide a required quality of service and invest in transmission capacity sufficient to meet that standard, while being given incentives to minimize the costs of providing transmission and ancillary services. These incentives take the form of profit sharing: if NGC can lower the cost of providing transmission services, it keeps some of the cost savings, while if it fails, it bears some of the additional cost, up to a limit. Alternative systems, in which the construction of new transmission lines is open to consortia of producers and consumers are willing to finance the additional transmission in return for lower transmission costs (as in some Latin American countries), may face high transaction and bargaining costs, and may fail to achieve the benefits of efficient competition.

The locational problem should not be exaggerated, as it is difficult to see the present system of approval for new generation disappearing overnight. Nevertheless, if further liberalization is contemplated, the Hungarian Energy Office will need to acquire or contract for the necessary expertise to judge the prudence of transmission investments and generation location decisions.⁶ This may require a transparent transmission pricing model and a system of appraising investments in generation and transmission.

Telecommunications

Hungary has made significant progress in modernizing and reforming its telecommunications sector. The first step was to sell the state-run companies to investors willing to invest in developing the infrastructure. One of the incentives for this investment was the promise of an exclusive regulated franchise until 2002. While this may have increased the amount paid for the franchise, it has clearly impacted competition.

Exclusivity provisions are not consistent with EU rules. Nonetheless, since the expiration dates for those provisions nearly coincide with the expected date of accession, this should not be a binding constraint during negotiations. The following recommendations are directed at developing a more effective telecommunications sector by the time competition is mandated.

The government should take an active role in ensuring that efficient competition for non-exclusive services can survive, both currently and in the future, now that there will be viable franchises for efficient competition for voice services. Such actions include close scrutiny of all mergers, especially with an eye toward preventing the elimination of potential competition. The authorities should also adopt a market-based spectrum policy that will help promote current mobile wireless services and position wireless to be a competitive alternative to wireline voice services. It should be noted that the new telecommunications law, now under preparation, deals with many of these issues (e.g., spectrum allocation and management), and envisages substantial further market liberalization.⁷

The regulatory authorities also need to examine their roles. They should eliminate any unnecessary regulatory hurdles to competitors and requirements that will frustrate competition. Regulators also need to set forth clear, efficient rules for the interconnection of networks so that competitors will have the confidence to undertake significant capital investments.

⁶ The Hungarian Energy Office has already issued guidelines for new capacity tendering.

⁷ The new law will enter into force in 2001.

Gas

The government has made impressive progress in its efforts to create a strong, efficient gas sector. It has successfully privatized all major market participants, subjected them to a carefully devised system of incentive regulation, and authorized large price increases that go a long way toward establishing prices that are consistent with costs and market forces.

The most serious remaining problem with the performance of the gas market is Hungary's dependence on a single gas supplier. Hungary lacks the ability to address that problem on its own, but there are potential solutions on the horizon—the most promising of which would be the prompt implementation of the EU Gas Directive. The directive aims to create a competitive gas market throughout the EU by providing for third party access to gas transmission lines. If the directive is fully implemented in the EU, Hungary will have effective access to multiple competing suppliers, with large resulting benefits to its domestic gas market.

There are two remaining problems with the government's methods of regulating the gas market. First, the present regulatory system provides extremely limited opportunities for competition, which is understandable, given the lack of access to alternative suppliers. Nonetheless, the government needs to be prepared to promptly implement pro-competitive regulatory reforms, as soon as Hungary obtains access to multiple gas suppliers. Second, the present rate structure is inefficient. Residential prices are too low, and there is no difference between the price of gas purchased during peak and off-peak periods. The government needs to promptly authorize further increases in the residential price and create an on-peak/off-peak price differential.

Roads

Two issues in the road sector have become more critical because of the preparation for EU accession: (i) the strategy for conserving and improving the road network; and (ii) the system of road finance. Much of the existing road network needs rehabilitation or periodic maintenance, particularly the extensive secondary network, which is managed at the national level. In addition, Hungary needs to strengthen part of the primary road network to accommodate the EU's higher axle load limit of 11.5 tons (MTCWM proposes 2,000 km, which would require strengthening 150 bridges).

Hungary has emphasized motorway construction as a way to comply with proposed TEN corridor improvements and catch up with Western Europe. Hungary now has 336 km of motorway, which is below the EU average relative to population or GNP. However, Hungary's GNP per capita is also lower than the EU. It would be imprudent to build motorways too quickly, at the expense of investments in other key sectors. It is important to note that if the TEN corridors are looked at from the demand side (the only way trucks and motorists see it), much can be accomplished with lower levels of expenditure. First, border crossing bottlenecks need to be resolved, as is happening. Second, the backlog of deferred maintenance and rehabilitation needs to be cleared to reduce vehicle operating costs. Third, existing roads and bridges need to be upgraded in terms of speed, traffic capacity, bearing capacity, and safety. Hungary has relatively few urban bypasses, which benefit both through and local traffic. It is recommended that MTCWM plan these improvements on a corridor basis, as much of the benefit is lost if the improvements are fragmented. It is important to note that this approach will benefit all Hungarian road users, many of whom cannot afford tolled motorways.

Railways

MAV continues to be a significant drain on the Government's budget and the economy, with passenger subsidies in 1997 amounting to HUF 37.1 billion, or 0.44 percent of GDP. In addition to this direct subsidy, the Government is responsible for the substantial losses incurred each year by MAV. However, MAV accounts are not prepared in accordance with international accounting standards (IAS), so its accounts for 1997, showing a loss of HUF 11.9 billion, or 0.14 percent of GDP, substantially understate the true losses. The main differences with IAS are the inadequate level of both depreciation charges and repair and maintenance expenditures. The best estimate of the real cost of MAV to the economy is about 1 percent of GDP over the last six years, and the trend is rising, due primarily to the fall in freight traffic. It is recommended that the government require MAV to prepare its accounts in accordance with IAS so that the true financial position of the railways and cost to the government can be ascertained.

The government at present determines the level of passenger services and sets maximum passenger fares. MAV presently collects about 35 percent of the cost of providing passenger services through ticket sales. While the government provides substantial operating subsidies, the amount is grossly inadequate to cover the mandated level of passenger services. The resulting cash flow problem means that MAV must limit its renewal investments and restrict the amount it spends on repair and maintenance. The deteriorating financial situation is further concealed by an inadequate charge for depreciation. The lack of investment and maintenance over the last eight years affects not only passenger service, but freight service as well. This is adversely affecting MAV's competitive position in the freight market, where it has a competitive advantage for some types of traffic. Every year MAV must resort to short-term borrowing, which results in insolvency every few years. This form of financial management is very costly to the government and demoralizes MAV, leading to numerous changes in managers who are not able to address the underlying issues. This malaise can only be remedied by establishing, in advance, realistic government payments for public service obligations.

The other condition for rail success is improvement in its management and commercial orientation. There are economies of scale in this endeavor, as flourishing railways in the CEECs will generate traffic for the EU, and visa versa. EU accession accelerates pressures that have been building for some time, and clinging to the nationalist status quo risks making MAV (or any other railway) all but irrelevant. A corollary is that MAV, at its present level of efficiency, cannot effectively use either ongoing investments or those under consideration in the TEN corridors because they risk not being properly maintained or well utilized.

The steps required to improve MAV's managerial efficiency and service orientation (and reduce subsidies) are known and supported by the EU, but are not easy to implement. They involve the separation of track (already done in the accounting sense); as well as the creation of a for-profit freight company (which could be eventually privatized), a passenger company subsidized only through public service obligations (PSO), and a restructuring company to dispose of excess assets and retrain or compensate redundant personnel.

MAV has already separated its track accounts, and MTCWM and the Ministry of Finance are discussing a system of track charges, as required under EU Directive 91/440. A management and accounting and costing system for freight and passenger services also needs to be developed. It is recommended that this process be completed, and that Hungary's tracks be opened up to both local and foreign trains, under terms and conditions that are competitively neutral. Thus, the European Rail Freeways should be permitted to extend their services through Hungary on MAV's tracks, and reciprocal rights for

Hungarian trains to operate in the present EU should be negotiated, even though present differences in locomotive electrification make it difficult to take advantage of this opportunity in the short run. These arrangements will serve several purposes. First, they will enable the government to clearly identify which types of traffic are profitable, the subsidies needed for individual passenger services, and areas where service should be discontinued. Second, they will provide competition and thus ensure a higher level of rail service to the Hungarian market. Third, they will put pressure on both the government and MAV to commercialize all rail services.

Road Transport

Most countries rely on the private sector for intercity truck and bus services, and numerous studies show that the private sector does the job at lower cost and a higher level of than publicly owned companies. The issue in Hungary is the slow privatization of VOLAN, the large (30,000 employee) association of domestic passenger, freight, and freight forwarding companies. VOLAN is owned by the State Privatization and Property Administration Company (SPPA), but the privatization process has been going on for a decade without being completed. It is recommended that VOLAN's freight and bus operations be separated because these require different management skills. It is also recommended that the trucking companies (some 400-1,000 trucks per company) be divided because they are much larger than in EU countries. In addition, it is suggested that the government offer lease or lease-purchase arrangements to provide financing. Workshops should be disposed of separately where possible.

MTCWM is currently preparing a new law on public transportation to harmonize with EU requirements. It is recommended that this legislation be used to completely deregulate intercity bus and truck services, with the government's role limited to ensuring compliance with safety and environmental regulations. Regulations that serve to limit access to the driving profession should be avoided to the extent permitted by EU regulations. VOLAN should be expeditiously privatized without investing in advance, and without asking for derogations from the EU. The privatization of VOLAN, which has proved difficult to implement in the past, could be usefully supported by an IFI to provide advice and momentum. This step is the best way to ensure the rapid adjustment of the Hungarian fleet size to match demand, improve the quality of service, and reduce government subsidies. PSO payments should be provided only for required bus services in suburban areas and to remote towns (others are commercially viable) and paid, if possible, by the local authority that benefits from the service.

The system of international trucking permits is being liberalized in stages, and this process is expected to continue following accession. Presently, permits have been issued for 4,800 trucks, of which 1,000 are Euro 1 & 2, and 3,800 are bilateral. Hungary should support this liberalization. It is also recommended that the government support reciprocal cabotage rights, including permitting foreign trucking companies to operate within Hungary. This will also help adjust the size of the trucking industry to demand.

Inland Navigation

The shift of economic output away from heavy goods has resulted in a permanent decline in traffic, as it has with the railways, and excess capacity in both river ports and transport. Traffic on the Danube south of Hungary is also blocked by the conflict in ex-Yugoslavia. One positive development is the startup of roll-on roll-off (ro-ro) traffic (trucks with trailers that can be loaded onto ships) between Germany and Budapest, which avoids congested roads and border crossings. River transport is deregulated, and there are a number of private operators. MAHART is owned by SPPA, and has about 200,000 tons of river freight transport capacity. It also provides passenger transport services and ship repair, and operates the free port of Csepel. MAHART is cross-subsidized by its more profitable port activities. It is recommended that these

organizations be separated, a landlord port created, and port operations privatized. MAHART requests substantial public investment to replace its aging fleet (mostly pusher barges), but this is not recommended since the private sector will invest where there are good business opportunities.

Aviation

MALEV, the national airline, is owned by SPPA, municipalities, private banks and individuals. To date, it has acted as a full service airline, providing scheduled service throughout the world. The EU is slowly deregulating its airlines, following a pattern established earlier in North America. This is expected to put additional commercial pressures on small airlines such as MALEV, a process that will likely to be accelerated by EU accession. One strategy for MALEV would be to participate in creating a new regional airline, on the model of SAS, in order to become competitive by becoming larger; however, this may be politically difficult to achieve. Another strategy would be to form an alliance with a larger carrier. It is recommended that MALEV develop a business plan, assuming increasing competition, and assess its options. The best strategy may be for MALEV to become a regional carrier, feeding into another long-distance airline with which it has a partnership.

Urban Transport

About 80 percent of GNP in EU countries is generated in urban areas. Hungary is developing a service economy similar to that of other EU countries, where the efficient movement of people in urban areas, including public transport for lower and middle income people, is an increasingly important factor in urban efficiency. It is also worth noting that the environmental benefits (air, noise, safety) of well-conceived urban transport investments are higher than for interurban ones. It is also important not to repeat the automobile congestion and suburban sprawl experience of Western Europe and North America. Budapest has a well-developed public transport system. Nevertheless, further measures should be considered to restrain road vehicles in the city center (parking restrictions), and some form of congestion pricing should be introduced. The EU now recognizes the importance of urban transport investments, and they should be included in the transport investment plan discussed above.

BKV and the Municipality of Budapest have taken a number of steps to improve BKV's commercialization, increase tariffs to improve cost recovery, and renew the public transport fleet. However, timetables, tariffs, and operating subsidies are still determined at the municipal level, which in practice has resulted in poor financial performance—forcing BKV to take medium-term loans—and network and service levels that are not well matched to demand. It is important for the municipality to provide BKV with a reliable operating subsidy, since tariffs are not expected to cover all costs.

7. THE LABOR MARKET

During the early years of the transition, labor market conditions changed substantially. Like other socialist countries, Hungary initiated its transition to a market economy with a highly inefficient and distorted labor market. It shared with the other Central and Eastern Europe (CEE) countries the same basic characteristics: high labor force participation rates, especially for women; high employment, particularly in the industrial sector; low productivity, despite a relatively well- educated labor force; little mobility; and a compressed wage structure.

The most significant changes during the transition have been a reallocation of labor among sectors (away from agriculture and industry, and toward services), a decline in both employment and labor force participation rates, the emergence of unemployment, and the introduction of new policies governing the functioning of the labor market (wage-setting mechanisms, and active and passive labor market policies).

While Hungary advances toward EU integration, three main sets of questions seem pertinent:

- To what extent has the labor market adjusted ? Is there sufficient adjustment to ensure smooth integration into the EU?
- Are the policies in place adequate to ensure the flexibility needed for productivity to increase?
- What is the likely impact of EU accession on the labor market? Should we expect substantial job creation, increase or decrease in unemployment, increased mobility and migration?

This chapter attempts to answer these questions, after briefly reviewing recent trends.

RECENT TRENDS

Employment, Labor Force Participation, and Unemployment

Among the changes in the Hungarian labor market during the transition, three are particularly striking: the decline in employment, the decline in labor force participation, and the rise in unemployment. Between 1990 and 1996, Hungary lost about 1.4 million jobs (27 percent of the total). The employment level stabilized in 1997 and increased slightly in 1998. In parallel fashion, unemployment emerged, rose rapidly, and after reaching a peak of about 13 percent in

early 1993, declined to 8.7 percent, its current level¹; this is somewhat below the average for the European Union (10.9 percent in 1998).

While these trends are common to all CEE countries, the magnitude of the changes varies (see figures 7.1 & 7.2). While Hungary has lost 27 percent of its jobs since 1990, Slovenia has lost 18 percent, Slovak Republic 16 percent, and Poland and the Czech Republic only 8.6 percent. Since 1993-94, employment either stabilized or grew slightly in all countries except Hungary, where it kept declining until 1997. Differences in unemployment trends can also be observed with Poland, which registered the highest unemployment rates, and Estonia and the Czech Republic, which had the lowest.

Figure 7.1: Employment Trends in CEE Countries

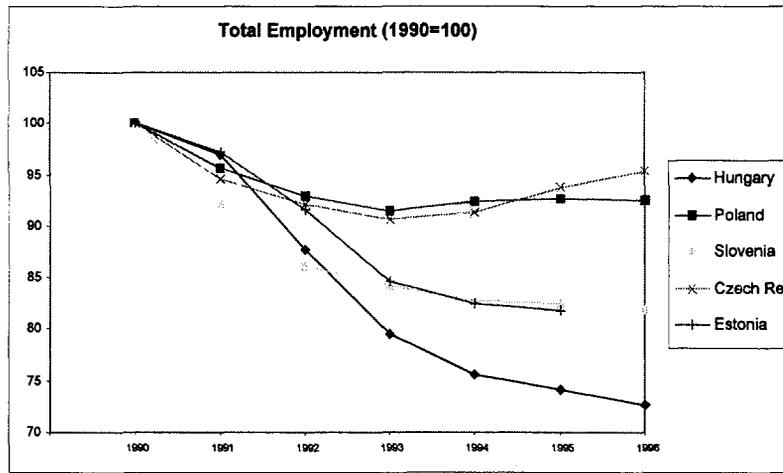
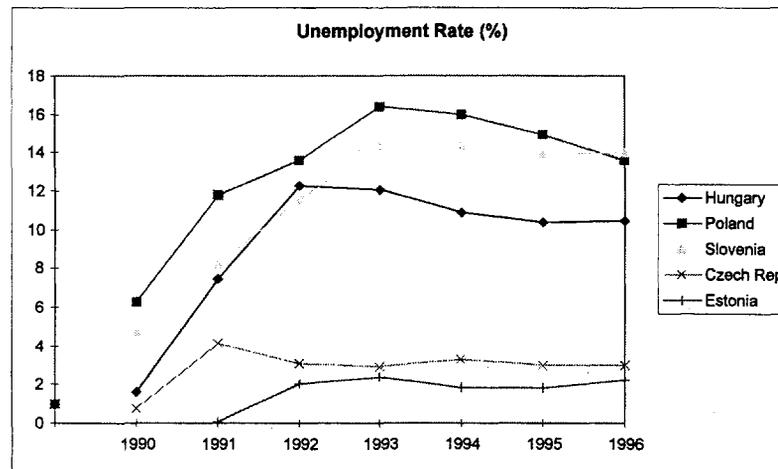


Figure 7.2: Unemployment Trends in CEE Countries



Source for Figures 7.1 and 7.2: OECD-CCET Labor Market Database.

¹ Estimates of unemployment rates vary according to the source. Based on the number of registered unemployed, the rate peaked at almost 13 percent in 1993, and declined to 9.2 percent by mid-1998; based on labor force surveys, however, the unemployment rate would be only 8.7 percent in 1997. Differences seem related to the advantages that registration in labor offices provide: access to job counseling, employer information and training programs, and free health insurance.

In Hungary, as in the other CEE countries, the increase in the number of unemployed has been lower than the number of job losses. Withdrawals from the labor force explain the difference. Employment rates declined for all ages, and for both men and women. As a result, the ratio of inactive to employed almost doubled between 1989 and 1997. This trend had already started for men during the previous decade, but it became more marked for women.² Since 1992, participation rates fell by about 9 percent for men and 13 percent for women. Increases in school enrollment rates and early retirement explain the decline for the young and old. However, participation rates also fell for middle-aged workers, especially for women, reflecting an adjustment to the new economic environment. In 1997, participation rates for ages 15-59 were 71 percent for men and 53 percent for women, somewhat below the EU average.³

Unemployment has hit different population groups and regions unevenly (see detailed tables in tables 1.6 through 1.9 of the Statistical Appendix). As in other countries, unemployment disproportionately strikes the young and those with a low level of education. Workers with only primary education have an unemployment rate ten times higher than those with a university degree. Those under the age of 20 have an unemployment rate four times that of middle-aged workers. In contrast with most countries, however, unemployment rates are lower for women than for men. Two factors may explain this feature of the Hungarian labor market: first, the higher proportion of women in the government sector, which provides greater job security; and second, the higher proportion of women with college and university education relative to men in the labor force (see below).

Regional differences in unemployment rates are also significant, with Budapest enjoying one of the lowest rates (6.9 percent in 1997). There is a sharp contrast between the western and northeastern counties. The latter (with some exceptions) experience unemployment rates above the national average of 8.7 percent; they range from 10 to 14 percent.

The increase in the stock of unemployed in the early 1990s was due more to low outflow than to high inflow rates. As a result, a large stock of long-term unemployed built up. The proportion of unemployed who had been out of work for more than 12 months (the long-term unemployed) continued to rise during 1994-96, when overall unemployment started to decline; this group went from less than 20 percent of the labor force in 1992 to almost 50 percent by 1996 (see Table 7.1). In parallel fashion, recurrent unemployment became more frequent.

Table 7.1: Duration of Unemployment Spells, 1992-1997
(percent)

Duration	1992	1993	1995	1996	1997
Less than 1 month	10.1	7.3	5.7	5.1	4.9
1-6 months	43.3	33.0	26.6	24.6	27.3
7-12 months	28.0	27.4	22.1	20.5	21.3
More than 1 year	18.5	32.2	45.6	49.8	46.5

Source: Nagy (1998).

² Between 1980 and 1990, labor force participation rates of men aged 15-59 declined from 87 to 83 percent.

³ Detailed tables are presented in tables 1.2 through 1.5 of the Statistical Appendix.

Education

The education level of the Hungarian labor force has increased substantially over the last decade. The proportion of women with higher education almost doubled, rising from 9 in 1986 to almost 17 percent in 1996. The proportion of men increased from 10 to 14 percent. This sharp increase seems due to the combined effect of two phenomena: the higher education level of new entrants; and the decline in employment and labor force participation, which disproportionately affected those with least education. While the first phenomenon is common to all European and Western countries, the latter is closely linked to the transition.

Real Wages

Real wages fell by 26 percent between 1988 and 1996, then increased by about 5 percent in 1997. A similar increase is reported for 1998. Real wage trends have closely followed real output trends. Nonetheless, the recovery in real wages lagged behind the output recovery by one year. The recent gains have not been sufficient to compensate for accumulated losses, and the 1988 real wage level has not yet been recovered.

TO WHAT EXTENT HAS THE LABOR MARKET ADJUSTED?

The sustainability of growth recovery and the speed at which convergence toward EU income levels will take place depends, in large part, on how the labor markets function. To what extent have workers in Hungary left unprofitable sectors or firms and responded to new job and skill-enhancing opportunities?

A number of factors suggest that the Hungarian labor market has, to a great extent, adjusted to the new economic environment. There have, for example, been large changes in the sectoral distribution of the labor force, from agriculture and industry toward services (Table 7.2). By 1997, the share of the labor force in the agriculture sector had fallen to 8.5 percent, while it rose to nearly 60 percent in the service sector.

Table 7.2: Distribution of Employment by Sector, 1980-1997

Year	Agriculture	Industry	Services	Total
1980	19.3	41.6	39.1	100
1990	17.5	36.1	46.4	100
1994	9.0	32.4	58.6	100
1997	8.5	31.8	59.7	100

Source: Central Statistical Office.

The substantial reallocation of labor that took place within the manufacturing sector provides additional evidence of this adjustment. Between 1992 and 1997, total employment declined by 37 percent in the manufacturing sector (Table 7.3). This was the outcome of two factors working in opposite directions: a loss of 60 percent of jobs due to downsizing, merger, or liquidation of enterprises that existed in 1992,⁴ and a gain of 23 percent due to jobs created in newly established enterprises. The whole process appears linked to the gradual expansion of the

⁴ There were also important job losses prior to 1992, but data problems prevent measurement of the exact magnitude.

private sector. The number of employees in state-owned enterprises was drastically reduced, while it almost doubled in private companies.

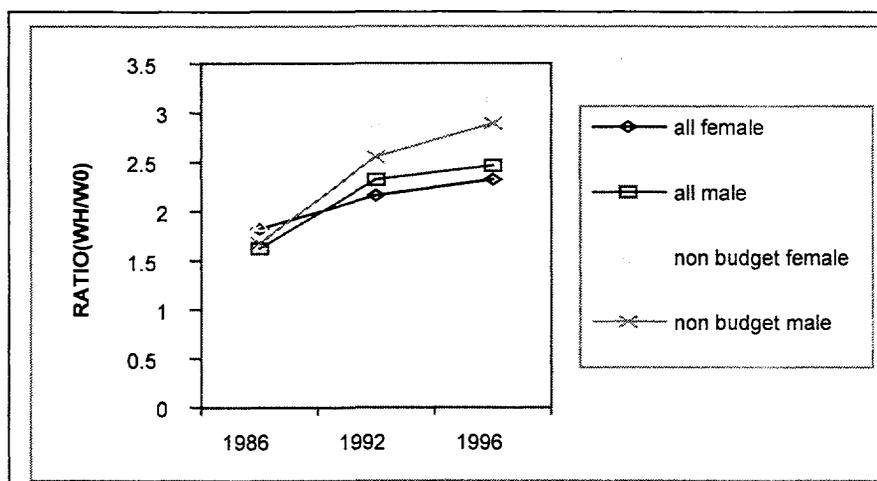
Table 7.3: Job Losses and Gains in the Manufacturing Sector, 1992-1997
(thousands)

Sector	Employment 1992	Change in employment 1992-1997	Job losses due to merger, liquidation, or downsizing	Job gains due to establishment of new enterprises
Total manufacturing	577	-213	-344	+131

Source: Staff calculations using Central Statistical Office data.

Another interesting piece of evidence is the sharp increase in the returns to skills that can clearly be observed since 1986. This indicates a flexible wage structure, an increasing demand for educated workers, and a rapid response to technological change. Over a decade, the wage differential between workers with higher education and those with only 8 years of schooling rose from 60 to 145 percent for men, and from 80 to 130 percent for women. In the non-budgetary sector, the wage differential increased even further (see Figure 7.3).

Figure 7.3: Wage Ratio, Higher Education versus Eight Years of Schooling, 1986- 1996



Sources: Kertesi and Kollo (1998), estimates from wage surveys.

Labor productivity increased dramatically over the period 1992-97. Measured in terms of real value added per employee, productivity more than doubled in the manufacturing sector (Table 7.4). This was essentially due to the performance of enterprises with foreign owners, and to the increasing proportion of workers in those enterprises. Labor productivity increased by 68 percent in firms with 100 percent foreign ownership, and by 104 percent in those with at least 10 percent foreign ownership. By contrast, labor productivity declined sharply in enterprises remaining under public ownership. (Another group with declining productivity, although to a lesser degree, was private firms with domestic ownership).

**Table 7.4: Real Value Added per Employee in Manufacturing,
by Type of Firm Ownership, 1992-1997**

Ownership Type	Distribution of Employment		Change in Labor Productivity, 1992-97 (%)
	1992	1997	
FDI 100%	4	21	+68.2
FDI 10% or more	17	34	+104.3
State owned	66	7	- 44.1
Domestic private	7	32	-19.9
Unknown	6	6	+104.4
Total	100	100	+121.3

Note: Value added deflated by industry price index.

Source: Staff calculations using CSO data.

Only one indicator suggests that the process of labor reallocation remains subject to constraints. This indicator is the persistent imbalance between the regional distribution of unemployment and vacancies. The unemployed rate in regions offering fewer jobs ranges from 20 to 40 percent and does not appear to have declined over time. These high-unemployment regions have been more severely exposed to job destruction and have lagged in terms of job creation. Reduction of unemployment in these regions seems unlikely without mobility on the part of workers or of enterprises. The low mobility that has been observed does not reflect irrational behavior, but rather the high cost of relocating due to the lack of a housing rental market and mortgage financing, sharp differentials in housing prices among regions, high transport costs, and uncertainty as to earning prospects.⁵

Overall, available evidence points to a substantial transformation of the labor market and a rapid pace of enterprise restructuring in Hungary over the years of transition. Nevertheless, a significant productivity gap with EU member countries remains. Labor productivity in manufacturing in 1996 was only about 30 percent that Italy or Spain. Since the decline in manufacturing and agriculture employment has now slowed, and since the change of ownership structure is close to completion, it will become increasingly difficult to maintain the same pace of productivity gains.

ARE POLICIES ADEQUATE TO ENSURE AN EFFICIENT ALLOCATION OF HUNGARY'S HUMAN CAPITAL?

In an environment in need of continuous adjustment, it is essential to maintain a policy and incentive framework conducive to work, to investment in human capital, and to matching skills and qualifications to those demanded by firms.

Wage-Setting Mechanisms

The practice of institutional consultation and negotiation among the Government, employer associations, and worker trade unions started in 1988, with the creation of the National Interest Reconciliation Council (NIRC). The creation of the NIRC coincided with the suspension of the central wage regulation system and the introduction of free wage bargaining and wage liberalization in the non-government sector. The purpose of the NIRC was to provide a forum where the necessary decisions could be jointly taken by social partners rather than unilaterally by

⁵ See Fazekas et al (1997).

the Government, and to provide an institutional framework for wage negotiations. The NIRC was replaced in mid-1990 by the Interest Reconciliation Council (IRC). The Council is comprised of, in addition to the Government, representatives from six trade union confederations and nine employer associations. The IRC was replaced in 1999 by the National Labor Council (NLC) with the same members, but more limited competencies

The mission of the IRC was to harmonize the interests of various stakeholders and prevent conflicts. It provides a forum for exchange of information on economic and social issues; IRC partners were asked to give their opinion on Government proposals for policy and legislative changes. Furthermore, within the framework of the IRC, the Government and other partners negotiated and agreed on the level of the national minimum wage, and on average wage increases for the following year. In the competitive sector, however, the agreement on the average wage increase is a recommendation only. A similar council exists for the budgetary institutions, with the additional competence to negotiate wages for public employees.

These councils give the Government a limited role in the wage-setting process. Beyond the minimum wage,⁶ the Government does not intervene in the non-government sector, except through the average wage increase target agreed with its partners. The Government, however, cannot enforce the implementation of this agreement. In the non-budgetary sector, collective agreements determine the pay scale and wage increases, and most such agreements are signed at the enterprise level. This decentralized bargaining system has most likely helped the wage structure become more flexible and responsive to competitive forces. But it may have also contributed to the increased earnings inequality discussed above.

Employment Legislation

Hungary's employment legislation attempts to provide a balance between the intent to foster permanent employment and protect workers, and the need to promote flexibility. Some of its features, however, can be conducive to unemployment or low formal employment.

One reason is that the cost of layoffs for the employers while not out of line with that of other European countries, is substantial, which acts as a barrier to hiring. Whenever a layoff originates from the employer's side, the employee is entitled to a notification period and severance payment.⁷ The notification period and the severance pay varies according to the length of employment.⁸ A worker with 20 years of job tenure would receive 8 months salary, in total compensation while one with only 4 years of employment would get only about 2 months. In the case of mass layoffs, which occur in cases of insolvency or when at least 10 percent of a firm's labor force is to be dismissed, procedures are more complex. The employer has an obligation to negotiate with the trade union, inform the local employment services office, and provide an additional 30 days of notice.

Although the cost of layoffs is substantial, it is generally in line with that of other European countries. There are, in addition, a number of cases in which layoffs can become

⁶ In 1996, about 5 percent of jobs in enterprises with more than 10 employees were paid at the level of the minimum wage.

⁷ Workers who quit are not entitled to severance payments.

⁸ Notification period varies from 30 to 60 days. See footnote 10 for severance payments.

considerably more costly. They can be three times more costly when an employee files a claim for unfair dismissal. Labor courts tend to rule in favor of employees, and either require reemployment or impose fines on the employer. Dismissals are forbidden during pregnancy, maternity leave (which can be extended to three years), military service, the five years preceding retirement, sick leave, and a certain period following illness. While these restrictions are designed to protect workers, they can have adverse effects. They may, for example, explain the very low reemployment rate of older workers. Sick leave has also reportedly been abused to maintain pay without working and avoid dismissal.⁹

The legislation provides some ways to reduce these costs. First, probation periods of up to three months can be part of any labor contract. At the end of probation, contracts can be terminated at no cost. Probation provides an opportunity to improve the job matching process and thus reduce the probability of job separation. Second, the legislation authorizes fixed-term contracts. Third, workers can be hired for specific assignments or for occasional (seasonal or short-term) jobs. In those cases, there are no layoff costs at the expiration of the contract. Furthermore, social security contributions are reduced. The extent to which these types of contracts are used reflects attempts to reduce labor taxes and avoid the high cost of dismissal.

Support to the Unemployed

The aim of unemployment policies is to adequately protect those affected by the transformation of the labor market and facilitate the transition to another job. If improperly designed, however, such policies can create disincentives to take a job and can lead to high fiscal costs.

Income-support programs. Income support for the unemployed comes in two forms: (i) a contributory unemployment insurance (UI), which is dependent on an adequate employment history; and (ii) an income-tested unemployment assistance (UA) for those who have exhausted their entitlement to UI. In addition, there is a severance payment corresponding to one to six months of wages for workers who have been dismissed for other than disciplinary reasons.¹⁰ The unemployed can also access other social benefits which are independent of work status.

Unemployment insurance was introduced early in the transition process (in December 1988) not only to mitigate the social impact of unemployment, but also to relieve employers of their social responsibilities so they could focus on restructuring. Benefits are earnings related within minimum and maximum limits and are unrelated to other sources of income. Those eligible are the unemployed, those searching for a job, and those who have worked for at least one year in the last four years. Due to fiscal constraints, the duration of benefits has been reduced: as of January 1993, the duration varies from 3 and 12 months, depending on the individual's employment record for the past 4 years. Benefits are set at 60 percent of base

⁹ If a person is sick for 15 days, he cannot be dismissed upon his return to work during a protected period equal to 30 days (twice as long as the sickness period); if a person is sick for one month, the length of the protected period becomes two months, and so on, up to one year. In addition, coming back to work for a few days (during the protected period) allows the worker to start a new sickness period and thus a new protected period. As might be expected under such a system, sickness periods are reported to be long and frequent in Hungary.

¹⁰ Severance payment ranges from one month's wages for those with 3 to 4 years of employment to 6 months' wages for those with 25 years or more.

earnings,¹¹ with the minimum at 90 percent of the minimum pension and the maximum at twice the level of the minimum pension.

Unemployment assistance was introduced later (in December 1992) to protect the growing number of long-term unemployed whose entitlement to UI had expired. It is less generous than the UI, providing a flat-rate payment equal to 80 percent of the minimum old-age pension. Only about half of those who have exhausted their right to UI qualify, as entitlement is based on a family income test: per capita family income must not exceed 80 percent of the minimum pension; that is, a level equal to about half the minimum wage. The UA system is administered by local governments, which bear 25 percent of the cost.

The labor market has been characterized by a gradual increase in the number of long-term unemployed; accordingly, the UI's coverage of the unemployed stock has decreased (see Table 7.5), leaving the burden of supporting the long-term unemployed to the UA and other social assistance programs.

Table 7.5: Percentage of Unemployed Receiving Benefits, 1992-97

	1992	1993	1994	1997
Unemp. insurance	62	54	36	25
Unemp. assist.		6	16	23
Career beginner		3	3	
No benefit	38	36	45	52
Total	100	100	100	100

Note: Career beginners benefits for labor force entrants have been discontinued. School leavers now only have access to active programs.

Source: Nagy (1998).

Policymakers always face the dilemma of maintaining a balance between social objectives (providing income support) and efficiency objectives (avoiding the negative effects of income support on the recipient's job search efforts). The income support provided by the UI system has been reduced in recent years, with the ratio of average UI over average wage declining from 44 percent in 1992 to 26 percent in 1997. The shift from UI to UA has also resulted in lower rates of compensation. Moreover, the number of those searching for work and receiving no support has increased (see Table 7.5). Monitoring the impact of these changes on poverty is clearly needed.

Regarding the impact of the UI system on the intensity of job search, research concludes that disincentive effects are relatively weak, and that policy changes had no significant impact on job search behavior.¹² Nonetheless, the availability of social assistance may have weakened incentives to take up jobs at the lower end of the wage spectrum. The unemployment assistance benefits are associated with a 100 percent marginal tax rate, and can be combined with other social benefits (family allowances). The possibility that households with unemployed persons could fall into a poverty trap thus exists. At the same time, it appears that program administrators are generally unable to verify whether the recipient is still unemployed. The UA system is often characterized as providing easy money. Here again, continued monitoring of recipients' behavior

¹¹ Base earnings are average earnings during the last two complete calendar quarters.

¹² See Micklewright and Nagy (1994); Micklewright and Nagy (1996)

is needed. In addition, it would be useful to enforce work tests to tighten eligibility for UA benefits.

Active labor market policies. Hungary has a wide range of active labor market measures for the unemployed, including job intermediation, training programs, public works, and subsidized employment. Approximately one third of those who experience less than one year of unemployment find a job; about a tenth of those remaining enter some type of active labor market program. In terms of resources, about one third is devoted to the administration of employment services, half to subsidized employment, and the remainder to training programs.

Hungary is one of the few transition countries to have evaluated its training and public works programs. However, the evaluation showed the limited effectiveness of the current programs.¹³ Training programs seem to be concentrated on those (younger and more educated) who are more likely to get a job. The impact of the programs on the length of job search and earnings appears small. Among the unemployed who participate in the public works program, only 5 percent seem to find sustainable employment.

Public Spending on Passive and Active Policies

In the early stage of the transition—up to 1993—Hungary spent substantial resources to support the unemployed through active and passive measures. It initiated those programs before other transition economies did so, and their scale rapidly reached levels comparable to those in OECD countries. After 1993, however, fiscal constraints led to the tightening of benefits; total spending fell from 2.9 percent of GDP in 1992 to 1.4 percent in 1996.

Table 7.6: Spending on Active and Passive Labor Market Measures, 1992-97
(percent of GDP)

Year	1992	1993	1994	1995	1996	1997
Active	0.61	0.66	0.61	0.43	0.37	0.45
Passive	2.29	2.28	1.53	1.21	1.04	n.a.
Total	2.90	2.94	2.14	1.64	1.41	n.a.

Note: Spending on active and passive measures is covered mainly by the labor funds (Employment Fund and Solidarity Fund). In addition, local governments co-finance 25 percent of the means-tested unemployment assistance benefits. Local authorities and some ministries also finance additional public works programs.

Source: Ministry of Social Affairs.

Hungary's support to the unemployed is now below that of most EU countries. It exceeds only that provided by Greece, and is comparable to that provided by Spain (see Table 7.7). Spending on unemployment support is not substantially higher, however, in France or the United Kingdom; while Sweden, Belgium, Germany, Ireland, and the Netherlands, have relied much more heavily on such policies.

On efficiency grounds, there is little reason for Hungary to significantly increase the budgetary resources allocated to unemployment support, especially since unemployment rates are declining. Hungary's own preliminary evaluation of active labor market programs, however, suggests that there is room for improvement in the effective use of resources allocated to these programs. The focus should be on workers subject to recurrent and long-term unemployment.

¹³ See Micklewright and Nagy (1994); O'Leary (1995); and Boeri et al (1998).

Table 7.7: Spending on Active and Passive Policies in Hungary and EU Countries, 1996

Country	Unemployment rate	Passive Measures		Active Measures	
		As % GDP	GDP cost per % point unemployment	As % of GDP	GDP cost per % point unemployment
Austria	5.3	1.44	.27	0.38	.07
Belgium (95)	9.3	2.81	.30	1.41	.15
France (95)	11.6	1.79	.15	1.30	.11
Germany	9.0	2.37	.26	1.43	.16
Greece (95)	9.1	0.44	.05	0.32	.04
Ireland	11.9	2.55	.21	1.75	.15
Luxembourg	3.3	0.65	.20	0.27	.08
Netherlands	6.4	3.41	.53	1.37	.21
Portugal	7.5	1.02	.14	1.04	.14
Spain	22.2	2.14	.10	0.67	.03
Sweden	8.0	2.77	.34	2.25	.28
UK	8.2	1.33	.16	0.46	.06
Hungary	9.9	1.04	.11	0.37	.04

Source: OECD (1997); Ministry of Social Affairs.

Taxes and Social Security Contributions

The tax system can create incentives for the steady growth of employment in the formal sector or for the development of an informal economy. In Hungary, as in other transition economies, the tax system is biased in favor of capital income and against labor income. This bias can be seen in both high taxes on workers' income and high social security contributions.

The tax on labor income is relatively high despite declining rates in the upper income bracket in the past years (from 48 percent in 1996 to 40 percent in 1999).¹⁴ In contrast, capital incomes are favorably taxed: there has been a zero tax rate on interest income since 1995, while yields and dividends are taxed at 20 percent. The corporate income tax was 18 percent in 1998, which is low by international standards. Depreciation rates vary from 2 to 33 percent, depending on the asset.

Table 7.8: Income Tax Rates by Income Bracket, 1998-1999

Annual Income (in HUF)	1998	Annual Income (in HUF)	1999
Less than 250,000	20	Less than 400,000	20
250,001-300,000	22		
300,001-500,000	31	400,001-1,000,000	30
500,001-700,000	35		
700,001-1,100,000	39		
Above 1,100,000	42	Above 1,000,000	40

Note: In 1998, a 20 percent tax credit applied to the lowest income category. As the lowest personal income tax rate was 20 percent, low-income people were practically tax exempt. While the tax credit originally served a social purpose, its existence resulted in a narrowing of the reported tax base and became a major form of tax evasion. In 1999, the tax credit will be reduced to 10 percent; hence the lowest incomes will be taxed at 10 percent.
Source: Ministry of Finance.

¹⁴An inflation adjustment of tax brackets has been necessary every year since 1995 to prevent an increasing share of income earners being pushed into the highest tax bracket.

Social security contributions are very high by international standards (60 percent in 1995 and 58.3 in 1998). They are paid by employers and employees to cover expenses for old-age and disability pensions, health insurance, sick pay, maternity leave, unemployment insurance, and active labor market programs. Successive Hungarian governments have taken steps to decrease employers' contribution rates (by 1.5 percent in 1995 and 5.5 percent in 1999), but efforts to act against noncompliance through the introduction of a flat health tax have made the effective reduction significantly lower (only 4.5 percent in 1999). Active and passive labor market schemes are financed through a special contribution to the Labor Market Fund. Decreasing unemployment made it possible to diminish that rate (see Table 7.9). Nevertheless, current prospects are that the total contribution rate will still amount to 50 percent by 2002.

Table 7.9: Social Security Contribution Rates as of Percentage of Gross Wage, 1995-2002

	1995	1996	1997	1998	1999	2000	2001	2002
Employer's	48.5	47.0	47.0	46.8	41.3	39.5	38.4	35.5
o/w Pension	24.5	24.5	24	24	22	21	21	19
Health	19.5	18	15	15	11	10	8	6
Flat health tax *	-	-	3.5	3.8	5.3	5.5	6.4	7.5
Labor Market Fund	4.2	4.2	4.2	4.0	3.0	3.0	3.0	3.0
Wage guarantee contribution	0.3	0.3	0.3	-	-	-	-	-
Employee's	11.5	11.5	12.5	11.5	12.5	13.5	13.5	14.5
o/w Pension	6	6	7	7	8	9	9	9
Health	4	4	4	3	3	3	3	4
Labor Market Fund	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Total	60	58.5	59.5	58.3	53.8	53.0	51.9	50.0

* For the purpose of this table, the flat health tax revenues have been expressed as a percentage of the payroll tax base. The monthly contributions have been HUF 1800, 2100, and 3600 between 1997 and 1999.

Sources: Ministry of Finance; Ministry of Labor.

The high tax burden on labor income has contributed to widespread tax evasion,¹⁵ it has also contributed to the use of work contracts (work assignments and contracts with self-employed persons), which provide less job security, and to a persistent gray economy. It may also have resulted in less creation of new jobs in the formal sector. To foster compliance, the Government is gradually lowering tax rates while eliminating loopholes to widen the tax base.¹⁶ These efforts, however, seem too modest to have a major impact.

Compliance with the *Acquis Communautaire*

Social policy development was not a high priority at the union level until the early 1970s, when the European Commission launched legislative initiatives in the field of employment laws, as well as laws covering equality of opportunities, health and safety at work. Following the adoption of the single market program in 1985 and the signing of a Social Charter¹⁷ in October 1989, successive action programs were adopted, covering such issues as working conditions and workers' right to information and consultation. The principles of the Social Charter were incorporated into a social chapter attached to the Maastricht Treaty. This set social policies, primarily employment policies, is at the heart of the EU integration process.

¹⁵ For example, most of the self-employed have reported an annual income that is taxed at the zero percentage rate.

¹⁶ A new income-related health tax was introduced in 1999 to tax the types of income that have, until now, not been subject to payroll taxes (e.g., use of company cars, intellectual work).

¹⁷ The Social Charter was signed by 11 governments. The United Kingdom declined to do so.

More recently, the 1994 White Paper on social policy and the latest Action Program (1998-2000) define the future direction of social policies, with employment as the main theme. They aim at the development and full implementation of minimum social standards for the single market, and stress the need for applicant countries to bring their legislation and policies in line with that of the EU. Box 7.1 summarizes the main requirements for harmonization and shows that Hungary's compliance with the *acquis* is already well advanced.

Box 7.1: Hungary's Labor Market and the *Acquis Communautaire*

I. Equal Opportunities for Men and Women. Stage I measures require the country to comply with directives 75/117/EEC and 76/202/EEC, which contain provisions regarding: (i) equal pay; and (ii) equal treatment for men and women in access to jobs, promotion, training, and working conditions. Stage II measures require the country to comply with directives 79/7/EEC and 86/378/EEC, which apply the principle of equal treatment for men and women to statutory and occupational social security schemes.

- *The Constitution of the Republic of Hungary guarantees equality of men and women. Subordinate legislation (such as labor laws) further enforces fundamental rights. The Hungarian Government envisages introducing supplementary legislation and education campaigns to ensure effective implementation of these principles.*

II. Coordination of Social Security Schemes. Although there is no need to further harmonize Hungary's social security schemes with those of the EU, certain rules have to be put in place to prevent workers from losing their social security rights when they move from one member state to another. Although there are no Stage I measures, it is advisable for Hungary to begin this process as early as possible. The EU's provisions regarding social security legislation are based on four principles: (i) the legislation of only one country can be applicable (to avoid double social security contributions); (ii) workers from other member states receive equal treatment (the same obligations and benefits as nationals); (iii) workers retain the rights they have acquired; and (iv) periods of insurance or residence are aggregated.

- *Consistent with EU directives, Hungarian laws that regulate social security schemes treat foreigners and nationals equally. International coordination is regulated by bilateral agreements.*

III. Health and Safety at Work. Measures at Stage I require compliance with Directive 89/391/EEC, which stipulates that employers must assess the risks to safety and health at work, ensure that workers receive appropriate safety and health information, and provide workers with adequate safety and health training. Legislation must also include provisions regarding protective and preventive services, health surveillance, and the participation of workers in health and safety issues at work. At Stage II, countries are required to comply with a set of 13 directives that include regulations on maintaining the health and safety of workers in the most critical areas (workplace equipment, safety signs, chemical exposure).

- *Hungarian laws and regulations need only minor adjustment. On the institutional side, health and safety issues are handled by two separate administrations (Ministry of Health and Ministry of Labor). Merger or close coordination between the two agencies would make implementation more effective.*

IV. Labor Law and Working Conditions. At Stage I, countries are required to comply with the contents of four directives that protect workers' rights in the areas of: (i) collective redundancies; (ii) undertakings, businesses, or parts of businesses; (iii) insolvency of employers; and (iv) young people at work. At Stage II, they are required to comply with three additional directives that regulate working conditions, working time, and information and consultation with workers.

- *The Labor Code, the Labor Control Act, and additional employment acts covering budgetary sector employees regulate labor contracts and dismissal procedures. The legislation stipulates conditions for normal dismissals. A July 1997 amendment provides for the continuation of the employment contract in the event of change of ownership. The legislation also contains provisions for collective dismissals in the event of a large number of redundancies. Some of these provisions (definition of mass layoffs, minimum notification period) were amended in July 1997. In case of insolvency, the mass layoff legislation applies. Nonetheless, dispositions that involve the use of the wage guarantee fund do not comply with EU directives and will need to be modified. The Labor Code fixes the minimum working age at 15. Basic limitations and arrangements concerning working time are defined: 8 hours per day (a maximum of 12 hours can be agreed upon for certain occupations), and 40 hours per week. Overtime shifts are regulated.*

CONCLUSIONS AND KEY RECOMMENDATIONS

Available evidence suggests that the Hungarian labor market has been subject to rapid transformation and has achieved substantial productivity gains during the years of transition. Hence, Hungary has entered the pre-accession stage with favorable conditions and seems well positioned to cope with competitive pressures in a single market. But notwithstanding the gains thus far, other steps still need to be taken to ensure Hungary's successful integration into the EU.

Maintaining the recent pace of productivity increases is unlikely over the long term. The large-scale loss of jobs linked to the transition is now largely over and the sale of assets to foreign investors is now largely completed, as is the sizable reallocation of labor among sectors. From now on, changes are likely to be less dramatic and further productivity gains more difficult to achieve.

It will also be difficult to achieve a substantial increase in the level of employment. Hungary's employment rate is currently somewhat below the EU average. This is due mostly to the employment rate of workers aged 55 or above—a rate almost half that of Germany or France. Many workers were encouraged to retire early, and the older workers are not likely to return to the labor force. But for the young, continuous job creation will be critical to keeping the unemployment rate down.

Migration flows are not likely to ease the pressure on the labor market. A number of factors induce one to think that labor flows from Hungary to the EU countries will probably remain small.¹⁸ First, the income differences between the EU and acceding countries tend to be smaller than those that generate sizable migration. Second, there are no large Hungarian communities in EU countries to act as social networks to reduce the costs of insertion. Third, the unemployment problem currently faced by many EU countries may discourage migration. Finally, during the last wave of accession, the potential migration flows expected from Greece, Portugal, and Spain to EU members never materialized, despite the elimination of national barriers.

Pursuing a strategy conducive to job creation and continuous adjustment to innovation is thus essential for Hungary. Although it is helpful to have a labor force that is younger and more educated than in the past, the policy framework still matters.

Among the policies that require attention, the first priority is to reduce the taxes on labor. This is necessary both to decrease the bias against labor and to reduce the size of the informal economy. Recent efforts to lower social security contributions and widen the tax base are steps in this direction. Nonetheless, the efforts remain too modest. The Government needs to consider supporting the long-term unemployed through general revenues, and also needs to reform the financing of the health care system.

In addition, there is still room to improve the programs that support the unemployed. The unemployment assistance system should be reviewed to avoid threshold effects and poverty traps. Work tests should be enforced to avoid a waste of scarce public resources. Efforts to evaluate and improve the effectiveness of active policies should also be continued, with special attention to the

¹⁸ See Borjas G., "Economic Research on the Determinants of Immigration: Lessons for the European Union," World Bank, mimeo, 1998.

long-term unemployed. To reduce regional differences in unemployment—and at the same time reduce long-term unemployment—consideration should be given to other types of policies that are complementary to labor market programs, particularly those fostering the development of public transportation and mortgage financing.

Hungary's wage formation system seems to have provided adequate flexibility thus far. Returns to skills are increasing and the minimum wage does not appear to be a binding constraint on employment. But there needs to be a focus on employment protection legislation. Although firms seem to find ways to avoid the impact of some of the regulations on layoffs, this necessarily comes at a cost. The possible adverse effects on the employment of some population groups, including women and older workers, need to be evaluated and considered.

If Hungary further improves its policy framework and maintains incentives that facilitate the adjustment of the labor market to rapid changes in the economic environment, it should continue to benefit from significant productivity increases. Achieving these increases will be crucial to ensuring smooth integration into the European Union and to gradually bridging the gap between the country's per capita income and that of the current EU member countries.

8. PUBLIC ADMINISTRATION

The process of negotiating and preparing for accession into the European Union, as well as implementing the *acquis*, will require high-caliber government. Hungary must therefore accelerate its efforts to build a modern, capable public administration. Three questions are critical to administrative modernization in Hungary. First, on the specific front of EU preparation, how well are the institutional structures and processes established to shepherd Hungary through the accession process working? Second, for more broadly defined public administration tasks, does Hungary have the necessary institutional infrastructure to formulate and coordinate policy at the center of government? Third, how advanced is the development of a professionalized human resource base in the civil service? This chapter lays the groundwork for analyzing these questions by reviewing recent trends in government pay and employment, noting the effects of prior reform efforts and weighing the potential impact of policies related to EU preparation.

GOVERNMENT EMPLOYMENT AND REMUNERATION: EFFICIENCY ISSUES

Government Employment

Three main groups dominate general government employment:¹ civil servants, public servants, and an “other” category encompassing several different employee classifications such as the judiciary and armed forces. In 1997, total government employment was 814,027 (tables 8.1 and 8.2 in the Appendix provide detailed statistics). The central administration, including Budapest-based ministries and central agencies, as well as deconcentrated organs at the county and district level, accounted for 34.5 percent (280,496 individuals) of total employment. Local self-governments employed the remaining 65.5 percent (533,531 workers).

Civil servants accounted for approximately 13 percent of total government employment in 1997. Civil servants are nearly evenly divided between the central administration (51 percent in 1997) and local self-governments (49 percent in the same year). About one third of those in the central government work for ministries and central budgetary institutions (CBIs) in Budapest, while two thirds are in deconcentrated administrative organs in counties and municipalities.²

Non-administrative functions—e.g., education and health—are carried out by a different class of government staff: public servants. The public service is by far the largest government employer, with 72

¹ General government employment includes all government workers other than state enterprise employees.

² CBIs are dependencies of central ministries, appearing as subchapters in the budget. Examples of CBIs are the customs and tax administrations, and the army. CBIs are funded partially or wholly by the budget. They can also receive transfers from local governments and extra-budgetary funds, and may also generate their own tax and non-tax revenue.

percent of government staff in 1997. Most public servants work in education and health; together, these sectors accounted for 56.8 percent of all government personnel in 1997, of which 80 percent worked at the local level.

The "other" category comprised 15.0 percent of government employment in 1997. This group is largely composed of the uniformed services (military, police, civil defense service, fire departments, border guards, customs and finance guards, and the national security services), as well as judicial branch personnel.

General government employment in Hungary has been declining in relative terms. It was down from 8.9 percent of population in 1993 to 8.0 percent in 1997.³ As a share of the labor force, it fell from 21 percent in 1993 to 20.3 percent in 1997. Public servants and civil servants alone (excluding the "other" category) make up 6.8 percent of the population.

The level of Hungary's general government employment is comparable to levels found in EU member states and other OECD countries.⁴ It is worth noting that, as Table 8.1 indicates, there is significant variation in government size, even among Western European countries. In general, however, less-developed economies tend to have a lower number of civil servants. For example, general civilian government employment as a percentage of population ranges from 2.0 percent in Africa, to 3.9 percent in the Middle East, to 6.9 percent in Eastern Europe and the Former Soviet Union.

**Table 8.1: Government Employment in Selected Countries
(percent)**

Country	General Government		Central Civilian Government*	
	Population	Labor Force	Population	Labor Force
Belgium	8.1	19.5	1.7	4.2
Bulgaria	7.5	14.7	0.9	1.7
Denmark	13.3	24.0	2.8	5.0
Finland	13.0	25.5	2.2	4.3
France	7.7	17.2	2.7	6.1
Germany	4.9	9.4	0.4	0.7
Greece	4.4	11.6	1.1	2.9
Hungary	8.0	20.3	1.7	4.3
Italy	6.0	14.6	1.3	3.3
Poland	4.9	9.3	0.2	0.4
Portugal	5.7	11.1	1.8	3.5
Slovak Republic	8.6	19.4	1.3	2.9
Sweden	18.1	34.7	4.1	8.1
United Kingdom	7.5	15.6	1.3	2.7

* Data for Hungary includes armed forces.

Source: Ministries of Labor and Interior (Hungary); World Bank (1997b).

³ Note that the fall in share occurred despite a consistent decline in both population and labor force over the years in question.

⁴ In a sample of 21 OECD members, general government employment was 8.2 percent on average and ranged from 4.4 to 18.1 percent of the population. See World Bank (1997b) for more details.

Box 8.1: The Legacy of Earlier Reforms

In March 1995, the stabilization program introduced a series of reforms that included government employment cutbacks (a reduction target of 15 percent of authorized posts, with limited exceptions for certain organs), rationalization of government structure and functions, and new approaches to wage financing and the remuneration structure.

EMPLOYMENT. In the public service, staff declined by 44,000 (6.9 percent); in the "other" category, employment shrank by 20,000 (12.1 percent) between 1994 and 1996. In 1996-97, the public service lost an additional 4,000 staff, while "other" employment was reduced by 23,000. Reductions in the latter category were due partly to military downsizing.

Employment reductions could not be mandated for local self-governments because of their independent status. Nonetheless, cuts were encouraged by changing the system of local government financing to stimulate increased own revenue-generating activities. Transfers from the budget declined from 6.8 percent of GDP in 1994 to 5.8 percent in 1995 and have since fallen further. The overall effect of tightening central-local transfers, however, has been that local government expenditures have fallen by 3 percent of GDP between 1994 and 1997.

Ministry of Interior data on civil service employment show a steady downward trend since 1995. From a high of 109,061—immediately after the announcement of the reform plan—the civil service declined by 4,415 staff over the subsequent two years, falling still further by early 1998.

The reform package affected the composition of civil service employment. In an effort to retain core skills in the face of employment cuts, professional staff (classes I and II) were somewhat shielded from dismissal; their share in civil service employment increased from 71 percent in 1993 to 79 percent in 1997. The increase in professional classes may have also been partly due to grade drift, with higher grades awarded to existing employees. From 1993 to 1997, for example, 1,000 individuals were added to the ranks of senior managers; total employment in class I grew by more than 2,700 individuals between 1993 and 1997.

REDEFINITION OF THE FUNCTIONS OF THE STATE. CBIs that were already receiving a large percentage of their budget from institutional revenues were removed from the budget. Between 1995 and 1997, this process affected 17 groups of CBIs, including the state-run television and radio services, the national press agency, and a variety of institutes with supervisory or quality control functions. Upon removal from the budget, these institutions were transformed into for-profit corporations or, more rarely, non-profit organizations. Although some institutions were reorganized or merged during this process, the functions carried out under their previous incarnation as CBIs were retained. From 1995 to 1997, the transfer of CBIs off budget reduced the government payroll by 14,578 staff.

WAGE FINANCING SYSTEM. Until 1996, the state budget financed the full amount of wage increases. As of 1997, however, CBIs were required to cover a portion of their wage bill (the exact percentage was negotiated with the Ministry of Finance) from their own funds. Since the budget allocation no longer funds the full extent of wage increases, institutions must either reduce staff or increase their own revenue-generating capacity in order to meet the wage increase that is agreed upon for each year.

*Figures represent average annual employment.

**See International Monetary Fund (1998).

Government Wage Bill Developments

The general government wage bill in 1997 was 7.3 percent of GDP, an acceptable level, and one within the range found in other countries. Between 1993 and 1997, as a result of inflation, Hungary's consolidated general government wage bill increased in nominal terms. In real terms, however, the wage bill declined by about 20 percent between 1994 and 1997. Reflecting the impact of the 1995 austerity package (Box 8.1) and other reforms, the wage bill declined significantly in 1995 and 1996 as a percentage of both GDP and total revenues (Table 8.2). The austerity package, as well as efforts to protect personnel budgets at the expense of spending on other goods and services, may explain the increase in the ratio of wages and salaries to goods and services, which was particularly evident in 1995.

Table 8.2: Wage Bill in the Consolidated General Government, 1993-97

	1993	1994	1995	1996	1997
As percentage of total revenues	18.8	18.8	17.5	16.5	16.6
As percentage of total expenditures	15.9	16.0	15.4	15.4	14.8
As percentage of GDP	9.7	9.6	8.4	7.6	7.3
Ratio of wage bill to other goods and services	0.82	0.95	1.04	0.97	0.94

Source: Ministry of Finance.

As part of the austerity package/efficiency efforts, wage bill management has also been strengthened. The Ministry of Finance determines targets for annual wage increases in the context of the macroeconomic situation, and engages in rigorous negotiations with public sector unions to determine the actual increase. Wage hikes are increasingly funded by resources mobilized by individual agencies, either through own-generated revenues or through funds released by staffing cuts. Moreover, controls on staff numbers have been tightened. Both approaches serve as a check on the size of government employment.

Remuneration in the Civil Service and Public Service: Efficiency Issues

Remuneration systems for the public service and civil service are regulated by separate acts, both passed in 1992; government employees in the “other” category are regulated by additional legislation. Classification and incentive structures differ significantly for the public and civil service, as shown in Table 8.3 in the Appendix.

Significant discrepancies in remuneration systems between the private and public sectors, and between the public service and civil service—as well as a lack of developed incentive systems (i.e., link between rewards and performance)—result in a number of problems and inefficiencies. Among the most important are high turnover of staff (brain drain to the private sector), and difficulties in staff recruitment and retention.

Differences in Public Service and Civil Service Wages

Pay levels may prove a serious threat to the recruitment and retention of government staff. According to the estimates of a local consulting firm, the average turnover rate for all classes of civil servants is around 8.9 percent per year.⁵ There is some evidence that the turnover rate is highest among young educated staff, which implies that the turnover rate among potential future managers is high. If this is the case, then it is a major concern, since bringing in fresh expertise could prove very expensive in terms of recruitment and opportunity cost.

In addition, average civil service pay levels have been consistently higher than those for the much larger public service. In 1997, the average basic wage in the civil service was 65 percent higher than in the public service; total earnings were 63 percent higher. Pay equities between the two services are somewhat mitigated by the restricted civil service employment conditions, which do not pertain to public servants. The former may not engage in secondary employment or political activity, or receive overtime pay. The latter may do so, as long as no conflicts of interest arise.

Previous attempts to raise pay levels have been largely reactive; there has been no long-term strategy to develop comprehensive pay policies to raise pay to competitive levels or to bring in needed skills. Raising public service pay to civil service levels would imply substantial, perhaps unaffordable, budgetary costs. Rough calculations show that the alignment of salaries of public service employees with the civil service would increase the public sector salary bill by approximately 50 percent. Still, many public servants continue to press for a single legal framework that would ensure such parity, although some groups within the public service, such as education and health workers, favor separate but equal scales. The Ministry of Interior is considering options for integrating the two pay systems, perhaps maintaining separate regulations to cover different employee groups. Nonetheless, financial constraints and civil service opposition continue to be strong.

⁵ Estimates based on enrollment in the Basic Examination.

Differences in Public and Private Remuneration

Earnings data by profession clearly reveal a tendency toward higher earnings in occupations that are generally in the private sphere, such as lawyer or computer specialist, and a tendency for lower wages in predominantly public service occupations, such as physician or teacher (tables 8.5 and 8.6 in the Annex). Starting salaries in the civil service are markedly lower than in the enterprise sector. The gap narrows substantially, but does not close, as new recruits acquire job experience.

Private-public pay discrepancies may partly explain the continuing brain drain of professional staff from the government to the private sphere and the persistent difficulties of recruiting high-caliber staff to government jobs. This rule does not apply to jobs related to European Union issues; such jobs are perceived to be important to one's career despite relatively low earnings.

New Measures for Civil Service Wage Flexibility

In 1997, new flexibility was introduced into the civil service pay system to reward performance. Central and local administration employers may now raise or lower the basic wage of individual civil servants by up to 20 percent. Another new provision allows the setting of "personal salaries" outside the formal wage structure—for up to 20 percent of staff within a single organ—with approval of the head of the institution. Through the above mechanisms, 25 percent of all civil servants had their basic wages increased and 11 percent had them reduced in 1997. Increases were more likely to be applied to higher-ranking staff, and in central, rather than local, administration.⁶ The personal salary option was used much less frequently, with fewer than 5 percent of civil servants receiving personal salaries in 1997.

While these new pay flexibility mechanisms have enhanced the possibility of rewarding performance and recruiting scarce skills, their application has not been well regulated. There are few concrete criteria for their use, and no formal evaluation is necessary for a pay increase to be awarded. Furthermore, since no additional resources have been allocated—a salutary feature that keeps the overall wage bill management intact—managers must reduce the wages of other staff in order to fund increases for the star performers or to attract and retain recruits with key skills. This results in a two-tiered system in which the losers are increasingly resentful and unmotivated.

Civil Service Pay and Employment Issues for European Integration

Adjustment in civil service recruitment will be necessary to meet the new skills mix required by EU accession. Although the Government has not carried out detailed surveys, preliminary estimates suggest that 5 to 10 percent more staff with EU-relevant skills—up to 11,000 individuals—may be needed in the medium term. Longer-term needs will only become evident several years hence, as the impact of EU-induced structural changes and membership responsibilities unfold. Requirements may differ markedly by sector.

Many of the skills needed for EU accession activities are lacking in Hungary's civil service. While the civil service is on the whole highly educated, technical credentials, rather than administration or management skills, predominate. The most common university degrees (36 percent) are in technical disciplines and agriculture, while administration and law degrees account for 22 percent. An additional 18

⁶ Forty-one percent of senior managers (a subgroup of Class I) received an increase, compared to 27 percent of other Class I staff and 24 percent of Class II. Every third civil servant in central administration had an increase in earnings.

percent of qualifications are in economics and trade. Furthermore, given that the median age of civil servants is 44, it is likely that many civil servants with administrative backgrounds obtained their degrees in the socialist era, raising questions about the relevance of this training in the current context.

Another problem is the lack of language skills. Fewer than 8 percent of civil servants have intermediate or advanced certification in a foreign language, and not all of these are major EU languages such as English, French, or German. Upgrading foreign language proficiency in the civil service will be timely and costly, since language pay supplements can amount to up to 40 percent of an individual's basic wage, depending on proficiency.

The Government will need to devise a range of approaches for enhancing the EU-related capability of the civil service and funding the skills upgrading. To help meet the immediate need for EU staff, the 1998 budget included a new "Euroatlantic Integration" allocation of 1.8 billion forints to fund EU-related expenses, including new EU-related posts and bonuses for staff carrying out EU-related work.

Cost Implications of EU Accession for the Civil Service

Recruitment of large numbers of highly skilled staff will mean that some portion of existing staff, who presumably will not meet EU criteria, will have to be redeployed or separated from the civil service. The Government needs to assess the number of likely redundancies and the financing requirement for such a restructuring/redeployment program.

Estimates of likely employment and wage bill changes under four scenarios are presented in Appendix Table 8.7. This exercise, however, is only a broad indication of costs and tradeoffs resulting from various assumptions, and is subject to a number of limitations; its results should be treated with caution. Scenarios vary by the number of employees receiving a hypothetical 20 percent salary increase (the top 10 percent vs. 100 percent of civil servants), and by whether the constraint is to hold civil service employment or the wage bill constant. Assuming an employment-neutral scenario, raising wage levels by 20 percent for all civil servants, in order to approach the public-private pay relativities in the EU countries, would increase the total wage bill by 20 percent. On the other hand, concentrating the 20 percent salary increase in the top 10 percent of the skill structure would increase the total wage bill by only 2 percent. Examining the wage bill neutral scenarios, raising wage levels by 20 percent for all civil servants would require cutting employment by 17,667 people (16.7 percent of total employment). By contrast, concentrating the 20 percent salary increase in the top 10 percent of skill structure would result in redundancies of 2,078 employees (2 percent of total employment).

Another cost implication stems from the salary increment policy that has developed ad hoc to attract EU accession skills. The potential impact on the wage bill of formal and informal EU skill incentives could be far reaching. It must be carefully analyzed and coordinated with a skills-based redundancy program to adjust the talent pool of Hungary's civil service to EU requirements.

Finally, the potential training requirements of an EU-driven skills enhancement program will need to be systematically examined and appraised. These requirements are discussed in the following section.

HUMAN RESOURCE MANAGEMENT IN THE CIVIL SERVICE

Since 1990, Hungary has made progress not only in establishing a politically neutral civil service, but in laying the legal basis for merit-based procedures for recruitment, promotion, and performance evaluation. Nonetheless, the institutional framework, management practices, and training infrastructure to support these early initiatives require serious attention if the civil service is to meet international standards in the near future. Several key aspects of human resource management will need to be strengthened.

Institutional Framework

Although Hungary has relatively stable policy and management organs for the civil service, it lacks a single organ with sufficient power to coordinate and implement its human resource policy regulations. Currently, this responsibility lies with the Civil Service Department (CSD) within the Ministry of Interior. This arrangement has some strengths but also some weaknesses (i.e., already overstretched management capacity of MoI, insufficient authority over other ministries to push through difficult human resource reforms, staffing inadequacies). Relocating the CSD to the Office of the Prime Minister would increase its authority, and thereby strengthen the Government's capacity to coordinate civil service human resources issues.⁷

The Prime Minister's Office already has a Commissioner for Modernization of Public Administration, responsible for advising the Prime Minister on all areas of public administration reform, including civil service and budgetary reform. Because of poorly defined roles and responsibilities, however, there is some overlap between the Commissioner for Modernization of Public Administration and the CSD in the Ministry of Interior. Both have strong leadership and talented staff, which could be used more effectively if the roles of the two agencies were clarified. If the CSD were relocated to the Prime Minister's Office, the role of the Commissioner could be developed to emphasize more strategic tasks.

One of the characteristics of effective human resource management in the civil service of advanced countries is the presence of ministry personnel departments that have skilled staff and coherent policies and procedures. In Hungary, this capacity is largely missing. At the ministry level, human resource departments generally lack skills to implement the Civil Service Law effectively; many of their activities have been unchanged since the 1980s. The Government has recently commenced a program of twinning,⁸ coordinated by the Commissioner for Modernization, whereby civil servants can work in member state institutions, and staff from EU member states work in Hungary's civil service to help with knowledge transfer.

The Hungarian civil service does not have a set of clear procedural manuals to guide practice. This results in a wide variation in understanding and application of the civil service law. The Civil Service Department, in conjunction with the human resource departments of ministries and local

⁷ A number of models for civil service administration exist in EU member states, including a central Civil Service Department in the Prime Minister's Office (United Kingdom), and a specific line ministry (France). In Hungary, relocation of the CSD to the Prime Minister's Office would be consistent with the existing model of small government.

⁸ Twinning is a region-wide Phare initiative and forms the backbone of Phare's planned technical assistance approach, in accordance with Agenda 2000. See Phare (1998).

governments should undertake the development of operational manuals, model human resource department structures, and staffing and skills requirements.

Hungary also lacks a specific oversight body to review civil service human resources policies; and lacks standards to ensure that such policies are fair, transparent, and effective. The establishment of an oversight body comprising independent experts, including leading academics, lawyers, and human resource specialists, is fundamental to ensuring merit-based practice in the Hungarian civil service.⁹

Internal control over the Civil Service Department's functions is exercised through MoI regulations and the Civil Service Law, which requires the Civil Service Department to report to Parliament on an annual basis. Reporting generally takes the form of issuing statistics on the numbers and profiles of civil servants. Since the Department does not have a mandate to develop a national human resources strategy, it does not report on the effectiveness of civil service human resources. Without such a mandate, an integrated HR strategy cannot be formulated. This critical weakness is becoming more serious as preparation for EU accession intensifies staffing requirements.

In this context, the lack of specialized skills required to forecast staff requirements and deployment patterns, and to carry out basic personnel management practices, such as job inspection, must be addressed quickly. The presence of such skills would allow the Government to harness the potential power of those information systems that support HR management. In 1995, the Ministry of Interior developed a computerized central register (KOZIGTAD) that can produce management reports using data provided by Government institutions. The system, however, is not routinely used to make decisions regarding national human resource planning; nor is it linked to the payroll, so it plays no part in national wage budgeting. Creating such links would prove useful in helping to forecast the national implications of different wage scenarios.

Merit Practices

Formal, merit-based (i.e., based on open competition and transparent rules) recruitment and promotion systems are fundamental requirements for an effective and highly motivated civil service. In Hungary, recruitment of civil servants is governed by the Civil Service Law (amended in 1998), which requires that all vacancies be reported to the MoI if they are not filled within 15 days. It also requires that ministries regularly post vacancy notices in official journal. The original intention of the recruitment article was to mandate that all vacancies be advertised and opened to competition, but it was weakened by the objections of some ministers. Advertisement of vacancies is now optional. Jobs that are advertised are, in principle, subject to a set of uniform procedures, but, in reality, recruitment varies across ministries. Clear procedures are also laid out for job descriptions, but a review of personnel files found few job descriptions that adhered to international standards.

Competency Exams

Although there is no mandatory open competition, all probationary civil servants without a degree in economics, law, or public administration must pass the Civil Service Basic Examination. The

⁹ Existing bodies to enforce merit-based practice are: The Civil Servants' Interest-Conciliation Forum (KEF), a tripartite organization consisting of trade unions, local government employee representatives, and chambers of commerce, which represents civil servants' rights; the Parliamentary Ombudsman (Commission) on Citizens' Rights; the Commission on Ethnic Minorities; and the Commission on Data Protection. For local government, employer groups such as the County Advisory Boards oversee policy to ensure fair practice.

exam focuses on administrative law and thus is perhaps a poor predictor of civil servants' on-the-job performance. A more cost-effective measure would be to initiate a uniform entrance exam, which would screen for abilities and potential rather than for legal and procedural knowledge.

Recruitment for civil service management positions is now linked to a Special Examination. This exam tests relatively detailed knowledge of legal and public administration issues. Those in-service civil servants who are or wish to become managers must attend evening classes and pass the relevant modules. The Special Examination is viewed as in-service training by the Government of Hungary, although in practice it is also used as a competitive screening device for potential managers. One of the deficiencies of the Special Examination is that it encourages managers to be sector specialists rather than decision-makers and generalists. It might be advantageous to de-emphasize specialist legal knowledge, and focus instead on the general skills required to operate within a context of EU integration.

Performance Appraisal

The Civil Service Law fails to clearly define the principles and procedures of performance appraisal. Performance ratings are used solely for promotion purposes rather than for career development, training, or performance improvement. Moreover, it seems that performance is not sufficiently linked to pay. This is a widespread problem: even in some EU countries, performance-related pay seems to be a way to make salaries more competitive rather than to improve performance.

Experience suggests that Hungary would have relatively more success in improving performance by streamlining public sector employment while raising the salaries of targeted positions, in line with market conditions. To avoid wage bill increases, the salary gains would need to be financed through efficiency savings. The performance review process also needs to be revised to allay concerns inherited from the previous era about arbitrary central standards. A formal review policy should be designed, and staff and managers trained in the relevant procedures. Performance reviews should be undertaken annually.

Promotion

Promotion within a civil service category is automatic with length of service, provided that a "capable" performance rating is obtained. Civil servants can expect to move up the hierarchy at least every five years. While this aids in the retention of valuable skills, the system cannot be truly merit based because of the inherent limitations of the performance appraisal system.

The promotion system is dependent upon the immediate manager, with little or no oversight by either the reviewer's senior manager or the agency's human resources department. Although promotion decisions are transparent, since they are linked to the appraisal system, the results are not published in the employer's bulletin or journal. The requirement to publish all staff movements should help management and staff to track personnel movements and provide a clear trail of staff movements.

Training and Career Development

The grading and the supplementary pay systems are based on educational qualifications. This overemphasis on general credentials, rather than on job-related skills and abilities, presents a problem in the context of EU integration. The focus will have to shift toward management and planning skills.

The institutional setup for the management of civil service training also needs strengthening. First, the role of each of the institutions involved in managing training needs to be clarified¹⁰ to help eliminate confusion and duplication. The new Government has recognized that training of civil servants is a key strategic issue, and plans to establish a central organizational structure for training based upon the Hungarian Institute of Public Administration (HIPA). Second, the analysis of training needs and the development of training policies are being undertaken on an ad hoc basis by individual ministries without civil service-wide coordination of training resources. If Hungary is to make effective use of its own and donors' resources, it is necessary that an overall training strategy for civil servants be developed. The strategy should define and prioritize the main training needs, the institutional arrangements for managing training, options for delivery, and the cost. The Civil Service Department should initiate this strategy, establish methods for coordinating national training, and specify the roles and reporting arrangements for the various policy and provider institutions.

The cost of civil service training will be a significant factor in determining Hungary's readiness for operating within an EU environment. The CSD draft training decree proposes that HUF 2.7 billion (2 percent of the wage bill) should be made available for civil service training, but this cost has not been analyzed in terms of need. One option to finance cross-sectoral, core management development training would be for the Civil Service Department to pool some proportion of the training budgets of the various ministries.

MANAGING EU ACCESSION

Hungary faces the immediate and pressing administrative task of managing the process of accession to the European Union. This task must be addressed in parallel with the reform of the wider public administration system. The challenge is to make progress in both areas without compromising either short or long-term objectives. The following discussion assesses the performance of the institutions set up to manage EU accession in Hungary in light of a strategy for accession (Box 8.2 below). We focus on the suitability of institutional arrangements, the management processes that have been put in place, and the degree to which an adequate human resource base is being built to support EU accession activities.

Box 8.2: Strategy for Accession

Hungary's accession strategy takes the form of a detailed National Program for the Adoption of the *Acquis*, issued by the Ministry of Foreign Affairs, State Secretariat for Integration (SSI), in March 1998. It was subsequently agreed upon by the Cabinet Committee for EU Integration, chaired by the Prime Minister. The program defines the priority tasks for the period up to 2001, and assigns broad responsibilities and timeframes for completion. The strategy covers ten areas, each of which is broken down into a number of subareas (e.g., employment, social affairs). For each subarea, the program identifies lead responsibilities, tasks, timeframes, and the economic and social impacts of EU integration.

Among the most important weaknesses of the Government's EU strategy are:

- With regard to the institutional requirements for strategy implementation, the actions defined in the strategy tend to be based on general institutional needs rather than on concrete proposals.
- Lack of complete cost estimates, which would enable a more coordinated approach to requisitioning and targeting government and external resources.
- There is a lack of connection between the strategy and the wider public administration reform program. Issues such as civil service professionalization, pay, and grading; and the institutional framework for civil service policy and management—all crucial to carrying out government tasks within the new EU-driven environment—are not addressed.

¹⁰ These include: the Commissioner for Modernization of Public Administration in the Prime Minister's Office (training policy for senior civil servants); Ministry of Interior (training policy of all other civil servants); Ministry of Foreign Affairs (training policy for EU-related issues); the Hungarian Institute of Public Administration (HIPA; provision of research and training); county and state administration offices (implementation of civil servant training at the local level).

Institutional Arrangements

EU integration requires adequate institutional capacity to define policy and coordinate implementation of the actions defined in the Government's accession program. Hungary appears to have made significant progress in developing the necessary institutional infrastructure and processes to realize these objectives. Current institutional arrangements provide for strong coordination for the accession program by ensuring that politicians, ministers, senior civil servants, and non-governmental experts are fully involved in the preparation of Government policy. However, as the integration process becomes more complex and as tasks become more numerous and sophisticated, these arrangements will require further strengthening. Hungary's basic institutional framework for EU accession activities is shown in Figure 8.1 in the Appendix. The structure has evolved over time as result of discussions with the EC, as well as examples of best practice recommended in SIGMA reports. The economic and trade-related functions of EU integration, for example, were moved from the Ministry of Trade to the Ministry of Foreign Affairs, which is now responsible for all EU integration matters. And coordination of international assistance was recently moved to the Prime Minister's Office, headed by a minister without portfolio who can independently assess bids for technical assistance from the various ministries.

There has been some discussion of how to improve efficiency in the functioning of and coordination among the structures involved in EU integration. There are a number of areas that need strengthening and improvement: (i) a clear division of roles of the Commissioner for Modernization of Public Administration and Coordinator for Technical Assistance, particularly with regard to responsibilities for newly developed twinning programs; (ii) technical assistance coordination; (iii) systems for tracking and monitoring technical assistance projects, and methods of ensuring compliance; (iv) more flexible usage of civil servants to improve skills transfer; (v) management procedures (i.e., a single standing order for passing documentation among the structures involved in EU integration); and (vi) technology that could strengthen these EU-related procedures.

Human Resource Issues

The structures and procedures used to coordinate EU integration are satisfactory, and have already proven effective in strongly positioning Hungary for EU membership. Nonetheless, because of the lack of centralized human resource planning, there has been no opportunity for strategic placement of scarce staff in key civil service positions or to transfer staff as needed to priority positions. Within line ministries, human resource departments have had to compete with other ministries to increase staffing levels and provided needed training.

Hungary's EU integration departments are relatively well staffed for their immediate tasks. Nonetheless, the State Secretariat for Integration has estimated that an additional 4,000 posts will be required in Year 2000 to manage the civil service under EU membership. The staff now involved in EU negotiations appear to be well trained. Following accession, however, it is likely that many of these will go to work for the European Commission and other EU organs, and additional resources will be required to replace them in Hungary. Although staff turnover at senior levels has stabilized, this is not the case for more junior staff, the future managers of the civil service, who are in high demand by the private sector, particularly international firms.

The cost of constant staff development in light of this predicted high turnover could prove significant. Preliminary estimates provided in Table 8.8 in the Appendix indicate that the initial four-year stream of training costs for high and mid-level personnel would reach approximately US\$105 million. In addition, about US\$7 million would have to be spent on training staff dedicated to EU integration.

Externally, training programs and technical assistance to provide relevant integration training have been vigorously supported by Phare and other donors. Technical assistance coordination has been improved by positioning the coordinator in the Prime Minister's Office to provide a cross-sectoral overview of needs in the various ministries. Many ministries and donors, however, claim to bypass the rules, and there are concerns about the fairness with which bids are considered for funding.

POLICY RECOMMENDATIONS

Strengthening institutional capacity is not only a prerequisite for a well-functioning market economy, but it is indispensable to the EU integration process. In the last few years, Hungary has made significant progress toward building a modern and efficient public administration and creating a fully professional civil service. However, it still faces a number of constraints in terms of government employment practices and remuneration systems, as well as management of human resources in the civil service and management of the increasingly complex EU accession process. The key policy recommendations provided below are aimed at addressing these problems.

Government Employment and Remuneration

To mitigate problems and eliminate inefficiencies stemming from significant discrepancies in private and public sector remuneration systems, the Government of Hungary should introduce a coherent pay policy. This means developing the capacity to undertake routine pay comparator surveys for different benchmark skills; and to regularly collect and publish turnover and vacancy statistics to support decisionmaking on pay policy. It also means considering the introduction of a revised pay and grading system, based on appropriate job evaluation techniques.

Regulation of the new pay flexibility mechanisms, including performance pay increments and subtractions, personal salaries, and Euroatlantic Integration supplements, needs to be strengthened and systematized. A policy framework outlining clear, concrete criteria for individual pay shifts on grounds of performance or skills needs to be developed.

Since EU accession will require rapidly increasing the number of staff with a new mix of skills, budgetary implications should be assessed as part of an overall forward staffing plan. Potential staffing increases associated with changing skill requirements in the context of EU accession should be evaluated, along with offsetting employment reduction projections of staff who are no longer required. A program of redundancy and relocation measures should be designed and costed to support these staffing movements.

Human Resource Management in the Civil Service

In order to facilitate more efficient human resource management and decisionmaking practices in the civil service, the mandates and reporting relationships of each institution involved in civil service management should be clearly defined. If necessary, the Civil Service Law should be amended.

The capacity of the Civil Service Department to manage human resources should be strengthened, through measures such as: (i) moving the Civil Service Department to the Prime Minister's Office (if necessary, with its own minister and counselor); (ii) rationalization of the Civil Service Department with the Public Service Department; (iii) training in international personnel management practices, possibly through the use of twinning arrangements; and (iv) development of operational manuals, model human resource department structures, and staffing and skills requirements. Moreover,

the Civil Service Department should develop a human resource strategy for the national civil service; and report to Parliament on the success of its policies.

A number of actions should be undertaken to ensure ethical, fair, transparent, effective, and merit-based practices in the Hungarian civil service. First, the Government of Hungary should consider establishing a civil service oversight body to review human resources policy and standards. Second, merit-based recruitment and promotion procedures should be systematically introduced and set out in operational manuals. Vacancies should be linked to job descriptions based on a common format; they should be advertised in national journals, and CSD should conduct inspections of ministries to ensure compliance. Performance evaluations should be undertaken on an annual basis. The Civil Service Law should be amended accordingly.

Finally, the following measures to improve civil service training should be considered: development of a national training strategy, contracting out of some aspects of civil service training, and clarification of the roles of relevant Government institutions in training policy and provision. In addition, the cost-effectiveness of examination arrangements for entering and sitting civil servants should be reviewed.

Managing EU Accession

Managing the process of accession to the European Union will become increasingly important in the coming years. Improvements should be sought in technical assistance coordination by clarifying the relative roles of the Commissioner for Modernization and the Technical Assistance Coordinator to minimize duplication. The government should consider assigning all technical assistance responsibilities, including those for twinning, to the newly appointed Minister for PHARE. Systems for tracking, monitoring and ensuring compliance in technical assistance projects need to be developed.

To ensure greater commonality among Government agencies in their management and staffing of EU-related functions, the State Secretariat for Integration should develop guidelines, based on a review of best practice, for the staffing and procedures in EU integration departments at the level of individual ministries. Management procedures to guide existing and newly recruited EU staff should be regularly published and circulated.

EU integration activities need to be approached in close coordination with overall public administration development concerns, and the integration strategy should be updated to incorporate administrative impact into its analysis. This analysis should detail the capital and recurrent costs, including staffing, of each proposed action. In addition, the CSD's human resource strategy should identify the cross-sectoral human resource requirements of supporting both the EU accession negotiation phase and the longer-term requirements of administering programs in the EU environment.

9. THE AGRICULTURE AND FOOD SECTOR

Agriculture has traditionally played a significant role in the Hungarian economy; in fact, the amount of arable land per capita is one the highest among EU candidate countries. Despite a fall in agricultural production since the late 1980s, agriculture and food processing still account for more than 10 percent of GDP (6 percent for agriculture alone). During recent years, the sector has undergone substantial structural changes. This chapter examines the outcome of those changes, as well as a number of other questions: How well prepared is the sector to compete in a single EU market? What is the likely impact of EU accession? How much adjustment to EU standards and policy will be required? And what are the remaining constraints to sector development?

OVERVIEW OF RECENT STRUCTURAL CHANGES

Hungary's agriculture and food sector has undergone substantial changes in recent years, fostered by the full liberalization of consumer and producer prices, the privatization of land and the food industry, and an open policy toward foreign investors in the food industry.

Producer and consumer prices have been fully liberalized, with the main adjustment taking place in the early 1990s. Large increases in the cost of energy and animal feed, coupled with changes in food consumption patterns (caused by a decline in real income and a change in relative prices), resulted in a drastic change in production. Agricultural production, mostly animal production, declined in the late 1980s and early 1990s. Since 1995, animal production has stabilized, while crop production (cereals and oilseeds, in particular) has increased. Crop production now represents 60 percent of total production, compared to 50 percent in earlier periods.

The privatization of land is almost complete. About one-third of the land belonging to collective farms was transferred to farmers as private and the remainder was auctioned. In addition, the owners of agricultural land confiscated during the socialist period received vouchers that could be used as payment in auctions of collective and state farm land. A small amount of land (about 1 hectare per person) was also provided to members of collective farms and state farm workers, in addition to their other allotments. As a result, more than 90 percent of agricultural land was privately owned by the end of 1998. Ten to 15 percent of the land, however, is still untitled.

A variety of new farming structures have emerged. By law, an individual farmer cannot own more than 300 hectares, and legal entities (companies of various kinds) cannot own agricultural land at all. Nevertheless, a significant concentration of holdings was made possible through associations of farmers. Thus, about 40 percent of the land is cultivated by farming organizations other than the owners. These include large family farms, cooperatives, and even some remaining state farms. Approximately 500,000 part-time farmers are also generating income from sources other than agriculture. Thanks to a rapidly developing leasing and rental market, the relatively fragmented land ownership pattern has not

prevented the agriculture sector from introducing new technology, a sharp contrast to most other Central and East European (CEE) countries.

As a result of these transformations, there has been a significant transfer of the active population from agriculture to other sectors of the economy. Agriculture now represents less than 8 percent of total employment, down from nearly 19 percent in 1992 (see Figure 9.1). This transfer was facilitated by

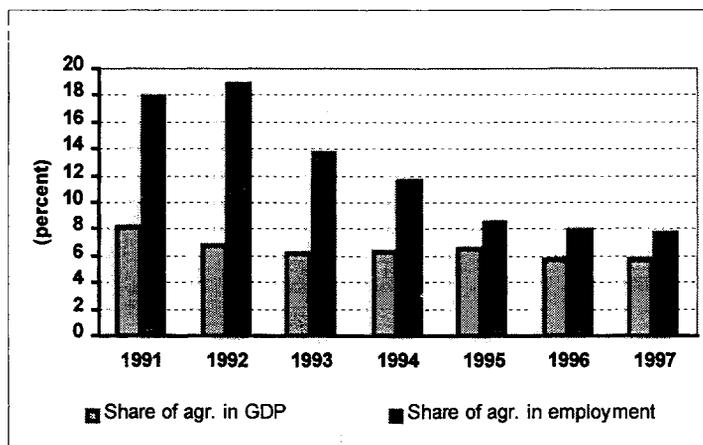
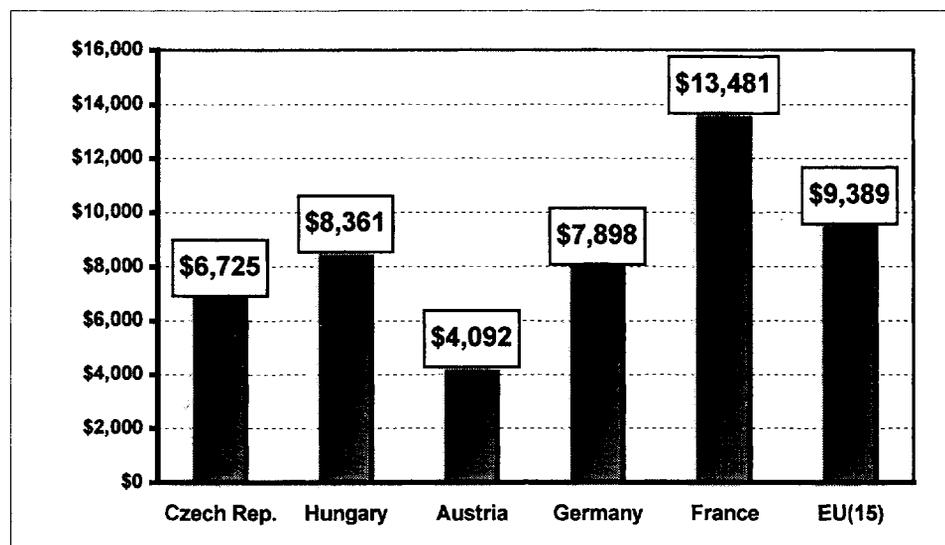


Figure 9.1: Shares of Agriculture in GDP and in Employment
Sources: MoARD and Central Statistical Office (CSO), Hungary.

generally good job opportunities in other sectors, and has allowed Hungary to be among the few CEE countries where incomes from agriculture compare favorably with those of the rest of the economy. Nonetheless, while the overall unemployment rate in Hungary is slowly declining, rural areas still suffer from relatively high unemployment, affecting most seasonal workers and those with a low level of training.

Another consequence of the transformation has been an *increase in labor productivity*, which now compares favorably to other sectors of the economy, as well as to EU countries. After adjustment to world prices, Hungary's labor productivity in agriculture (US\$8,361 in terms of value added per capita) is now roughly of the same order of magnitude as the average productivity in the EU (see Figure 9.2).

Figure 9.2: Labor Productivity in Agriculture in Selected EU Countries and Hungary, 1996
(estimated at world prices)



Source: OECD, 1998.

The food processing sector is now mostly in private hands (only around 6 percent remains state owned) Privatization and openness to foreign investors have been a deliberate, although much debated, choice of the government. Agro-industry is among the sectors that has attracted the most foreign direct

investment to Hungary: between 1991 and 1996, approximately 35 percent of FDI was invested in the food industry, and in 1996, the share of foreign capital in the sector reached 50.6 percent. The largest companies, in particular, attracted foreign investors, and about 65 percent of them are majority foreign owned. This privatization policy has allowed a rapid introduction of new processing and marketing technologies, along with enough working capital to avoid disruptions in the financing of agriculture (through the purchase of agricultural products) and in the operation of factories. At the same time, the liquidation of failing agro-enterprises has facilitated the overall transformation of the sector. Overall, the contribution of the food industry to GDP remained stable, at around 4.5 percent, while its share in total employment declined from 4.6 to 3.5 percent, between 1992 and 1996.

As discussed in chapter 3, the relative contribution of agriculture and the food industry to total exports has declined over recent years. Hungary, however, remains a net exporter of agricultural and food products, mostly to European countries, with exports and imports remaining roughly stable over the whole period (with the exception of 1993). Recently, exports to non-EU countries (mostly CEFTA countries) and Central Asia have started to increase, making Hungary the only CEFTA country with a positive trade balance with the other CEFTA countries. This new phenomenon results from Hungary's geographic comparative advantage and from good commercial knowledge of the needs of neighboring countries. Foreign investors, in particular, see Hungary as an excellent platform from which to launch trading ventures with its Eastern and Central European neighbors.

SUPPORT TO AGRICULTURE: A LIMITED PROGRAM IN NEED OF REVISION

Direct Budgetary Support

The total budgetary cost of Hungary's agriculture support programs is modest compared with other OECD countries. In 1997, it amounted to about 1 percent of GDP (about one-fifth of the contribution of agriculture to GDP). Estimates of producer subsidy equivalents¹ (PSE) show that Hungary significantly reduced its support to the sector after 1995, and now offers the same level of support as the United States (about 16 percent) (see Figure 9.3). While in nominal terms, budget transfers to agriculture have more than doubled over the past six years, these transfers, measured in US dollar terms, have remained relatively stable—between US\$500 million and US\$600 million. Pressure, however, is growing for increasing subsidies following the recent decrease in international prices. The 1998-99 support programs are thus likely to result in an increased PSE. On the consumer side, prices are not significantly higher than international prices. This fact, expressed in terms of consumer subsidy equivalents² (CSE), is reflected by a 8 to 9 percent implicit tax on consumers; again, a percentage equivalent to what consumers face in the United States, but 2.5 times less than the tax imposed on EU consumers (see Figure 9.4).

Although modest, these budgetary programs need revision. Budgetary transfers to agriculture occur in two main forms: production or investment subsidies, and market support (domestic price support and export subsidies). Each accounts for about half of the total amount of transfers.

¹ Producer subsidy equivalents (PSE) measure the value of transfers to producers. When expressed as a percentage of the total value of production, measured at domestic prices, and adjusted to include direct payments and exclude production levies, PSE becomes an indicator of the level of support to agriculture. This indicator is also adjusted to take into account the implicit taxes or subsidies associated with market price support.

² Consumer subsidy equivalents (CSE) measure transfers to consumers resulting from agriculture policies. A negative CSE indicates an implicit tax on consumers.

Production and investment subsidies are either direct subsidies or through interest rates. Interest rate subsidies can result in negative real interest rates, although to avoid excessive costs the subsidy is based on a central bank rate that is substantially lower than market rates. Notwithstanding this mechanism, these subsidies have created significant, non-market based incentives to borrow. At the same time, banks seem to provide credit only under the condition that the request for subsidy has been approved. Consequently, the great majority of credit to agriculture is subsidized. The larger farm organizations benefit most from these investment incentives, although the government tries to limit the regressiveness of the subsidies by imposing a cap on the amount that can be received by a single farmer. The Government believes that market failures, such as large information asymmetries and the lack of specialized financial institutions, justify the subsidy program.

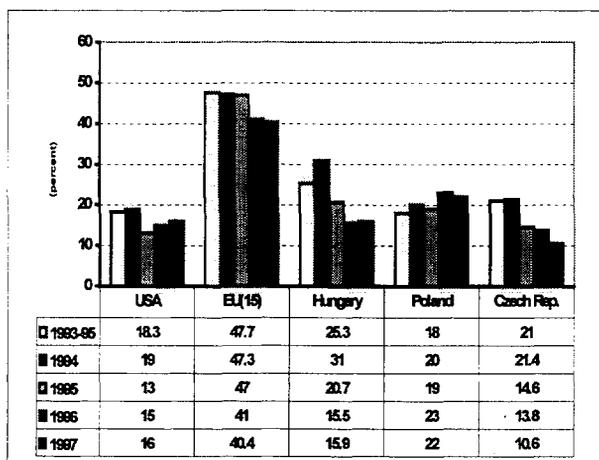


Figure 9.3: Producer Subsidy Equivalents for Selected Countries

Source: OECD, 1998.

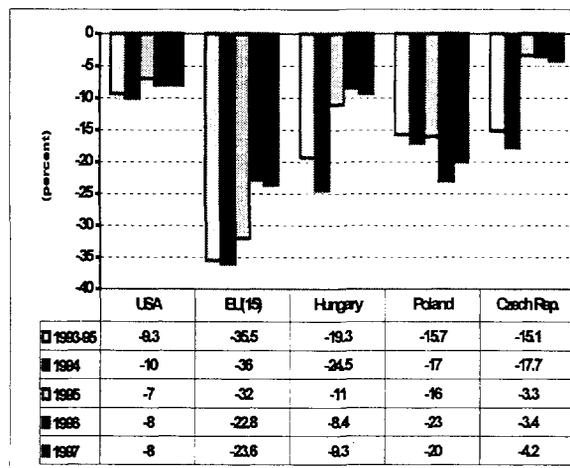


Figure 9.4: Consumer Subsidy Equivalents for Selected Countries

Source: OECD, 1998.

Export subsidies, the largest part of Hungary's market support program, are also its most questionable and debated component. Export subsidies benefit export trading firms and foreign buyers, but they do not enhance the competitiveness of the producer. In addition, the export subsidy programs are not transparent. Instead, they reflect a piecemeal approach in which the narrow agenda of Hungarian export trading and processing firms is supported with budget transfers. Nothing illustrates this better than the fact that the 1995 budget provided significant support in export subsidies to wheat traders at a time when world market prices were the highest in a decade. The phasing out of export subsidies is thus strongly recommended, and this proposal has the backing of many Hungarian experts.

Direct market support through a system of guaranteed prices to farmers is limited to five products: food wheat, feed maize, pork, beef, and cow's milk. For these products, the government sets quotas and guaranteed prices (at 82 to 85 percent of domestic production costs). So far, the program has only been implemented in exceptional cases, as market prices have generally exceeded guaranteed prices.

The cost-plus approach used in setting guaranteed prices is neither sustainable nor compatible with a strong exporting position. So far, the absence of linkage with international prices has not been a real impediment, as the past few years have brought relatively strong international prices for cereals. Nonetheless, in an exporting country such as Hungary, this mode of calculation is not sustainable when international prices are decreasing, since it does not create the necessary incentives for agriculture to adjust to market demand. As a large net exporter, Hungary needs to adjust its costs to international prices; any other policy would be unsustainable in the long run. Recent decreases in international prices will put

the system in a difficult financial position. It must be noted that the Common Agricultural Policy (CAP) faced a similar dilemma in the past when it abandoned the cost-plus approach in setting intervention prices.

Tax Privileges

Compared to other sectors of the economy, agriculture enjoys significant tax privileges that need to be thoroughly reviewed. Small-scale farmers with an income up to HUF 1 million (about US\$5,000) are tax exempt. Those with revenues between HUF 1 and 2 million pay income taxes but may choose not to do cost accounting for business taxes. The land tax was eliminated in 1995. A reintroduction of the land tax was proposed in early 1999 as a part of an overall review of taxation in agriculture. The proposal calls for elimination of the refund of the fuel excise tax, which was introduced in 1997 (on the basis of the use of up to 90 liters per hectare). While the general VAT rate is 25 percent, the rate for most agricultural products is 12 percent. Only a few products, such as spices, pepper, and tobacco have a 25 percent rate. Producers with a total turnover of more than HUF 2 million must register as VAT payers, and they can be reimbursed for the VAT they paid on their inputs. Agricultural producers with a turnover below HUF 2 million do not pay VAT and do not receive refunds for the VAT they have paid on their inputs. Overall, the tax burden on agriculture is relatively low compared to other countries.

Registration of Farmers and Tax Evasion

Reporting by farmers to the tax administration is lagging. The government uses the support programs as an incentive for farmers to report to the tax administration. Farmers who are not registered cannot receive any subsidy. Nevertheless, in 1997, only 48 percent of production was covered by taxation. Most individual private farmers do not pay taxes, and hardly any provide information to tax and other authorities. The government has begun to change this situation. As of January 1, 1997, all producers marketing any agricultural product must register with the tax authorities, even if they do not fill out detailed income statements. At the same time, policymakers have started to ensure that farmers pay their social security contribution.

The National Reserves System

The main objective of the National Reserves is, in principle, to ensure that the population is supplied with basic products in case of emergency. However, the fact that sales and purchases are done at the discretion of a state-owned enterprise opens the possibility of using the management of stocks as an instrument to either stabilize or support prices. Indeed, it is reported that the rotation of wheat and maize stocks is often done by sales at the end of the crop year, before harvest and purchases of products from the new crop. If the impact of these interventions on markets is substantial, the functioning of the program would prove incompatible with EU rules.

PREPARATION FOR ACCESSION TO THE EUROPEAN UNION

The agricultural and food sector is an area of potentially difficult negotiations with the EU. This difficulty is increased by the uncertainty surrounding the future of the CAP. Given the large cost of the CAP³ and its potentially even larger cost after the accession of new countries, the European Commission

³ The CAP represents a little less than 50 percent of the total EU budget, and the resulting PSE for EU countries is about 40 percent.

has proposed a set of reforms aimed at providing less price support⁴ and more direct income support. Although the McSharry reforms of 1992 opened the way for these types of reforms, the Agenda 2000 has set the main direction of the reforms, including the March 1999 refinement of the original targets

Consistency with Ongoing Agreements with WTO and CEFTA

One of the expectations of some members of the Hungarian farming lobby is an adjustment of the domestic support system to the levels of the CAP.⁵ The likely unbearable budgetary cost (storage costs or export subsidies) of such a policy, however, is well understood by most farming circles and the authorities. In addition, such a move would violate Hungary's obligations to the World Trade Organization (WTO) and CEFTA.

Under the original WTO agreement, Hungary's commitment was to reduce its export subsidies to HUF 14 billion by year 2000. From 1994 to 1996, however, yearly subsidies reaching HUF 40-45 billion⁶ resulted in Argentina, Australia, New Zealand, and the United States requesting that a WTO trade dispute panel examine the conformity of Hungary's export subsidy scheme with the Uruguay Round commitment. In October of 1997, Hungary obtained a WTO waiver of its original obligations. The waiver, however, only allows for a temporary delay, as it imposes strict limitations—for each year starting in 1997 and ending in 2001—on the quantities eligible for subsidies and on the budgetary outlays per category of agricultural products. While the yearly reduction in quantities and outlays remains small until 2000, it will be on the order of 50 percent or more in 2001 for cereals, dairy products, and vegetables.

Proposed Adjustment of the Common Agricultural Policy (CAP)

The reforms of the CAP envisaged under Agenda 2000 aim at improving the competitiveness of agriculture in the EU. The reforms cover: (i) prices; (ii) food safety and food quality; (iii) environment; and (iv) farm income and employment. The EC views the next set of reforms as a continuation of the 1992 reform, with further shifts from price support to partly decoupled direct payment (i.e., unlinked to production), as well as the development of a rural policy to accompany this process. The following main measures are foreseen for the period 2000-2002:

- reduction of the intervention price (EU support price) for cereals from ECU 119.19/ton to ECU 95.35 (minus 20 percent), a non crop-specific area payment of ECU 66/ton (using regional reference yields for cereals), and the abolition of set asides;
- reduction of market support for beef from ECU 2,780/ton to ECU 1,950 (minus 30 percent), and an increase in direct income payments per head of cattle;

⁴ In its declaration of mid-March 1998, the European Commission proposed a 15 to 30 percent reduction of support prices over the next few years, to be compensated by direct income-support measures. However, the EU has already declared that farmers from CEECs will not be eligible for such compensatory payments; this is a potential element of disagreement during the negotiations.

⁵ The Act CXIV of 1997 on the Development of the Agricultural Economy, adopted on November 11, 1997, indicates that as part of the medium-term plan for agriculture, the gap in agricultural support between Hungary and the EU will be gradually decreased until Hungary accedes to the EU (Section 1, item 1).

⁶ In addition, export subsidies in 1996 covered 149 products, instead of the 16 specified by the WTO.

- reduction of the price of milk by 10 percent, extension of the quota regime up to 2006, and a new yearly payment per dairy cow equal to the ECU 215 payment for suckler cows.

At the same time, the level of protection at the border will remain high. Another EC proposal to renationalize certain budget transfers to agriculture (non market related) could also leave the government some flexibility in negotiating the maintenance of some of its non market-based budget supports to agriculture.

Hungary's Transition toward a Hypothetical New CAP: Support Prices and Surplus

With or without the reformed CAP, Hungarian producer prices will significantly increase. Not only does the intervention price in the CAP cover all the main cereals, but it is at the same level for all categories of cereals. At the current exchange rate (1 ECU = 239 HUF), this intervention price of ECU 119.19/ton is obviously much higher than the guaranteed price for food wheat in Hungary of ECU 75.31/ton in 1998. Even with the proposed new EU intervention price of ECU 95.35/ton, Hungarian farmers would get a 26 percent increase in the guaranteed price. This will have an impact on animal production, as the price of cereals (in the feed) for pigs and poultry will increase substantially. Producers of least-cost feed formulas will look for substitutions for cereals, for which the EU has not developed a highly protective tariff at the border. In this regard, Hungary's position is not as favorable as that of other EU countries, which have easy access to products imported by sea from third countries. Nevertheless, in Hungary the trend will be to utilize less cereal and more substitutes in feed. At the same time, one can envisage the opposite scenario in the EU(15), where, with lower prices for cereals, imported substitutes would become less attractive and more cereals would be used in animal feed. From these broad trends, the following main consequences can be envisaged:

- fewer cereals will go to intervention in the main surplus regions of the EU(15);
- pig and poultry producers of the EU(15) will become more competitive;
- pig and poultry producers in Hungary will face higher costs of production and will have to further improve their competitiveness (quick improvement of the genetic material and of the feed; and reduction in energy and labor costs); and
- the remaining surplus quantities of cereals (wheat, in particular) will seek intervention purchases in Hungary as well as in France, and (subsidized) exports to third countries will also tend to concentrate on these two countries.

With accession to the EU, a growing net surplus in cereals can be expected as a consequence of supply and consumption effects. Hungary could then become constrained by logistical problems. Transportation of wheat by rail may have a higher cost than transportation by waterway from competing countries. In such a case, intervention stocks will appear in Hungary while being reduced in other countries of Western Europe.

Hungary's Transition toward a Hypothetical New CAP: Policy Instruments and Institutions

Hungary's market intervention system differs from that operating in the EU. In the EU, with the exception of export subsidies that must adjust to both internal and international markets, the eligibility and implementation rules of the guaranteed prices and market intervention are known beforehand and remain unchanged. They are not considered on an ad hoc basis by the various market committees at the

subsector level. In addition, intervention in the CAP is designed so that market support is organized only at the wholesale level (wholesale traders, marketing cooperatives, processing firms), and not at the farm level, as in Hungary. The actual impact of intervention measures at the farm level is felt only indirectly, since it depends largely on the actual efficiency of the marketing system between farmers and their first commercial clients. Though the government has now established an agency in the MoARD that cooperates with institutions similar in the EU, the operating rules of this agency will need to be reviewed so that:

- enough private wholesale agents, merchants, marketing and processing cooperatives, and processing firms in each subsector are registered as authorized agents that can bring agricultural products to intervention;
- the procedure to reserve storage for intervention, and to price the service of storage, is open and transparent, and, as soon as possible, exclusively implemented through private sector facilities; and
- export subsidies are allocated in an open and transparent manner (either a fixed subsidy to whomever requests it and actually exports, or an open auction to the lowest bidder).

Wholesale commodity exchanges for livestock and perishables will need to be used as market references. In several subsectors (livestock, fruit and vegetables), EU market regulations are based on a number of reference prices observed on a daily or weekly basis at “reference” wholesale commodity markets. Most of these markets are located in production regions.⁷ The government will soon need to adopt this practice and designate commodity exchanges for live animals and perishables. It will also need to collaborate with the concerned Product Councils to see how best to invest in those facilities. A system linking electronically major slaughterhouses with spot or term deliveries could serve as reference; the Budapest Commodities Exchange could also play a similar role.

Strengthening statistical infrastructure in agriculture and food, and providing reliable documentation on exports to and imports from third countries is an urgent need. The collection of information, quality control of data, and data processing and dissemination in real time—in close coordination with EUROSTAT and the European Commission—are to be put in place in preparation for EU accession. The Product Councils that represent the private sector in various agricultural and food subsectors already play an important role in intermediating such information

Other Consequences for Hungary of Full Accession

Trade (either formal or informal) in agricultural products with neighboring countries, where Hungarian minorities traditionally exchange products with Hungary, will be affected by implementation of the EU trade policy. Romania, the Slovak Republic, and Ukraine have developed informal trade relations with Hungary over the years, and the EU policy will have broader consequences for these countries than do existing border controls related to the quantity and the quality of goods. It will, for example, affect the supply of raw agricultural products to food processing enterprises located in border regions outside the extended EU. The higher cost of raw materials could result in the closing of these enterprises. Similarly, Hungarian food processing firms—now selling at higher prices—will have to depend on export subsidies to sell their products to neighboring non-EU countries.

⁷ In consumer regions, the retail industry tends to originate its products from the production regions and bypass the local wholesale exchanges.

Financing of Structural Changes and Investment

Some policymakers in Hungary believe that the country should wait for support from the EU budget before addressing the long-term need for structural changes and investment in the sector. The EU including through the European Agricultural Guarantee and Guidance Fund (EAGGF), spends (1997 figures) about 35 percent of its total budget on structural and cohesion measures.⁸ For countries with a per capita GDP below 75 percent of the EU average, this support is made through two funds, the European Regional Development Fund (ERDF) and the European Social Fund (ESF), and through the guidance section of the EAGGF. A decision has already been made to create similar pre-accession funds (ISPA, SAPARD) for the current candidate countries. This type of non market-related support to agriculture is necessary, particularly to improve rural infrastructure and strengthen the countries' ability to implement the *acquis communautaire* without delay. In this regard, the existence of a convergence program, with a large amount of funding available either through the EAGGF or through the Phare programs, would facilitate the transition. Nonetheless, while the financing is crucial, it remains necessary for Hungary to develop a strong and reliable program of adjustment and to partially finance it.

Rural or Regional Development: A Policy Still To Be Finalized and Strengthened

Rural and regional development policies are weak and need strengthening. On the institutional side, the framework set in mid-1998 represents a significant step forward. In 1996, nineteen County Development Councils (CDC) were established, as was a National Council for Regional Development to make recommendations to, and coordinate with, the government. Rural development issues are now the responsibility of the MoARD. In this regard, during the summer of 1998, the secretariat in charge of coordinating the regional development councils was transferred from the Ministry of Environment to the MoARD. Coordination problems also exist between the National Chambers (agriculture and industry) and the nine ministries involved in developing programs. Clearly, there is a need to better define and coordinate central and decentralized tasks and responsibilities. To this end, the MoARD has set up a new department responsible for promoting rural development and preparing a national strategy—a prerequisite for receiving grants from SAPARD. The national plan will be followed by the preparation of regional development plans for each major region

The development of effective regional development policies—particularly those aimed at the reinsertion of the rural poor—is also made difficult by a narrow focus on agricultural policies. To be effective, rural development policies need to be designed in collaboration with other stakeholders and include public investment programs in economic and social infrastructure. They need to define areas of collaboration with the private sector, and support the financing of micro and small enterprises in collaboration with NGOs. The availability of good regional statistics regarding unemployment and poverty would also prove particularly useful, as the transformation of the agricultural sector—in particular, the decrease in seasonal and part-time jobs—seems to have disproportionately hit the Gypsy minority. Most of that population lives in rural areas and 35 to 40 percent are reportedly unemployed.⁹

⁸ About ECU 31.5 billion in 1997.

⁹ The Gypsy population is not well counted but is probably between 700,000 and 800,000, out of a total population in Hungary of about 10.3 million.

REMAINING CONSTRAINTS TO LONG-TERM EFFICIENCY AND INNOVATION

Although attention is now focused on negotiations with the EU, the long-term objectives of increasing competitiveness and efficiency should not be forgotten. A number of constraints and distortions in factor and product markets need to be corrected so that Hungary can benefit fully from its comparative advantage in numerous areas of agricultural production. In addition, state agencies must go beyond the task of harmonizing Hungarian laws and regulations with the EU framework, and prepare for their implementation. They will also need to collaborate with the private sector and research institutes, to promote the introduction of new technology and attractive products.

Factor Markets

Land market. Agricultural land ownership is still subject to legal constraints that limit the scope for restructuring and investment. As discussed earlier, the 1994 Land Law does not recognize the corporate (or cooperative) ownership of land. This constrains enterprises that could consolidate land holdings and optimize the size of farms. The 300 hectare limit on private ownership of land also constrains the range of operations. Furthermore, the prohibition on corporate land ownership reduces the incentive for corporations to invest in agriculture, and deprives them of the ability to use land as collateral for credit. It also blocks the entry of foreign investors in the agricultural sector. The government argues that market failures, especially information failures, justify the restrictions on land ownership, since land prices in Hungary are only a fraction of those within the EU. The restriction on foreign ownership was inspired by the fear that foreigners could purchase Hungarian agricultural land cheaply prior to Hungary's accession to the EU.

The legal regulations on land tenure and land lease are intended to protect the interests of both the lessor and the lessee. The recently adopted amendment to Act LV of 1994 on agricultural land, which introduces land tenure registration beginning in 2000, was intended primarily to provide for and to strengthen the legal institution of land tenure. According to the amendment, all forms of agricultural land use involving more than one hectare will have to be reported to the land registry office. Various other legal conditions for the lease of land—such as the duration and terms for terminating the lease—might also need to be revised. The Land Law limits the duration of a lease on agricultural land to a maximum of ten years (with longer lease terms for orchards and forest plantations). This can discourage investors from consolidating land through leasing if the payoff period for their projected investment exceeds ten years. Another lease-related provision requires landowners to compensate the tenant for certain natural calamities by reducing the rent. This diminishes the incentive of landowners to lease out. Similarly, tenants are granted the right to terminate the lease contract for health reasons. This may provide a loophole for tenants, thus penalizing owners and deterring rentals.

The agricultural land market is still not very active. One reason may be that current owners expect a higher price for their land after EU accession. Another is that relatively good employment opportunities in cities—Budapest in particular—have freed former small landowners from farming the land themselves; the lease of their land to larger farms augments their non-agricultural salaries and allows them to retain their land as part of their wealth.

The valuation of land and dissemination of market prices need to be reviewed and improved. The Phare program has financed technical assistance for cadastre, titling, mapping, and land consolidation, but the issue of land valuation still needs to be addressed. The current system links the quality of a piece of land to a “crown” value. This system, which has been in place for more than 100 years, needs to be

revisited. Under this system, the registration of a transaction does not include the price of the land. Surveys are done independently to determine the price of land, but the Central Statistical Office does not release a relevant price index.

Another problem is that the legal framework under which cooperatives operate prevents modern strategic management. Typically, a large part of the land and some assets used by cooperatives belong to non-members, who do not participate in the general assembly of the cooperative. Members are paid on the basis of the results of the enterprise, while others are paid according to a fixed price. This creates a permanent source of conflict, since the various categories of factors (land, labor, and capital) can have opposing objectives and differing views regarding the way cooperative profits should be divided at the end of each year.

Credit to agriculture and food industry. Bank financing and public support to agriculture are intricately linked. As explained earlier, a large majority of the agriculture financing by commercial banks is done in connection with investment subsidies or interest rate subsidies under various government programs. In addition, there are several types of guarantee funds that can be used for loans to farmers and food enterprises. These are mainly: (i) the agricultural guarantee fund, which benefits mostly small farmers; and (ii), the agro-industrial credit guarantee fund (Agro-Entrepreneur Credit Guarantee Fund). These funds create an obligation for the state and are, therefore, controlled by the Treasury. Nearly 60 percent of all long-term loans for investment are guaranteed. Again, commercial banks often require such guarantees as a condition of eligibility for their loans, but interest rates are market rates and are, therefore, not subsidized.

Despite (or because of) these constraints, the financing of agriculture is becoming diversified. A large number of banks now provide long-term credit to agriculture. By the end of 1997, each of five banks had financed agriculture for more than HUF 4 billion (more than US\$21 million); and three more banks each contributed between HUF 1 and 4 billion. The bank that accounts for the largest share of agricultural investment financing represents about 25 percent of the total market, and the second largest represents 14 percent. Banks benefit indirectly from the various subsidies and guarantees obtained by their clients, and from the detailed loan documentation prepared by the extension agents¹⁰ of MoARD.

In addition to the commercial banks a new specialized mortgage bank has begun to operate. The law prohibiting legal entities from owning agricultural land has obliged the legislature to introduce a special case for banks: they can own land recovered from defaulted mortgages for a maximum of three years, but can sell it only to private individuals. In March 1998, the first bank to specialize in mortgage lending, the Land and Mortgage Credit Bank (FHB), was launched. It accepts agricultural land as collateral and is planning to provide the equivalent of about US\$55 million in loans (agriculture and other types) during its first year of operation. The development of this new bank was facilitated by the government's decision to participate in its capital, both directly (with a 37 percent stake) and indirectly (through the state's interest in the bank's shareholders¹¹). The close link of several Hungarian banks with foreign banks could also facilitate the development of other mortgage lending institutions.

Credit for working capital—a service not provided to agriculture in most CEE countries—has been rapidly expanding in Hungary, fostered by interest rate subsidies and state guarantees. In both 1996 and

¹⁰ Those agents are located at the regional level, and preparation of loan documents is their main task.

¹¹ The shareholders are Hungarian Investment Bank (48.33 percent), Financial Center Bank (10 percent), Mezőbank (3.33 percent), and Postabank (1.67 percent).

1997, credit for working capital to agriculture grew by 75 percent in nominal terms over the previous year. In the food industry, working capital financing increased during the same years by 43 and 51 percent. The relatively low real interest rates for non-subsidized loans in Hungary are clearly very attractive to the business community. For instance, the real interest rate in 1996 for credit of more than year was about 4.4 percent, and 3.6 percent for less than one year. Subsidization makes the effective rates to farmers even lower. State guarantees (of up to HUF 14,000 per hectare) in connection with four crops (wheat, barley, rye, and maize) create similar incentives. Such guarantees should be reduced as other types of collateral develop; and subsidization of interest rates should be reviewed to avoid unwanted macroeconomic and microeconomic effects.

By contrast, the credit system to small farmers remains underdeveloped. This has created demand for other ways of financing agriculture, including those usually seen in countries much less developed than Hungary. One such method is the pre-financing of crops by commercial companies, mainly integrators and processing firms. The service package they offer to small and unorganized farmers incorporates a mix of pre-financing and the supply of input products against the delivery of certain quantities of outputs. Such practice does not result in the transparent pricing of products.

All of the various subsidies to the financing of the agriculture and food industries will probably prove incompatible with the CAP, and will have to be removed at the time of Hungary's accession to the EU, since they could constitute discrimination against foreign products. Privately funded, sector-specific guarantee funds, however, may be acceptable (they have been acceptable in the past in the EU). The dismantling of the credit subsidy schemes will most likely cause a drastic change in the financing of agriculture, unless some sort of post-accession transition is negotiated.

Labor market. The smooth functioning of the labor market has facilitated the transfer of jobs from agriculture sector to other sectors of the economy. The departure of workers from agriculture has primarily affected the less-skilled employees of the former state farms, as well as seasonal workers. Such rapid adjustment—and the resulting more educated agricultural labor force—largely explains Hungary's progress in the agriculture sector. The challenge for the coming years will be to achieve a collaboration between the public and private sectors in financing high-tech vocational, secondary, and college-level training. The Product Councils in each agricultural and food subsector could be an excellent instrument for such collaboration.

Product Markets: Instruments and Participants

Integrators and processing companies play an important and useful role in the transfer of modern technology to agriculture. As intermediaries they provide a number of services to small farmers, including pre-financing of harvest, delivery of inputs in exchange for products after harvest, and support for marketing of products. In contrast, cooperatives operate under rules inconsistent with efficient management (see above). This constrains their restructuring.

Farmers' interests are now well represented through a wide range of associations. In 1994, a new Chamber of Agriculture was established, with a regional network, along the lines of the German and French system. Its aim is to assist farming organizations of all kinds, collect information, and support the implementation of agricultural policies. The functioning of these Chambers is very much dependent on government budget transfers. To guarantee full accountability of these public funds, thorough annual reviews of their activities and audits (financial and operational) of their accounts should be carried out.

The Budapest Commodity Exchange (BCE) also plays an important role. Like most other exchanges in the world, BCE has diversified from agricultural commodities to financial derivatives—a change largely reflected by the total turnover of the exchange, which in terms of turnover ranked twenty-second in the world in 1996. While the financial derivatives tend to overshadow the agricultural commodities, the grain section of the market has expanded: in 1997, 217,844 futures contracts were traded—equivalent to one third of the total grain production of Hungary. The most traded commodities are milling wheat, followed by maize and feed wheat. Deliveries have decreased from previous years, showing that users have moved toward using the market as a hedging instrument (exchange of risks) rather than for the exchange, with actual delivery, of products

The expansion of the market—at a time when the Paris and London wheat futures are struggling to survive—is due to a combination of factors: the liberal policy of the Hungarian government, the emergence of a thriving trade sector with a substantial participation of foreign grain trading companies; and the use of the market by “integrators” to price cereals.¹² But despite this progress, interference in foreign trading activities—for instance, through the issuance of export licenses—could still be detrimental to the future development of the market. In spring and summer of 1998, for example, the deposits required to obtain grain export licenses caused a substantial decline in Hungarian exports—the timing of which was especially bad, since international prices were rapidly decreasing.

The development of a warehouse receipt system is important, as it gives farmers flexibility in marketing their goods (that is, they can store their products and sell them later, rather than having to sell at harvest time), and provides more secure collateral to the banks. This development was made possible in Hungary by two laws,¹³ enacted in 1994 and 1995. An important element, however, is still missing in the warehouse receipt legislation: a provision for performance guarantees. As such guarantees are not currently possible available, the government has imposed high capital requirements, which have reduced the private sector’s interest in this type of business. As a result, the only players in this field are three state-owned companies. Since in the EU, it is the private sector—not the state—that is supposed to implement the decisions of the Council of Ministers, it will be important for Hungary to facilitate the development of the warehouse receipt system and the privatization of warehousing activities over the next few years.

The development of a marketing node for Central Europe in the riparian countries of the Danube is of great interest to private traders and to the BCE. Such a node would be of significant benefit to Hungary, especially since grain exports to third countries are likely to increase substantially. Contacts are being developed between BCE and emerging exchanges in Romania so that the Danube/Black Sea region could become an internationally recognized reference similar to the Mississippi/Gulf of Mexico, the Rotterdam/Rhine, or the Plata region. A bilateral agreement between Hungary and Romania removing constraints to load and unload products for the river transport of grain would drastically reduce the cost of

¹² It should also be noted that the BCE is a member of the Product Council for cereals. This demonstrates a good understanding by the Hungarian private sector of the usefulness of such councils in improving marketing techniques and fostering a dialogue with state agencies. Such cooperation is very much in line with what the EU expects in the implementation of its policies via the private sector. In this regard, Hungary seems more advanced than the other CEE countries.

¹³ The 1994 law on commodity exchanges and the 1995 law on public warehousing.

transportation and result in faster development in the activities of the grain terminal facilities in the delta and canal region of the Danube.¹⁴

Hungary is the only CEE country in which the private sector is represented by Product Councils at each subsector level. More than 30 Product Councils have emerged since 1991. These councils have played a significant role in enabling the government to convey information to the private sector, while providing the government with the views of farmers, wholesalers, and other members of the business community.

The role of the Product Councils, however, needs to be clarified. They should not intervene in the fixing of prices and the functioning of markets. The example of the Dairy Product Council is illustrative. This Council helps its members define an indicative price to be paid for milk by the dairies if they want to benefit from a government subsidy. Individual dairies have no choice but to accept the so-called indicative price. Similarly, the development by the Dairy Product Council of an intervention fund could bring significant interference in the market and create opportunities for various types of further market support, at a time when a relatively high indicative price reduces the competitiveness of Hungarian dairy products.¹⁵

By contrast, the Product Councils could play a useful role in helping farmers agree on rules for delivery, quality norms, and arbitration in case of dispute (which would be particularly be useful for the sugar sector, which involves a large set of participants). Another useful role would be to assist enterprises in a specific marketing chain in their efforts to improve quality control management and collaborate with private and state agencies (national or foreign) to train staff and develop new techniques. Collaboration with the Central Food Research Institute (KÉKI), for instance, could facilitate better management of quality control along the agricultural and food marketing chain, as opposed to separate and uncoordinated actions at the individual enterprise level.

The Role of State Agencies in Promoting Efficiency and Enforcing the EU Legal Framework

The role of state agencies should be to support cost effectiveness, marketing efficiency, and enforcement of the EU legal framework. To be ready for the January 2000 launching of the EU-financed pre-accession program, the government will have to finalize its program of harmonization with the EU. This includes adjustment of market-support institutions, agricultural statistics, and farm registers; reference wholesale markets for implementation of the CAP; quality control and consumer protection; environmental protection; customs administration; and so forth. Implementation of the *acquis communautaire*, however, should not prevent state agencies from continuing to help the private sector improve the production and marketing performance of the agricultural and food chain.

¹⁴ The World Bank has prepared a project with the Government of Romania that would permit the creation by the private sector, under concessionary terms, of two large grain terminals in the free zone of the port of Constanta. The European Bank for Reconstruction and Development (EBRD) has already financed a new grain terminal in the same port.

¹⁵ The Product Council made a request to the government for increased export subsidies for cheese, in order to facilitate the sale of increasing inventories of milk powder, butter, and cheese. A similar situation in the EU a few years ago led to the creation of milk production quotas.

The harmonization of laws and regulations with the *acquis* seems well advanced,¹⁶ if not complete on numerous fronts. To enforce the new harmonized legislation, however, a national program still needs to be designed and implemented. The program should include targets for each area of legislation, the proposed implementing units, and a first assessment of the needed human and financial resources.¹⁷ Proposed guidelines for the development of a National Program of Harmonization (NPH) with the EU legal framework are set out in Box 9.1.

Box 9.1: Guidelines for a National Program of Harmonization with the EU Legal Framework

The National Program of Harmonization (NPH) with the EU Legal Framework should facilitate the adjustment of both public and private institutions and enterprises to the *acquis communautaire*. It could focus on the following elements, given here as indicative only:

- **a program of public information**, developed in coordination with the various Product Councils;
- **a program of collaboration between the private sector and state agencies, including outsourcing of some public sector activities** that could be carried out either by the private sector or in collaboration with foreign state agencies operating in the same field in the EU or in other acceding countries.
- **a plan to complete the restructuring of state agencies** involved in consumer protection, animal and plant protection, agricultural research and extension, border control, farm registration, market information, market organization by subsector, and market intervention. The restructuring plan should address issues related to the location of offices and laboratories (including creations, mergers, and closures);
- **a detailed training program** for existing staff in the various specialties concerned and a program to exchange staff between Hungarian and EU institutions. This training program should not only be implemented for civil servants but should be designed, in collaboration with the Product Councils, to address the needs of private sector in various areas;
- **a recruitment program by the restructured state agencies** (especially in areas where the *acquis communautaire* imposes new types of activities on Hungary); and
- **an investment program** to strengthen quality control and introduce new food processing techniques allowing quality enhancement and environmental protection. The program would have two major components: one for **financing the private sector's** priority actions to implement the new legal framework (e.g., through five-year loans); and one for **financing the restructured state agencies'** acquisition of office technology, information networks, laboratory buildings and equipment, etc.

Another policy the government should implement is the privatization of seed companies. The state-owned seed companies (which do not have a monopoly) have various specialties, but they have not developed their own research capability and continue to be linked to several Hungarian research institutes. The supply of new seed lines by the research institutes has not met the expectations of domestic or foreign markets, and all seed companies reportedly experience losses. This appears to be for two main reasons: (i) lack of full access to foreign genetic material and private research; and (ii) the lack of a commercial link to the market for these seeds

¹⁶ Roughly speaking, as of March 1998, the harmonization concerning food and agriculture was considered complete for about 85 percent of the body of legislation.

¹⁷ As of March 1998, no comprehensive plan was ready for review.

Development of New Marketing Strategies

Collaboration among the private sector, state agencies, and universities will be beneficial in bringing high-tech equipment, as well as processing and marketing techniques, to Hungary. The country has already been exposed to modern retailing. Large chains of super and hypermarkets emerged in the early 1990s, and entrepreneurs in the food industry already understand the demands of the retail industry. Nonetheless, the absence of trade barriers for food products between Hungary and the EU after accession will call for an even more proactive strategy by Hungarian food processors. A permanent search for innovative solutions through research and technology development, and through new marketing strategies, will be crucial. Contractual arrangements with enterprises or research agencies to develop new products or new packaging or processing techniques, will need to be multiplied. The Product Councils can contribute to the process by developing training programs for executives and line workers on technological, legal (EU legislation), and economic and business issues.

New products and technologies could emerge from a stronger collaboration among state agencies, universities, research centers, and the private sector. Product differentiation, as it appears in the 1998 Hungarian Food Catalogue, still remains narrow. Food processing enterprises still largely produce canned or frozen products that are only slightly differentiated; their comparative advantage resides in their cost effectiveness. When CAP prices are introduced in Hungary, however, this price advantage will largely disappear, and the marketing mix (product, price, retail channels) will become more important. In this endeavor, the important participation of large foreign firms in the Hungarian food industry will clearly facilitate the process. However, for small and medium-size enterprises with no link with foreign research and development, the ability of food industry colleges and research centers to offer advanced technologies will be crucial for long-term survival. The modernization of research centers such as KÉKI's laboratories and facilities, together with the Product Councils and individual enterprises, could play a major role in this regard in the coming years.

CONCLUSIONS AND KEY RECOMMENDATIONS

Full price liberalization, successful privatization, a sharp decline in sector employment, and a productivity level comparable to the EU average constitute remarkable achievements in the agriculture and food sector. Nevertheless, as the process toward accession unfolds, Hungary still must adjust its policies to prepare for the implementation of the *acquis communautaire* and to pursue productivity gains.

The support programs will need substantial revision over the coming years, both to comply with ongoing agreements (WTO) and to be compatible with the CAP. By 2001, export subsidies should already be significantly reduced; credit subsidies, which [practically] apply to nearly all credit to agriculture, will have to be discontinued at the time of accession. The government should also, as part of its pre-accession strategy, modify its current method of setting guaranteed prices—a cost-plus approach—which does not promote adjustment to market demand and can lead to unbearable budgetary costs at times of decreasing international prices. For similar reasons, the government should continue to resist pressure to raise its guaranteed prices to the current level of EU intervention prices—a level that will be revised downward in the near future.

Even with a substantial reduction in EU intervention prices, Hungary's producer prices for cereals will increase. This, in turn, will create higher producer costs for pig and poultry producers and a growing exportable surplus of cereals. A continued search for competitiveness and reduction of logistical constraints will be critical to maintaining Hungary's export capacity.

Hungary has already gone a long way in adjusting its laws and regulations to the EU framework. Nevertheless, an action plan still needs to be designed and implemented to apply and enforce the new framework. This plan should include, *inter alia*, a public information campaign, a staff training program, a restructuring plan for state agencies involved in consumer protection, animal and plant protection, agricultural research and extension, border control, farm registration, market information and market intervention, and an investment program. While resources made available by the EU during the pre-accession period will be critical to implementation, it remains essential for the government to develop a realistic plan and contribute to its financing.

Preparation for negotiations, however, should not overshadow the long-term objectives of greater efficiency and growth. To achieve these objectives, the government should remove the remaining legal constraints that still affect the land market and limit the scope for restructuring and investment. It should also privatize the seed companies to allow full access to foreign genetic material and enable these companies to become profitable. In addition, the government should continue improving the functioning of the numerous instruments (Budapest Commodity Exchange, warehouse receipt system, Product Councils) that facilitate the marketing and export of agricultural products. Finally, it should collaborate with the private sector and research institutes to promote the development of new technology and attractive products

10. ENVIRONMENT

OVERVIEW AND COST ESTIMATES

Joining the EU will require that Hungary adopt and implement the entire body of EU legislation and standards known as the *acquis communautaire*. Environmental protection is a guiding principle of the *acquis*—a status not accorded to other crosscutting objectives such as social protection. There are some 70 EU environmental directives, supplemented by “daughter” directives and regulations.

The EU recognizes that the investments required to implement the environmental *acquis* are significant, and that full compliance will not be possible, for Hungary and other pre-accession countries, before the date of accession. While Hungary would make such investments in the future even without the EU directives, accession clearly accelerates the investments and reduces the scope for flexibility. The EC expects extended transition periods for some environmental directives and for each country to address its own national priorities and problems, taking into account their economic constraints.

The field of environmental protection presents particular challenges. First, the benefits of investments will be seen only in the very long term, but the costs will affect every Hungarian household immediately. In the short term, therefore, environmental investment may have to be considered a price of joining the EU. An awareness campaign may be necessary to promote public understanding of these costs. Second, the EU directives, particularly as they relate to transboundary environmental impacts, do not necessarily correspond with Hungary’s priorities at this stage in its development. The challenge is to identify actions that will have both domestic and transboundary benefits and, where this is not possible, to clearly delineate the trade-offs.

Some of the costs will fall exclusively on the public sector. These include changing institutional structures and procedures to ensure monitoring, enforcement, and reporting systems. A second category of costs will be imposed predominantly on the private sector. Directives regulating industrial pollution dominate this category. Other directives, such as efforts to reduce emissions from transport or household heating, will fall directly on consumers. A third category of costs—in fact, the bulk of investment costs—are likely to be borne by municipalities, corporatized municipal entities, or utilities owned by a combination of municipal governments and private organizations. Municipal wastewater and solid waste are in this category.

After presenting a summary of costs, this chapter reviews the key implementation issues in each of the environmental sectors, in terms of institutional arrangements, the scope for managing investments as efficiently as possible, and implications for public service tariffs. The chapter closes with strategic recommendations.

A recent study¹ has estimated that if Hungary were to continue current levels of expenditure on the environment (1 percent of GDP plus 0.6 percent for operating expenses), and if GDP grows at 3 to 4 percent a year, Hungary could reach full compliance with EU directives by 2010. Under these circumstances, Hungary would require an 8-year transition period if it joined the EU in 2002.

¹ Kerekes and Kiss (1998).

These estimates, however, seem highly optimistic for two reasons. First, estimates of the costs of compliance do not include the costs of operating and maintaining the new investments, which can be extremely high. A recent study in Poland² estimates that the additional O&M costs amount to around 10 percent of the annualized additional investment requirements for all environmental sectors, and up to 50 percent for certain sectors or subsectors. Second, the investment estimates assume no future change in per capita resource consumption or pollution generation. In fact, both are likely to change (with different indicators increasing and others decreasing) as prices and income levels change.

Various studies have addressed the costs for Hungary of complying with EU environmental directives. These would be additional to the 1.6 percent already being spent by the public and private sectors. The range of estimates for each sector is presented in Table 10.1.³

**Table 10.1: Costs of EU Environmental Directives for Hungary
(excluding industrial pollution, institutional change, and reducing pollution from agriculture)**

Sector	Investment Cost		Annual Costs*									
	Total		Capital		O&M		Total/Year		Total/capita/year		As % of 1997 GDP	
	ECU m		ECU m		ECU m		ECU m		ECU			
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Long-range air pollution	218	618	21	58	39	111	60	169	6	16	0.1	0.4
Wastewater treatment	2,100	4,300	198	406	158	200	356	606	34	58	0.8	1.4
Waste management	1,800	4,400	170	415	150	750	320	1,165	31	112	0.7	2.7
Total	4,118	9,318	389	880	347	1,061	736	1,940	70	186	1.7	4.5
Costs (%) borne by public sector**	95%	93%	95%	93%	89%	90%	92%	91%	92%	91%		

Notes: * Assumes investment spread evenly over 20 years, 6.5 percent discount rate.

** Includes 100 percent of wastewater treatment and solid waste management costs. In some municipalities, part of these costs will be borne by private investors or users.

Source: IfO consultants; Kerekes and Kiss (1998); MERP (1998); UK Water Research Council (1993); World Bank estimates.

It is important to bear in mind that these are estimates of the costs of moving from today's situation to full compliance. They do not take account of the investments Hungary would have made in any case; nor do they consider the potential health, amenity, or economic benefits of the investments. Moreover, the cost estimates take no account of the potential reduction in costs that might be achieved through process improvements, a reduction in waste generation, or behavioral changes resulting from rising utility tariffs. Finally, the estimates take no account of the potential for reducing costs by extending the time period over which the investments are made, implementing least-cost technical solutions, or phasing the investments.

² World Bank (1999).

³ For long-range air pollution, these calculations are based on the need for 4,000 MW in new generating capacity. The high estimate assumes that all of this capacity will be coal-fired and the cost of fitting pollution control equipment is US\$150 million /1,000 MW for SO_x reduction and US\$20 million /1,000 MW for NO_x reduction. The low estimate assumes that half the new generating capacity will be gas fired, which requires no additional expenditure to comply with environmental standards, and that the cost of meeting both SO_x and NO_x standards on the coal-fired portion of the new plant will be US\$120 million/1,000 MW. The calculations assume that annual O&M costs are 1.9 times the annualized investment costs. Little investment is required for drinking water, so this is not included. The wastewater costs consider wastewater collection and treatment and sludge disposal. The low estimate comes from the UK Water Research Council and excludes the cost of nutrient removal and sludge disposal. The high estimate comes from MERP (1998) and includes the cost of sludge disposal, although it is not clear whether nutrient removal is assumed or not. For the waste sector, the minimum estimate comes from Kerekes and Kiss (1998) and includes only the cost of landfill investment. The high estimate comes from Ifo consultants and includes other waste management options such as recycling and composting, but excludes incineration.

DIRECTIVE COSTS FALLING EXCLUSIVELY ON THE PUBLIC SECTOR

Most EU regulations require changes in the structure, procedures, and activities of national government institutions; indeed, many directives require only changes of this nature. The government's capacity to set reasonable policies, enforce the laws, and monitor progress are vital to the compliance effort in all environmental sectors, and further progress is needed in these areas. The EC's 1997 Opinion on Hungary's application for EU membership found its institutional arrangements for environmental protection to be not yet adequate.

Better coordination is required among all the institutions involved, both national and regional. The environmental authorities are fragmented, which makes it difficult even to regulate issues that cover only one environmental medium. Moreover, environmental policy is moving toward regulating the environment across media, which will require realigning the roles of various agencies, greater financial and human resources, and a strong government commitment.

The direct financial costs of institutional approximation are unlikely to be great. Nonetheless, experience in other countries suggests that institutional changes require substantial and sustained effort, and that building necessary capacity can take many years.

DIRECTIVE COSTS FALLING PREDOMINANTLY ON THE PRIVATE SECTOR

The Internal Market

The 1995 EU White Paper on accession identifies the key measures relevant to the internal market that accession countries must adopt before joining the EU. It covers legislation affecting the free movement of goods and services, which in the environmental field are chemical substances, waste management, and abatement of air pollution (including fuel composition) and radioactive contamination.

Hungary must adopt all of the White Paper measures by the time of accession, which leaves little scope for strategic choice. Formal adoption of White Paper measures relating to specific products, such as chemicals, carries little financial cost for the public sector, apart from the necessary efforts to upgrade institutions. On the whole, producers and users of those products are likely to welcome the changes, since they will ease their access to the internal EU market. The major difficulty, however, will come in complying with waste legislation, which will be addressed below.

Industrial Pollution

EU legislative requirements. The EU has a large volume of legislation on the control of industrial pollution. The most significant for Hungary is the 1996 Directive on Integrated Pollution Prevention and Control (IPPC), which aims for integrated management of industrial emissions to the environment as a whole, rather than to single medium, such as air or water. The IPPC regulates several categories of industry, including energy, production and processing of metals, minerals, chemicals, waste management, paper and pulp production, textiles, food processing, and livestock operations. At present, with a few exceptions, the IPPC directive does not affect SMEs, and this is not likely to change in the near future.

Compliance issues. Of Hungary's 50,000 point sources of industrial pollution, 400 to 500 are expected to fall within the scope of the country's new legislation to implement the IPPC. The Hungarian National Environment Program identifies "processing industry"—which includes chemicals, engineering, food manufacturing and light industry—as the major problem sectors. The most important of these, in

terms of contribution to economic value added, are (in descending order) the engineering industry, the food manufacturing industry, and the chemical sector.

Experience in EU member states suggests that, provided the legislation allows sufficient flexibility in terms of the method of abatement and the timeframe for making investments, private sector industry can absorb the costs of compliance within the normal investment cycle.

The main concern for the future, however, is not that companies will have difficulty complying with the IPPC, since most them are large, principally foreign-owned enterprises. Rather, the concern is that other environmental legislation and improved enforcement will place a burden on small and medium-sized enterprises.

Long-Range Air Pollution

EU legislative requirements. Legislation on emissions from stationary sources—which is relevant to the control of long-range air pollution—is found in the 1988 Large Combustion Plant Directive and the Directives on Air Pollution. This legislation addresses pollution from new and existing municipal waste incineration plants. The Large Combustion Plant Directive applies to power plants with a thermal input of 50MW or more; its goal is to reduce emissions of SO₂, Nox, and particulates through a combination of national targets and specific limits for individual plants. The EU has plans to tighten the standards, which will require substantial additional investment and greatly increase operating costs.

Compliance issues and costs. The former state power monopoly, MVM Rt, now handles the national grid, strategic planning, dispatching, wholesale trade, and import-export. This makes the foreign energy companies, which now dominate the power generation market, responsible for compliance. Around one-third of existing generating capacity is slated for replacement or refurbishment under current Hungarian policies. If electricity demand rises by some 2 percent per year over the next 15 years, the expected net new generating capacity requirement will be some 4,000MW by 2010.⁴

The total investment required for Hungary to meet EU standards for new power generation capacity built after 2000 is estimated at least ECU 218 million—if half of the capacity is gas and half is coal, and if technology costs fall as predicted. If, by contrast, all new capacity is coal fired and if technology costs remain as they are at present, then costs could rise to approximately ECU 618 million. These estimates use coefficients of costs that have been seen in other Central European countries. Operation and maintenance costs are high—an average of 1.9 times the annualized investment costs.

Alternative estimates by the Ministry of Energy (MoE) show the total cost of meeting EU requirements for stationary sources of air pollution, up to year 2006, as ECU 1.2 billion. This, however, includes costs associated with establishing an energy trading system, the gradual introduction of cogeneration, and the IPPC requirement for BAT in the non-power sector. Kerekes and Kiss⁵ estimate the compliance costs for the energy sector at ECU 1 billion.

Urban Air Quality

EU legislative requirements. The 1996 Ambient Air Quality Assessment and Management Directive is designed to provide a comprehensive strategy for the management of air quality in member states by linking controls on emissions from various sources with improved air quality.

⁴ This forecast does not take into account potential shifts to renewable energy or the impact of future demand-side management measures.

⁵ Kerekes and Kiss (1998).

It applies to cities of 250,000 or more, densely populated areas, and especially polluted areas. It will certainly apply to Budapest, but probably not to any other city.⁶

Compliance issues. Air quality is a problem in Hungary, particularly in Budapest, although not nearly on the same scale as in many other Central European countries. Several towns and cities suffer from poor air quality due to oxides of nitrogen and particulate concentrations, and from summer ground level ozone exceeding safe limits on a significant number of occasions during the year.

Emissions from motor vehicle transport appear to be a major contributing factor in air pollution in Budapest. After declining in the late 1980s and early 1990s, such emissions have increased sharply in recent years. Transport now contributes 56 percent of national carbon monoxide emissions and 50 percent of nitrous oxide emissions.⁷

As the effects of implementing current policies become apparent, as compliance with single market requirements for vehicle and fuel standards progresses, and as car and bus fleets are modernized, Hungary's vehicle emissions will fall. This should significantly reduce air pollution in Budapest in the short term, although this will be offset by increases in the number of passenger kilometers.

DIRECTIVE COSTS FALLING ON BOTH PUBLIC AND PRIVATE SECTOR BODIES

Wastewater Collection and Treatment

EU legislative requirements. Water resource management is one of the most comprehensively regulated areas of EU environmental legislation. Historically, EU directives have established water quality standards for certain classes of water, as well as emission limit values for individual substances. This so-called "combined approach" is to be consolidated in the proposed Framework Directive for Water Policy, first issued by the European Commission in 1997, and which member states are still negotiating.

By far the largest costs of implementing the environmental *acquis* are associated with the Urban Wastewater Treatment (UWWT) Directive. This specifies that all settlements above 2,000 person equivalent (p.e.) be connected to the sewerage system and that sewage should be treated to specific levels, depending on the characteristics of the receiving water.⁸

Hungarian baseline. Through the 1990s, Hungary has made significant progress in improving its water infrastructure. It has also invested heavily in the collection and treatment of municipal wastewater, and plans investments of almost ECU 3 billion. Coverage is, however, still far below that required for compliance with EU standards. Table 10.2 shows the coverage of 81 largest wastewater treatment companies.

⁶ Budapest's population was 2.016 million in 1994. The other largest cities are Debrecen (218,000), Miskolc (190,000), Szeged (180,000), Pécs (173,000), and Győr (131,000).

⁷ All statistics in this section are from Zegras and Hook (1995).

⁸ This paper refers to water supply, wastewater collection, and treatment as the water sector. As used here, the water sector does not include issues of water resources management.

Table 10.2: Water Coverage of 81 Largest Companies in Hungary, 1997

Total population served (thousand)	Total connected to sewer (thousand)	Percent of total	Percent of Hungarian population	Total Wastewater (million m ³)	Percent with primary treatment	Percent with biological treatment
11,575*	4,817	41.6	47.6	412	65	58

Notes: * There is some overlap between companies of the towns within their potential service areas.

**Domestic wastewater volume is estimated at 193 million m³ per year (40 m³ per capita per year) and industrial wastewater discharge at 219 million m³.

Source: National Water Authority

The 1990 Self-Government Act transferred to the municipalities the assets of the 28 non-regional water service companies that served most of the population. A large part of the population is still served by a few bigger companies—the largest 32 companies have 90.6 percent of the national capacity and 92.5 percent of the physical assets of the entire water industry. The companies have, however, been broken up into more than 300 new service companies, and the disaggregation is continuing.

Many of the new utility companies are inevitably very small, which creates a number of problems. They lack sufficient staff, and often provide do not provide adequate maintenance. Their small size makes it difficult to finance major investments from operating revenues and, in any case, they face higher unit costs of investment since they are unable to take advantage of economies of scale. Furthermore, as different utilities face greatly differing operating costs, the charges for water and wastewater services vary widely in different parts of the country.

Compliance issues and costs. Estimates of the capital investment required to secure compliance with the UWWT directive in Hungary break down as follows:

Table 10.3: Investment Costs to Secure Wastewater Collection and Treatment

	Investment Costs (ECU million)
New collection systems	602
New treatment plants	1,073
Upgrading existing treatment plants	455
TOTAL (without nutrient removal)	2,130
Additional cost of nutrient removal	522
TOTAL (with nutrient removal)*	2,652

*Other estimates range from ECU 3 billion (Kerekes and Kiss, 1998) to ECU 3.4 billion (MERP, 1998) — equivalent to US\$200-400 per person. This can be compared to actual per capita investment costs to comply with the directive, which were US\$200 in the United Kingdom, US \$300 in France, and US\$1,100 in Germany.
Source: Water Research Council (1993).

The above estimates are for investment costs and do not include additional operating, maintenance, and replacement costs. It is not clear what assumptions were made about growth in water consumption, and by inference, about wastewater production, as GDP rises in the future. In addition to these costs, one must factor in the cost of disposing of sewage sludge generated by the wastewater treatment plants—which typically adds around 40 percent to the annualized costs of constructing and operating these plants.

The government should take several strategic considerations into account when planning compliance in the water sector:

- *Definition of sensitive areas.* The directive requires member states to identify receiving waters that are sensitive to eutrophication, and to treat sewage discharges into sensitive water to a higher standard (nutrient removal). It has not yet been determined how much of Hungary's

surface water will be considered sensitive. Many believe the entire Danube basin should be included, which would add about 25 percent to the necessary capital costs and significantly more to the cost of operation and maintenance.

- *Operating efficiency and estimates of consumption.* The cost estimates are very sensitive to assumptions about the volume of water delivered to households. For countries in transition, forecasts of water consumption and wastewater discharge are particularly problematic; consumption is often overestimated, which leads to the construction of plants with excessive capacity. Domestic consumption in Hungary has already fallen to around two-thirds of the EU average, and industrial water consumption is similar to that of EU countries. It cannot, therefore, be expected to fall further. Experience in other countries, however, indicates that consumption does not always increase as the economy grows, as higher demand is often offset by gains from operating efficiency.
- *Institutional rationalization.* Costs could almost certainly be reduced if the water industry were rationalized into a smaller number of units able to exploit potential economies of scale. Certain municipalities, however, would be likely to put up strong resistance.
- *Phasing investments by population size.* Costs increase exponentially with decreasing settlement size, both because the unit costs of smaller treatment plants are much higher, and because of the additional costs of extending sewer networks to widely dispersed populations.⁹ Therefore, any compliance strategy should concentrate on improving service in agglomerations above 10,000 or 5,000 inhabitants as a priority.
- *Phasing investments by environmental impact.* Compliance strategies should focus on the plants that bring the greatest marginal environmental benefit in terms of water quality. Not all sewage discharges cause equal damage, because of variations in natural characteristics of receiving water, other polluters in the vicinity, etc. A study of water quality in the Sajó river basin indicates that several alternative investment plans with greatly different investment costs—the most expensive alternative cost eight times more than the cheapest—made very little difference in terms of water quality, except for a few parameters.¹⁰
- *Institutional difficulties.* The highly decentralized nature of responsibility for urban wastewater treatment is likely to cause problems implementing any “least cost” strategy. Ultimately, the central government has little power to compel municipalities to construct sewerage systems and wastewater treatment plants and no powers whatsoever to force households to connect to the system.

Drinking Water

The drinking water directive sets maximum concentrations for certain contaminants for drinking water to be delivered to households, whether or not they are supplied by a public system.

Supplies are mostly from groundwater and comply with the drinking water directive. Problems do occur in some areas with arsenic that is naturally present in the raw water, and with bacteriological contamination caused by plants operating far below their design capacity. Nevertheless, Hungary has

⁹ Recent studies in the Czech Republic, for example, indicate that it costs five times more per person to build a wastewater treatment plant with a capacity of 2,000-5,000 p.e. than to build the same plant with capacity of 100,000 p.e. (Aquafin, 1998).

¹⁰ Somlyódy et al (1998).

recently invested heavily in the drinking water supply system and it is unlikely that much new investment will be required to achieve compliance with the drinking water directive.

Waste Management

EU legislative requirements. The 1975 Framework Directive on Waste, amended in 1991, and the Hazardous Waste Directive of 1991, set out the EU's waste management policy. The aim is to encourage prevention of waste, and to ensure the proper administrative control of waste and the use of clean disposal technologies. The key principles in the framework are prevention, polluter pays, and proximity (i.e., waste should be disposed of as close as possible to its source).

In addition to the framework directive, specific directives define the requirements in more detail for particular products or waste streams—for example, hazardous waste, waste oils, sewage sludge, and packaging—and for particular activities such as waste movement, incineration, and disposal. A Landfill Directive, proposed in 1997, involves phased reduction in the landfilling of biodegradable waste, and sets strict standards for landfill construction. Prices for landfill disposal would have to reflect the cost of current operations as well as site restoration and 50 years of care.

The most challenging aspect of these requirements for Hungary is that waste legislation must represent a coherent whole and be implemented simultaneously. Legislative and administrative approximation with the EU is complex enough, but substantive compliance requires that the legislative definitions of waste are both clear and workable. In practice, this requires training of personnel, not only those from the competent authority but from industry and trade as well. Experience also shows that to be successful, legislative action must be accompanied by efforts to raise public awareness.

Compliance issues. Waste management in Hungary is hampered by the absence of a comprehensive waste management act covering all types of waste; and by the lack of a reliable information system on waste occurrences and disposal methods. Industrial waste occurrences are unjustifiably high, and inexperience and confusion in waste classification have only aggravated the problem.

Hungary is considered more advanced than other accession countries in managing its municipal solid waste (MSW). Collection is now mostly in private sector hands and covers two-thirds of all households. However, there is currently no legal obligation for municipalities to manage municipal waste collection or disposal. Disposal facilities are inadequate for a number of reasons. There are a large number of small, authorized, but not technically adequate municipal landfill sites (2,700), and a large number of illegal dumps. Twenty to 30 percent of landfills are dangerously close to inland or ground water. The country has 66 regional scale landfills, most of them new, but more are needed. In fact, the National Environment Program 1997 envisages that an additional 100 to 150 regional landfills will be required over the next 10 years, at an estimated cost of HUF 100 billion (ECU 427 million).

A lack of good natural sites, local resistance, and the absence of a nationwide authority to coordinate development plans hamper the construction of regional landfill sites. In addition, low tariffs for MSW collection and disposal, and the fact that waste companies must recover the tariffs directly from households and industrial waste generators, has rendered investment unattractive to private developers.

There are a number of uncertainties surrounding any estimate of the likely costs of complying with EU waste management requirements. First, estimates depend on assumptions regarding the likely future level of waste generation. Although MSW occurrences per capita are at the same level as the EU average, Hungary's MSW occurrences per unit of GDP are five times the EU average, and industrial waste occurrences per unit of GDP are twice the EU average. This suggests that there is considerable

scope for improvement.¹¹ Capital expenditure on new disposal facilities is certain to be accompanied by higher waste disposal tariffs, which will provide an incentive for waste minimization. On the other hand, as consumer incomes rise, the amount of waste generated could also rise.

Second, costs will depend on the scale of facilities provided, their technical characteristics, and the siting of those facilities. There is likely to be potential for considerable economies of scale in landfill construction, and more particularly in operational costs, which are unlikely to be realized by current arrangements. In addition, costs can vary considerably between urban and rural areas. These factors account for a very broad range of estimates for landfill investment and operational costs per ton.

The only estimates on the operational costs of landfill come from a relatively dated study that gives cost factors of ECU 20 per ton for investment costs and ECU 3 per ton for operational costs.¹² Based on these figures and the range of capacity projections detailed above, the cumulative costs of the program, including investment and operation expenditures, could total between ECU 1.1 billion and ECU 2.3 billion. Another study¹³ estimates the investment cost of complying with EU waste management legislation at between ECU 1.8 billion and ECU 2.3 billion.

IMPLICATIONS OF THE INVESTMENT REQUIREMENTS

Implications for the Public Sector

Most public sector investment is required in sectors—water supply, wastewater treatment, and waste disposal—that are the responsibility of municipalities. In water, operational responsibilities are fulfilled in a variety of ways, including contracting out to companies with a wide range of legal forms and structures. All but the largest municipalities own the water companies and, by law, must own the physical assets. In waste, both collection and disposal are frequently contracted out to private operators.

The way municipalities structure and manage these investments makes an enormous difference in terms of costs. As mentioned above, economies of scale can be significant, particularly in the water sector. Furthermore, local environmental benefits will vary. It is therefore crucial that central government policies and financial incentives encourage municipalities to take advantage of economies of scale, and to make the highest (national) priority investments.

Although the central government cannot, and should not, control municipal decision-making, it does have mechanisms for influencing the process indirectly. Currently, several funds provide grants for municipal investment in the water and waste sectors, and pre-accession funds from the EU are also becoming available. These funds are the ideal mechanism for the central government to influence the way municipalities invest. For example, there is a preference in the Central Environment Fund grants system for proposals from groups of municipalities working together. This mechanism probably needs to be strengthened. Grant financing from the European Union for accession-related environmental investments could be used to reinforce this mechanism.

Although current levels of government subsidy for capital investment are significant (up to 85 percent in the water sector),¹⁴ O&M costs are high, and municipalities making new investments still need

¹¹ OECD/MERP data.

¹² IFO (1994).

¹³ Kerekcs and Kiss (1998).

¹⁴ The current system is not effective, since any investment is eligible for grants. More selective eligibility criteria could yield much faster environmental improvements for the same level of financial support.

to increase their tariffs considerably. In the future, an increasing proportion of the investment costs will have to come from utilities' own cash flows from operations.

Implications for Utility Tariffs

The affordability of utility tariffs is likely to be a key constraint on the required upgrading of wastewater, waste disposal, and energy generating capacity. Hungary's average household utility bills are already high by international and by Central European standards. Water, wastewater, electricity, and solid waste currently account for 5.1 percent of household consumption when the bill for drinking water is included.¹⁵ A similar estimate from 1990 for the United Kingdom (before investments associated with EU environmental directives had begun to take hold, but when infrastructure coverage was significantly higher than currently in Hungary) was 3 percent. To further the comparison, water, electricity, and solid waste bills accounted for 4 percent of household consumption in Poland in 1996.¹⁶

Table 10.4, which is intended for illustrative purposes only, shows possible increases in Hungary's household bills for wastewater, solid waste, and electricity services as a result of alternative investment scenarios. The figures in the table are based on the mid-range estimates for investment and O&M costs presented in Table 10.3. As percentages of household consumption, estimates do not include the bill for drinking water. When drinking water is excluded, utility bills currently account for 3.9 percent of household consumption.

Residential electricity prices have historically been heavily subsidized; despite price increases of 10 to 25 percent over the past few years, they have not yet reached market levels. Regular price modifications are expected to result in price rises of 4 percent per quarter. Average tariffs for the first quarter of 1998 were set at HUF 12.82/kWh for residential and HUF 11.5/kWh for non-residential customers.

¹⁵ For example, the combined prices of water and sewerage services in state-owned regional companies range between US\$1.0/m³ (Dunamenti), which is similar to typical levels found elsewhere in Europe, including Central Europe, to US\$2.1/m³ (Dunantuli), which is high (GWR, 1998). Average annual household consumption is estimated at HUF 991,000, or ECU4,220, for 1996 (*Hungary in Figures*, website).

¹⁶ World Bank owned estimates, and World Bank (1998a).

Table 10.4: Household Utility Bills Under Alternative Investment Scenarios

Annual percentage change, averaged over life of investment program						
Scenario	Household Bill			Share of Household Consumption*		
	A	B	C	A	B	C
Wastewater	3.2	6.5	6.5	0.2	3.4	3.4
Solid Waste	6.1	12.5	12.5	3.0	9.2	9.2
Electricity	1.1	2.3	2.3	-1.8	-0.7	-0.7
As a percentage of household consumption**						
Scenario	After 5 years			After 10 years		
	A	B	C	A	B	C
Wastewater	1.1	1.3	0.8	1.1	1.4	1.1
Solid Waste	0.7	1.0	0.5	0.8	1.3	0.8
Electricity	<u>2.1</u>	<u>2.2</u>	<u>2.0</u>	<u>1.9</u>	<u>2.2</u>	<u>1.9</u>
Total	3.9	4.5	3.3	3.8	4.9	3.8

Notes: Scenario A: 20-year investment program.

Scenario B: 10-year investment program.

Scenario C: 10-year investment program, delayed by 5 years.

*Adjusted for 3 percent average real household income and consumption growth.

Source: World Bank staff estimates.

Energy tariffs. We estimate that real (inflation adjusted) household electricity bills will have to rise by 1.1 percent per annum over a 20-year program or by 2.3 percent for a 10-year program to meet the additional capital and O&M requirements of EU directives. If real household income and consumption grow at 3 percent a year, household electricity bills will fall to 1.9 percent of household consumption after 10 years in the course of a 20-year investment program. The bill will amount to 2.2 percent of household consumption in the course of a 10-year investment program (roughly similar to the current 2.3 percent level). These estimates are based on an investment cost of ECU 420 million, and assume that consumers bear all of the burden of financing the investment.

Water tariffs. We estimate that household wastewater bills (for those connected to the system) will increase in real terms by 3.2 percent per year over the course of a 20-year program, or 6.5 percent for a 10-year program. Again, if household income grows at an annual rate of 3 percent, then household wastewater bills will rise to 1.1 percent of household consumption after 10 years in the course of a 20-year program; bills will rise to 1.4 percent at the end of the 10-year program, from the current level of 1.0 percent. Furthermore, the hypothetical average domestic wastewater tariff is expected to rise from the current level of HUF 105 per m³ to HUF 207 per m³ at the end of a 20-year investment program. These figures are based on an estimated investment program of ECU 3.2 billion, and assume that grant financing will cover about 60 percent of the investment cost and that the rest of the investment is shared between domestic and industrial consumers (respectively, 47 and 53 percent).

As a proportion of household consumption, water and wastewater bills are already high in comparison to Western Europe and to elsewhere in Central Europe.¹⁷ Many municipalities are already seeing resistance to further price increases, even under the current highly subsidized conditions for investment. In some towns, households have accepted an incentive to connect to the sewer. Their reaction to the first bill, however, is often to revert to other sources, usually the well, thereby bypassing the meter on which charges are based. The utility may also be forced to operate its drinking water treatment plant below designed levels, which increases its costs. Newly connected households compound the problem by continuing to discharge their wastewater into the sewer, thus increasing costs for the utility.

¹⁷ The water and wastewater bills account for approximately twice the proportion of total household spending in Hungary as in Poland, for example (World Bank estimates; *Hungary in Figures*; and Government of Poland, 1996).

Household waste tariffs. Whether the investment is financed by the private or the public sector, it is likely that households and other waste generators will face increasing tariffs for waste collection and disposal as the waste infrastructure is extended and upgraded.

There is currently a wide range of waste fees charged to residents for municipal solid waste collection and disposal; i.e., from HUF 460 to HUF 3,000 per capita per year. The highest charges are applied in areas where the landfill site is constructed and operated to high technical standards. This provides an approximate estimate of the likely average charges if regional scale landfill sites were to be constructed.

Based on an estimated investment program of ECU 3.1 billion, and assuming that grant financing covers about 60 percent of the investment cost, with the rest of the investment shared between domestic consumers (40 percent) and industrial consumers (60 percent), the implied increase in real average household waste disposal bills would be 6.1 percent per year over the course of a 20-year program, and 12.5 percent per year for a 10-year program. If household income grows at an annual rate of 3 percent, then household waste disposal charges will rise to 0.8 percent of household consumption after 10 years in the case of a 20-year program, or to 1.3 percent at the end of a 10-year program, from the current level of 0.6 percent.

The hypothetical average residential waste disposal per capita fee is expected to rise from HUF 2,400 to HUF 8,100 at the end of a 20-year investment program.

RECOMMENDATIONS FOR AN IMPLEMENTATION STRATEGY

The backbone of any successful strategy will be to **strengthen institutional capacity**. This will be fundamental to developing policies that bring the greatest environmental benefits for a given expenditure or a level of effort, while ensuring the wise use of public or external funds and reducing distortions elsewhere in the economy. Strengthening institutional capacity will be particularly important since many environmental issues cut across sectoral areas of responsibility and different levels of government. Furthermore, building the **capacity to enforce laws and to set incentives for improving compliance** will be essential to complying with many of the regulations that affect the private sector.

It will be important to **negotiate carefully**. Hungary will have to ensure that most large sources of pollution comply with all standards. For many types of pollution abatement, particularly those that involve highest levels of investment, the costs per unit of environmental improvement will rise steeply. Many of the directives have clauses that allow exemptions where environmental benefits are low or where costs are excessive, e.g., applying the Urban Wastewater Treatment Directive in small towns. It will be important to negotiate either derogations where it is agreed that there is no environmental benefit, or very long transition periods for compliance with the most costly aspects of the directives for the smaller or less environmentally significant sources of pollution.

The Government should **use public and EU subsidies to direct investments toward strategic goals**, particularly in the area of wastewater collection and treatment, and municipal solid waste. This has various aspects. First, there is large scope for **improving the efficiency** of utilities, which will reduce the upward pressure on tariffs. Eligibility criteria for grants could be used to encourage utilities to improve their performance.

In addition, limiting the proportion of grant funding, and thus requiring municipalities to contribute significantly from their own resources, will give municipalities an incentive to operate their utilities more efficiently. Technical assistance from the EU and other sources could also be used to help less efficient utilities improve their performance.

Reducing pollution from the largest settlements will have the largest environmental impact. It will therefore be important to focus on the **largest cities first**, even if smaller towns propose promising projects.

The costs of investments can vary dramatically, depending on some of the basic design parameters. For example, it will be important to ensure that wastewater treatment plants are large enough to take advantage of substantial **economies of scale**, traded off against the increased sewerage costs, even though multi-municipal cooperation may increase the institutional difficulties of overseeing the investments.

Finally, it will be important to remember that **not all investments of the same size carry the same environmental benefit**. Benefits depend on the conditions in the receiving environment. Developing detailed plans so that authorities know which investments will have the greatest environmental impact can help to direct investments strategically toward full compliance with EU environmental requirements.

REFERENCES

- AQUAFIN Consultants (1998). "Pre-Accession Planning to the EU in the Water Sector," Background information. Basic Introduction to Cost Analyses and Cost Relationships for Wastewater Treatment, Sludge Disposal Upgrading of Treatment Plants and Sewerage.
- Baldwin, J. Francois and R. Portes (1997), "The Costs and Benefits of Eastern Enlargement: Impact on the EU and Central Europe," *Economic Policy: A European Forum*, No. 24, 127-76, April.
- Baldwin, R. and E. Seghezza (1996), *Growth and European Integration: Towards an Empirical Assessment*, Working Paper No. 1393, Centre for Economic Policy Research.
- Barabás, Hamecz, and Neményi (1998) "Fiscal Deficit and Public Debt During the Transition," in Bokros and Dethier, eds. (1998), *Public Finance and Debt During the Transition: The Experience of Hungary*, Washington D. C.: World Bank.
- Barbone L. and J. Zalduendo (1997), *EU Accession of Central and Eastern Europe: Bridging the Income Gap*, Policy Research Working Paper No.1721, World Bank.
- Barro, R. (1997), *Determinants of Economic Growth, A Cross-Country Empirical Study*, Cambridge, Massachusetts: MIT Press.
- Barro, R. and X. Sala-i-Martin (1995), *Economic Growth*, New York: McGraw Hill Inc.
- BASYS-IGES (1998), *Financial Analysis for the Future Restructuring of Health Funding – Stage I*, June; mimeo.
- Blejer and Cheasty (1991), "Analytical and Methodological Issues in the Measurement of Fiscal Deficits," *Journal of Economic Literature* (December).
- Boeri, T., M. Burda, and J. Köllö (1998), *Mediating the Transition: Labour Markets in Central and Eastern Europe*, London: CEPR
- Bokros and Dethier, eds. (1998), *Public Finance and Debt During the Transition: The Experience of Hungary*, Washington D. C.: World Bank.
- Borjas, George (1998), "Economic Research on the Determinants of Immigration: Lesson for the European Union," World Bank mimeo.
- Borszéki, Zsuzsa (1998), "A Study of the Hungarian Industry and the Challenge of EU Accession," mimeo.
- Central Statistical Office (CSO) (1996). The data origin from a cross-sectional household budget survey of the CSO of Poland.
- Csaba, László (1996), *Hungary's Trade Policy and Trade Regime: from Neoprotectionism to Liberalism or Vice Versa?* Discussion Paper 39, Kopint-Datorg, Budapest (July), p. 16.
- Csaba, László (1998), "Privatization and Restructuring: the Hungarian Corporate Sector Reform in a Comparative Perspective" mimeo.
- Cukierman and Mortensen (1986), *Monetary Assets and Inflation-Induced Distortions in the National Accounts*, Working Paper No. 15, Directorate General for Economic and Financial Affairs, European Economic Community.

EDC (1997). *Compliance Costing for Approximation of EU Environmental Legislation in the CEEC*. Final Report, May.

Eisner (1989), "Divergences in Measurement and Theory and Some Implications for Public Policy," *American Economic Review* (March).

EU-PHARE (1996). *Status Report on Legislative and Institutional Approximation in Hungary*. Environmental Management and Law Association, Budapest.

Fazekas, K., G. Kertesi, and J. Köllő (1997), "Regional Labour Market Differentials during the Transition," mimeo, Budapest, (May).

Global Development Finance, The World Bank, Washington D.C., 1998.

Economic Survey of Europe 1998 No.1. United Nations Economic Commission for Europe, New York and Geneva, 1998.

Gray, Cheryl, Sabine Schlorke, and Miklos Szanyi (1996) "Hungary's Bankruptcy Experience, 1992-93" *The World Bank Economic Review*, Vol.10, No.3 pp. 425-50.

GWR. (1998). Global Water Report. Financial Times Newsletters, Issue 39, January 24, p. 7; Issue 40, February 5, pp. 1-3.

Hamar, Judit. (1998), "FDI and Its Effects on Industrial Structure and External Competitiveness," mimeo, Budapest (June).

Holló, Long, and Papp (1998), "Health Care Financing in Hungary," paper presented at the Health Reform Conference, Visegrad (October).

Hungarian Central Statistical Office (1995-1998), *Statistical Yearbook of External Trade*, Budapest.

Hungarian Statistical Pocketbook (1994, 1995, 1997).

Hungary in Figures (1998). Internet Version: <http://www.ksh.hu/eng/free/e7maor/ftartj.html>

IFO (1994). *Environmental Standards and Legislation in Western and Eastern Europe: Economic Costs and Benefits of harmonisation*, ifo Institut für Wirtschaftsforschung e.V, Munich.

International Monetary Fund (1998), *Hungary: Economic Policies for Sustainable Growth*, IMF Occasional Paper 159 (February).

Jakab and Fidler (1998), "Health Reform Options for Hungary," paper presented at the Health Reform Conference, Visegrad (October).

Kerekes and Kiss (1998), *Hungary's Green Path to the EU, Summary and Progress Report 1997*, Budapest University of Economic Sciences.

Kiss, G. (1998), *The Role of General Government in Hungary*, NBH Working Paper No. 1998/4.

Kornai, J. (1998), "Az egészségügy reformjáról (On the Reform of Health Care). *Közgazdasági és Jogi Könyvkiadó*, Budapest.

Low, P. and A. Yeats (1992), "Do 'Dirty' Industries Migrate?" in P. Low, ed., *International Trade and Environment*. 159 *World Bank Discussion Papers*, Washington D.C.: World Bank.

Ministry of Environment and Regional Policy (MERP). Owned estimates.

- Micklewright, J. and G. Nagy (1994), *Flows to and from Insured Unemployment in Hungary*, European University Institute Working Papers in Economics, No. 94/41.
- Micklewright, J. and G. Nagy (1996), *Labor Market Policy and the Unemployed in Hungary*, European Economic Review; v. 40, pp. 3-5, April, 1998.
- Ministry of Environment of the Czech Republic (1998). Pre-Accession Planning to Meet the Requirements of EU Legislation in the Water Sector. Study financed by Danish EPA for the Czech Ministry of Environment. Interim Report, April, 1998.
- Ministry of Trade, Industry, and Tourism (1998), *Newsletter*, Vol. 10, No. 1.
- Nagy, G. (1998), "Unemployment Benefits in Hungary," Budapest, mimeo.
- NERA (1998). "*Hungary Health Care Study*" (Draft Report). London. (Study was sponsored by Pharmaceutical Partners for Better Health Care (PPBH).
- OECD (1997), *Employment Outlook* (July).
- Orosz, Ellena, Jakab (1996), "*Health Reform Options and Priorities*." World Bank Technical Note. September, Budapest.
- Palacios, Robert J. and Rocha, Roberto R. (1998), "The Hungarian Pension System in Transition," in Bokros and Dethier (eds.) (1998), *Public Finance and Debt During the Transition: The Experience of Hungary*, Washington D. C.: World Bank.
- Phare (1998). "Preliminary Analysis and Structure of Twinning—Meeting with National Contact Points, Institution Building," Brussels (March 3).
- Pohl, Gerhard, Robert E. Anderson, Stijn Claessens, and Simeon Djankov (1997), *Privatization and Restructuring in Central and Eastern Europe: Evidence and Policy Options*, World Bank Technical Paper No. 368.
- Rocha and Saldanha (1993), *Fiscal and Quasi-Fiscal Deficits, Nominal and Real*, Working Paper No. 919, World Bank.
- Sachs, J. and A. Warner (1996), *Achieving Rapid Growth in the Transition Economies of Central Europe*, Cambridge, Mass.: Harvard Institute for International Development.
- Sachs, J. and A. Warner (1995), *Economic Reform and the Process of Global Integration*, Brookings Papers on Economic Activity 1, Washington, D. C.: Brookings Institution.
- Somlyódy, Búzás, Clement, Koncsos, Licsko, and Simonffy (1998), *Strategies for Meeting the Requirements of EU Legislation in the Water Sector: The Sajó River Case*, Draft Interim Report, Budapest, July.
- Somlyódy, Lázló and Peter Shanahan. 1998. *Municipal Wastewater Treatment in Central and Eastern Europe*. A Report for the Environmental Action Programme for Central and Eastern Europe. The World Bank, Washington DC.
- Stepan, ed. (1997), *Finanzierungssysteme im Gesundheitswesen, Ein Internationaler Vergleich*, Manzsche Verlags –und Universitätsbuchhandlung, Wien 1997.
- Strategies for Meeting the Requirements of EU Legislation in the Water Sector (Hungary): The Sajó River Case*. Draft Interim Report, Budapest, July.

The Wall Street Journal Europe's Central European Economic Review (July and August 1998, Vol. VI, Number 6). Compiled by Dun & Bradstreet Hungaria Inc.

Toth, Janos Istvan (1998), "Ownership Structure, Business Links and Performance in a Transforming Economy: The Case of Hungary"; mimeo.

US Department of Energy. 1998. *An Energy Overview of the Republic of Hungary*. Prepared by Department of Energy Office of Fossil Energy. Internet Version: <http://www.fe.doe.gov/int/hungary.html>

Winston, Clifford (1993), "Economic Deregulation: Days of Reckoning for Microeconomists," *Journal of Economic Literature*, 31, 1263-89.

World Bank (1993), *World Development Report 1993*.

World Bank (1995), *Country Economic Memorandum: Hungary: Structural Reforms for Sustainable Growth*, Washington, D. C.

World Bank (1997a), *An International Statistical Survey of Government Employment and Wages*, Washington, D. C.

World Bank (1997b), *Enterprise and Financial Sector Adjustment Loan Report*, Washington, D. C.

World Bank (1998a), *Poland: Complying with EU Environmental Legislation*, World Bank Discussion Paper, Final Report, Washington, D.C.

World Bank (1998b), *World Development Report 1998*.

WHO (1997), World Health Organization, *Health in Europe*. and the OECD 1999 Economic Survey on Hungary.

WHO (1998), World Health Organization, *Health Care System in Transition* (draft), Hungary, European Observatory on Health Care Systems.

WRC - Water Research Council, UK. 1993. *Environmental Standards and Legislation in Western and Eastern Europe: Towards Harmonisation*. Water Sector Case Study. Report for the EBRD and the EU

Zegras, Christopher and Walter Hook (1995), *Transportation, Energy, and Environment in Hungary: The Role of Government Policies and the World Bank*, IIEC Publication (April).

Statistical Appendix

Section I Social Indicators, Population, and Employment

Table 1.1	Population and Demographic Indicators, 1985-98
Table 1.2	Number of Employed Persons by Industries, 1993-97
Table 1.3	Participation Rates, Employment Rates and Unemployment Rates for Men by Age Group, 1992-97
Table 1.4	Participation Rates, Employment Rates and Unemployment Rates for Women by Age Group, 1992-97
Table 1.5	Participation Rates, Employment Rates and Unemployment Rates for Both Sexes by Age Group, 1992-97
Table 1.6	Unemployment Rates by Educational Level for Both Sexes, 1992-97
Table 1.7	Benefit Coverage of ILO Unemployed in Hungary by Type of Benefit, 1992-97
Table 1.8	Unemployment Benefits in Percentage of Average Wages and Minimum Wages, 1991-97
Table 1.9	Unemployment Rates for Budapest and 19 Counties, 1992-97
Table 1.10	Monthly Inflow Rates to ILO/OECD Unemployment for Age Group 15-54 in Quarter 1 of Year by Sex, 1992-97
Table 1.11	Yearly Averages of Registered Unemployed, Vacancies and U/V Ratios on National Level, 1990-97
Table 1.12	Employment Protection Legislation

Section II National Accounts

Table 2.1	GDP by Origin in Current Value, by Value Added, 1985-96
Table 2.2	GDP by Expenditure in Current Values, 1985-96
Table 2.3	Income Generation of Non-Financial Cooperation, 1994-96
Table 2.4	Distribution of Household Income, 1991-97

Section III Balance of Payments

Table 3.1	Balance of Payments, 1989-95
Table 3.2	Balance of Payments, 1996-98
Table 3.3	International Reserves and Other Foreign Assets, 1985-98
Table 3.4	Commodity Pattern of External Trade, 1991-97
Table 3.5	Value of External Trade by Trading Partners, 1991-97
Table 3.6	Share of Hungarian Products in EU External Imports by Major Product Categories, 1989-96
Table 3.7	RCA and Shares in EU Imports of Major Product Groups in Terms of their Factor Intensities, 1989-95
Table 3.8	Bindings and Levels of MFN Tariff Rates After the Uruguay Round

Section IV Public Finance

Table 4.1	General Government Finance Statistics, 1991-97
Table 4.2	Local Government Financial Statistics, 1991-97
Table 4.3	Tax and Contribution Rates, 1993-2000
Table 4.4	Budget Transfers to Agriculture, 1992-98

Section V Monetary Statistics

Table 5.1	Banking Survey, 1989-98
Table 5.2	Banking Survey - Assets, 1989-98
Table 5.3	Banking Survey - Liabilities, 1989-98

Section VI Prices and Wages

Table 6.1	Prices Indices of the Industrial Sector, 1985-98
Table 6.2	Labor Income, Wage Bill and Covered Wage Bill, 1995-98

Section VII Enterprise Sector

Table 7.1	FDI Inflows into Hungary, 1991-97
Table 7.2	FDI: by Sector 1992 and 1996
Table 7.3	Manufacturing Firms' Indicators: 1992 and 1996
Table 7.4	Business Links with Other Owners
Table 7.5	International Comparison: Enterprise Losses, 1992-97
Table 7.6	Number of Owners, and Whether They Held Majorities 1995
Table 7.7	Ownership Links among the Larger Exporting Manufacturing Firms (1996 and 1997)
Table 7.8	Trade Links among Firms with Ownership Links

Section VIII Public Administration

Table 8.1	General Government Employment Annual Average Employment, 1993-97
Table 8.2	General Government Employment by Economic Sector, 1997
Box 8.3	Remuneration Systems for the Public Service and Civil Service
Table 8.4	Average Remuneration in the Civil Service and Public Service, 1994-97
Table 8.5	Earnings of White Collar Workers by Profession, 1997
Table 8.6	Civil Service - Enterprise Earnings Comparison by Rank, 1997
Table 8.7	Hungary EU Accession Employment Increase Cost Implications
Table 8.8	Training Costs
Figure 8.1	Institutional Framework for EU Accession Activities in Hungary

Table 1.1: Population and Demographic Indications, 1985-98

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Thousands of Persons										
Male	5149.3	4984.9	4972.0	4960.5	4943.4	4922.9	4903.7	4883.9	4863.3	4841.9
Female	5508.1	5389.9	5383.0	5376.7	5366.8	5354.0	5342	5328.4	5311.2	5293.5
Urban	6193.0	6417.3	6435.0	6581.5	6574.1	6557.6	6569.9	6533.9	6498.6	6453.8
Rural	4464.4	3957.5	3920.0	3755.7	3736.4	3719.3	3675.8	3678.8	3675.8	3681.6
Under 15 Years of Age	2298.5	2130.5	2064.0	2009.8	1958.0	1910.8	1869.9	1836.5	1802.0	1771.7
15 - 59 Years of Age	6437.0	6284.5	6317.0	6347.5	6367.7	6380.5	6389.4	6390.7	6392.7	6385.7
Over 59 Years of Age	1921.9	7959.8	1974.0	1980.0	1984.5	1985.6	1986.3	1985.2	1979.8	1978.0
Total	10657.4	10374.8	10355.0	10337.2	10310.2	10276.9	10245.6	10212.4	10174.5	10135.4
Percent Distribution										
Male	48.3	48.0	48.0	48.0	48.0	47.9	47.9	47.8	47.8	47.8
Female	51.7	52.0	52.0	52.0	52.1	52.1	52.1	52.2	52.2	52.2
Urban	58.1	61.9	62.1	63.7	63.8	63.8	64.1	64.0	63.9	63.7
Rural	41.9	38.1	37.9	36.3	36.2	36.2	35.9	36.0	36.1	36.3
Under 15 Years of Age	21.6	20.5	19.9	19.4	19.0	18.6	18.3	18.0	17.7	17.5
15 - 59 Years of Age	60.4	60.6	61.0	61.4	61.8	62.1	62.4	62.6	62.8	63.0
Over 59 Years of Age	18.0	18.9	19.1	19.2	19.2	19.3	19.4	19.4	19.5	19.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Per Thousand Population										
Birth Rate	12.2	11.9	12.1	12.3	11.8	11.4	11	10.3	9.9	n.a.
Death Rate	13.9	13.9	14.1	14.0	14.4	14.6	14.2	14	13.7	n.a.
Rate of Natural Increase	-1.7	-2.0	-2.0	-1.7	-2.6	-3.2	-3.3	-3.7	-3.8	n.a.

Data of the Population Census before 1989 are not comparable with the 1981-89 figures

Sources: Statistical Yearbook and Central Statistical Office.

Table 1.2: Number of Employed Persons by Industries, 1993-97

	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997	1994/1993	1995/1994	1996/1995	1997/1996
	(thousands of persons)					(in % of total)					(previous year = 100)			
Total	3827.3	3751.5	3678.8	3648.1	3646.0	100.0	100.0	100.0	100.0	100.0	98.0	98.1	99.2	99.9
Agriculture, hunting, forestry and fishing	349.4	327.6	295.1	302.4	287.9	9.1	8.7	8.0	8.3	7.9	93.8	90.1	102.5	95.2
Industries	1292.2	1237.3	1198.1	1190.1	1207.9	33.8	33.0	32.6	32.6	33.1	95.8	96.8	99.3	101.5
o/w: Mining and quarrying	42.2	39.2	34.0	32.8	27.2	1.1	1.0	0.9	0.9	0.7	92.9	86.7	96.5	82.9
Manufacturing	937.8	888.8	850.2	850.8	864.1	24.5	23.7	23.1	23.3	23.7	94.8	95.7	100.1	101.6
Electricity, gas, steam and water supply	105.1	108.3	96.6	88.8	97.4	2.7	2.9	2.6	2.4	2.7	103.0	89.2	91.9	109.7
Construction	207.1	201.0	217.3	217.7	219.2	5.4	5.4	5.9	6.0	6.0	97.1	108.1	100.2	100.7
Services	2184.2	2186.0	2185.1	2155.2	2150.1	57.1	58.3	59.4	59.1	59.0	100.1	100.0	98.6	99.8
o/w: Wholesale and retail trade, repair of motor vehicles and household goods	469.5	467.4	459.9	486.9	496.8	12.3	12.5	12.5	13.3	13.6	99.6	98.4	105.9	102.0
Hotels and restaurants	110.4	110.6	116.6	114.1	120.9	2.9	2.9	3.2	3.1	3.3	100.2	105.4	97.9	106.0
Transport, storage, post and telecommunication	336.3	314.5	319.6	321.2	310.0	8.8	8.4	8.7	8.8	8.5	93.5	101.6	100.5	96.5
Financial intermediation	72.6	72.9	82.2	83.3	83.3	1.9	1.9	2.2	2.3	2.3	100.4	112.8	101.3	100.0
Real estate, renting and business activities	137.6	125.6	130.6	128.2	146.3	3.6	3.3	3.6	3.5	4.0	91.3	104.0	98.2	114.1
Public administration and defence; compulsory social security	299.5	320.2	318.1	306.6	293.8	7.8	8.5	8.6	8.4	8.1	106.9	99.3	96.4	95.8
Education	342.8	338.6	335.4	319.6	296.6	9.0	9.0	9.1	8.8	8.1	98.8	99.1	95.3	92.8
Health and social work	241.6	239.0	231.4	225.6	232.1	6.3	6.4	6.3	6.2	6.4	98.9	96.8	97.5	102.9
Other community, social and personal service activities	173.9	197.2	191.3	169.7	170.3	4.5	5.3	5.2	4.7	4.7	113.4	97.0	88.7	100.4
Unknown	1.5	0.6	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	40.0	83.3	80.0	25.0

Source: Central Statistics Office.

Table 1.3: Participation Rates, Employment Rates and Unemployment Rates for Men by Age Group, 1992-97

Participation rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	24.4	21.7	20.5	19.4	17.6	16.5
20-24 years	81.0	79.2	75.1	74.9	72.9	69.5
25-29 years	92.7	91.6	91.5	91.3	90.7	90.4
30-39 years	93.4	91.9	90.5	90.7	90.8	89.3
40-54 years	86.3	83.7	82.8	82.1	81.2	80.5
55-59 years	52.0	47.8	44.1	44.9	46.1	44.2
60-74 years	13.5	10.6	9.0	8.0	6.2	5.8
Total (15-74 years)	66.7	64.0	62.4	61.7	61.1	60.4
Age-group 15-59	76.9	74.4	72.8	72.3	71.8	70.8
Employment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	17.5	13.9	13.9	12.9	12.1	11.8
20-24 years	67.9	63.7	61.5	62.3	61.5	59.5
25-29 years	81.7	79.9	80.9	81.3	80.9	81.8
30-39 years	84.0	80.8	80.8	80.9	81.7	81.6
40-54 years	79.2	74.8	75.1	74.7	74.3	74.6
55-59 years	48.7	43.6	40.9	42.3	43.1	40.9
60-74 years	13.0	9.9	8.4	7.6	6.0	5.5
Total (15-74 years)	59.6	55.6	55.1	54.7	54.5	54.6
Age-group 15-59	68.5	64.4	64.2	64.0	64.1	64.0
Unemployment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	28.2	35.8	32.2	33.3	31.5	28.4
20-24 years	16.2	19.6	18.2	16.8	15.7	14.3
25-29 years	11.8	12.8	11.6	11.0	10.9	9.5
30-39 years	10.1	12.1	10.8	10.7	10.0	8.7
40-54 years	8.3	10.7	9.3	8.9	8.5	7.4
55-59 years	6.4	8.7	7.1	5.9	6.6	7.3
60-74 years	4.0	7.0	7.1	4.5	3.4	5.1
Total (15-74 years)	10.7	13.2	11.8	11.3	10.7	9.5
Age-group 15-59	10.9	13.4	11.9	11.5	10.8	9.6
Note: Those on regular military service are considered employed						
Source: CSO Labour Force Survey.						

Table 1.4: Participation Rates, Employment Rates and Unemployment Rates for Women by Age Group, 1992-97

Participation rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	21.5	19.8	17.6	14.1	12.9	11.8
20-24 years	60.6	57.4	56.5	53.4	49.3	49.2
25-29 years	62.1	59.8	59.7	54.3	53.5	52.9
30-39 years	79.9	77.8	75.0	71.9	71.1	69.3
40-54 years	77.3	75.3	72.5	71.2	71.4	70.2
55-59 years	19.3	16.8	13.8	14.7	15.5	16.2
60-74 years	7.9	5.8	5.0	3.4	3.5	3.0
Total (15-74 years)	51.0	48.5	46.3	43.8	43.4	42.8
Age-group 15-59	62.0	59.6	57.2	54.7	54.1	53.3
Employment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	16.0	13.8	12.9	10.2	9.2	8.4
20-24 years	54.0	49.7	49.2	47.2	43.0	43.8
25-29 years	55.0	51.9	53.1	49.0	47.2	48.4
30-39 years	73.1	70.1	68.0	65.5	65.4	64.0
40-54 years	72.3	69.9	67.7	66.7	66.7	66.2
55-59 years	18.2	15.2	13.2	13.8	14.8	15.4
60-74 years	7.5	5.0	4.2	3.2	3.2	2.8
Total (15-74 years)	46.6	43.5	41.9	40.0	39.6	39.5
Age-group 15-59	56.5	53.5	51.9	49.9	49.3	49.2
Unemployment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	25.4	30.3	26.8	28.0	28.8	29.3
20-24 years	10.9	13.3	12.8	11.7	12.8	11.0
25-29 years	11.4	13.3	10.9	9.7	11.9	8.5
30-39 years	8.5	9.9	9.4	9.0	8.0	7.7
40-54 years	6.5	7.2	6.5	6.3	6.7	5.8
55-59 years	5.7	9.3	4.4	5.5	4.8	4.8
60-74 years	4.9	14.2	14.9	6.1	7.9	7.7
Total (15-74 years)	8.7	10.4	9.4	8.7	8.8	7.8
Age-group 15-59	8.9	10.3	9.3	8.7	8.9	7.8

Source: CSO Labour Force Survey.

Table 1.5: Participation Rates, Employment Rates and Unemployment Rates for Both Sexes by Age Group, 1992-97

Participation rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	23.0	20.8	19.1	16.8	15.3	14.2
20-24 years	71.1	68.5	66.1	64.4	61.3	59.7
25-29 years	77.6	76.0	75.7	73.0	72.4	71.9
30-39 years	86.6	84.9	82.8	81.3	81.0	79.4
40-54 years	81.7	79.4	77.5	76.5	76.2	75.2
55-59 years	34.3	30.9	27.4	28.2	29.2	28.7
60-74 years	10.3	7.9	6.7	5.3	4.6	4.2
Total (15-74 years)	58.6	56.0	54.0	52.4	51.8	51.2
Age-group 15-59	69.4	66.9	64.9	63.4	62.8	62.0
Employment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	16.8	13.9	13.4	11.6	10.7	10.1
20-24 years	61.1	56.9	55.6	54.9	52.4	52.0
25-29 years	68.5	66.1	67.1	65.3	64.2	65.3
30-39 years	78.5	75.5	74.4	73.2	73.6	72.8
40-54 years	75.6	72.3	71.3	70.6	70.4	70.3
55-59 years	32.2	28.1	25.7	26.6	27.4	26.8
60-74 years	9.8	7.1	6.0	5.0	4.4	3.9
Total (15-74 years)	52.8	49.3	48.2	47.0	46.7	46.7
Age-group 15-59	62.4	58.9	58.0	56.9	56.6	56.5
Unemployment rates, %						
	1992	1993	1994	1995	1996	1997
15-19 years	27.0	33.3	29.8	31.1	30.4	28.8
20-24 years	14.0	17.0	16.0	14.7	14.5	13.0
25-29 years	11.7	13.0	11.3	10.6	11.3	9.1
30-39 years	9.3	11.1	10.1	9.9	9.1	8.2
40-54 years	7.4	9.0	8.0	7.7	7.6	6.6
55-59 years	6.2	8.9	6.4	5.8	6.1	6.6
60-74 years	4.3	10.1	10.5	5.1	5.4	6.2
Total (15-74 years)	9.8	11.9	10.7	10.2	9.9	8.7
Age-group 15-59	10.0	12.0	10.7	10.3	10.0	8.8

Note: Those on regular military service are considered employed
Source: CSO Labour Force Survey.

Table 1.6: Unemployment Rates by Educational Level for Both Sexes, 1992-97 (%)

	1992	1993	1994	1995	1996	1997
Incomplete primary	17.5	27.4	25.4	26.2	31.5	31.0
Primary	13.9	16.4	15.6	15.2	14.6	14.2
Vocational	11.6	14.4	12.7	12.3	11.7	10.1
Special vocational	12.0	13.2	12.3	10.4	12.0	7.9
General secondary	7.1	9.2	7.9	7.4	7.7	6.3
Vocational secondary	7.0	8.7	7.7	6.8	6.9	5.6
College	2.8	3.6	3.6	3.6	3.0	2.1
University	2.5	2.2	2.2	2.0	2.4	1.3
Total	9.9	12.1	10.9	10.3	10.0	8.8

Note: Not including those on regular military service
Source: CSO Labour Force Survey.

Table 1.7: Benefit Coverage of ILO Unemployed in Hungary by Type of Benefit, 1992-97 (%)

	1992	1993	1994	1995	1996	1997
Unemployment Insurance	61.9	53.9	36.0	26.7	23.8	25.2
Carreer Beginners' Benefit		3.0	3.1	2.8	1.9	
Unemployment Assistance		6.5	16.0	21.4	21.9	22.7
Any benefit	61.9	63.4	55.0	50.9	47.7	47.9

Source: CSO Labour Force Survey.

Table 1.8: Unemployment Benefits in Percentage of Average Wages and Minimum Wages, 1991-97

	1991	1992	1993	1994	1995	1996	1997
Average UI benefit/average wage, %	44	40	37	32	31	28	26
Average UI benefit/minimum wage, %	118	110	112	105	99	93	82
UA benefit/average wage, %		18	18	17	17	16	17
UA benefit/minimum wage, %		50	56	57	55	54	54

Source: Frey, 1997.

Table 1.9: Unemployment Rates for Budapest and 19 Counties, 1992-97

	1992	1993	1994	1995	1996	1997
Budapest	6.4	9.0	8.6	6.9	8.0	6.7
Bacs-Kiskun	11.5	13.2	11.6	8.3	8.5	7.1
Baranya	7.6	11.3	10.8	11.0	7.2	8.3
Bekes	9.4	9.5	8.7	9.3	8.7	7.3
Borsod	12.5	15.4	14.6	15.0	14.7	14.0
Csongrad	7.4	11.4	8.9	8.3	5.8	5.9
Fejer	9.1	11.6	9.0	9.2	8.3	7.8
Gyor-Sopron	7.0	8.5	7.6	6.0	6.3	5.8
Hajdu-Bihar	10.6	13.6	13.2	11.9	12.3	10.7
Heves	13.5	13.1	12.2	12.4	12.9	10.3
Jasz-Nagykun	12.5	13.2	11.3	13.5	12.3	10.4
Komarom	12.4	12.4	10.0	11.2	12.3	8.9
Nograd	14.0	16.1	15.2	17.7	14.6	12.0
Pest	8.3	9.9	7.8	7.0	6.9	6.1
Somogy	10.1	13.8	11.7	11.3	9.1	10.0
Szabolcs	11.9	14.0	13.4	12.7	11.4	11.7
Tolna	10.1	10.6	11.1	11.0	10.3	9.4
Vas	6.2	6.7	4.6	5.3	5.2	4.0
Veszprem	11.4	11.1	10.9	10.0	8.8	5.8
Zala	7.3	10.1	10.3	8.1	8.5	7.0

Source: CSO Labour Force Survey.

Table 1.10: Monthly Inflow Rates to ILO/OECD Unemployment for Age Group 15-54 in Quarter 1 of Year by Sex, 1992-97 (%)

	1992	1993	1994	1995	1996	1997
Men	1.15	1.27	0.93	0.88	0.66	0.63
Women	0.88	0.81	0.78	0.56	0.47	0.48
Total	1.03	1.05	0.86	0.74	0.58	0.57

Notes: Inflow is defined as unemployed with 1-4 weeks duration of unemployment. Inflow rates are calculated in percentage of labour force.

Source: CSO Labour Force Survey.

Table 1.11: Yearly Averages of Registered Unemployed (U), Vacancies (V), and U/V Ratios on National Level, 1990-97

	Unemployed (U)	Vacancies (V)	U/V Ratio
1990	46,269	31,228	1.48
1991	227,141	14,342	15.84
1992	556,965	21,752	25.61
1993	671,745	34,375	19.54
1994	568,366	35,569	15.98
1995	507,862	28,680	17.71
1996	500,622	38,297	13.07
1997	470,112	42,560	11.05

Source: National Labour Centre.

Table 1.12: Employment Protection Legislation

Regular procedural inconveniences		Notice and severance pay for no-fault individual dismissals							Difficulty of dismissal	
Procedures	Delay to start of notice	Notice period after			Severance pay after			Definition of unfair dismissal	Compensation at 20 years	
		9m	4y	20y	9m	4y	20y			
Scale 0 to 3	Days	Months						Scale 0 to 3	Months	
Hungary										
Regular layoff	1	0	1	1.3	3	0	1	5	1	24
Mass layoffs	2	30	2	2.3	4	0	1	5		
Unweighted average for developed economies listed below										
	1.7	12.3	0.9	1.9	4.9	0.1	0.7	3.7	0.8	16.9
European Community (as of late 1980)										
Belgium	1	3	2	3.6	11.4	0	0	0	0	12.5
Denmark	0.5	0	1.6	2.8	5	0	0	1.5	0	9
France	1.5	12	1	2	2	0	0.4	2.7	0	15
Germany	3	10	1	1	4.5	0	0	0	2	18
Greece	2	1	0.6	1.7	9	0.3	0.9	4.6	1	9
Ireland	1.5	3	0.2	0.5	2	0	0.5	3.9	0	24
Italy	1.5	0	0.3	1.1	2.2	0.7	3.5	18	0	32.5
Netherl.	3	35	0.6	1	5.3	0	0	0	1	5.3
Portugal	2	17	0.8	2	9.1	0.2	1.7	9.3	3	20
Spain	2.25	40	1	3	3	0.2	1.3	6	2	35
UK	1	3	0.2	0.7	2.8	0	0.9	4.6	0	10.8
EFTA (as of the late 1980s)										
Austria	2	5	0.8	1.2	2.5	0	2	9	1	9
Finland	2	56	2	2	6	0	0	0	0	20
Norway	1.5	3	1	2	5	0	0	0	2	15
Sweden	2	7	1	4	6	0	0	0	1	32
Switzerl.	0.5	1	1	2	3	0	0	0	0	3

Notes: Provisions described here relate to individual dismissals. Explanations for the columns:

Procedures: procedures to be followed when issuing a regular dismissal notice: 1 for a statement in writing to the employee of reasons for dismissal, 2 for notification to a third party, and 3 when prior permission for dismissal must be obtained from the third party (the higher the number, the stricter the procedure).

Delay to start of notice: the delay between a decision to dismiss and the time that notice can become effective after following required procedures, in days.

Notice period, 9 m, 4 y, 20 y: the period between issuance of a dismissal notice and the effective cessation of employment, in months. The columns refer to workers who have been with the employer 9 months, 4 years, and 20 years respectively.

Severance pay, 9 m, 4 y, 20 y: a lump-sum payment to the dismissed employee at the time of cessation of employment. The columns refer to workers who have been with the employer 9 months, 4 years, and 20 years respectively.

Definition of unfair dismissal: scored 0 when worker capability or redundancy of the job are adequate grounds for dismissal, 1 when social considerations, age or job tenure must, where possible, influence the choice of which worker to dismiss, 2 when retraining to adapt the worker to different work must be attempted prior to dismissal, and 3 when worker capability can never be a basis for dismissal (the higher the number, the stricter the definition).

Compensation at 20 y: the compensation payable to a worker who has been unfairly dismissed after 20 years with employer.

Sources: OECD (1994); Labor Acts (1992).

Table 2.1: GDP by Origin in Current Value, by Value Added, 1985-96

	1985	1990	1991	1991	1992	1993	1994	1995	1995	1996
	(billion HUF, at current prices)									
GDP (at purchasers' prices)	1033.658	2089.313	2308.404	2498.319	2942.668	3548.262	4364.811	5561.865	5614.042	6893.934
o/w Gross Value Added of Industries (at basic prices)	931.4	1796.5	2039.2	2299.0	2624.269	3142.327	3919.434	4892.5	4932.855	6061.312
o/w Agriculture, Hunting, Forestry and Fishing	166.7	261.2	230.6	195.1	189.879	206.095	262.271	347.4	332.963	402.39
Industry	363.4	576.2	640.0	666.5	717.257	824.418	993.554	1294.1	1296.495	1591.437
Construction	74.0	125.4	121.9	123.5	153.892	167.392	201.455	246.3	227.828	260.682
Trade, Repair, Hotels and Restaurants	96.7	266.6	329.7	355.6	341.615	417.535	493.793	613.5	655.733	804.59
Transport, Storage and communications	77.7	143.5	185.4	209.9	245.244	276.967	333.774	474.4	442.808	556.095
Other Services	152.9	423.5	531.6	748.3	976.382	1249.92	1634.587	1916.8	1977.028	2446.118
FISIM	-	-	-	-107.7	-100.643	-124.44	-199.082	-219.248	-219.2	-218.848
Net Taxes on Products	102.2	292.8	269.2	307.1	419.042	530.375	644.459	888.571	900.4	1051.47
	in % of GDP									
GDP (at purchasers' prices)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
o/w Gross Value Added of Industries (at basic prices)	90.1	86.0	88.3	92.0	89.2	88.6	89.8	88.0	87.9	87.9
o/w Agriculture, Hunting, Forestry and Fishing	16.1	12.5	10.0	7.8	6.5	5.8	6.0	6.2	5.9	5.8
Industry	35.2	27.6	27.7	26.7	24.4	23.2	22.8	23.3	23.1	23.1
Construction	7.2	6.0	5.3	4.9	5.2	4.7	4.6	4.4	4.1	3.8
Trade, Repair, Hotels and Restaurants	9.4	12.8	14.3	14.2	11.6	11.8	11.3	11.0	11.7	11.7
Transport, Storage and Communications	7.5	6.9	8.0	8.4	8.3	7.8	7.6	8.5	7.9	8.1
Other Services	14.8	20.3	23.0	30.0	33.2	35.2	37.4	34.5	35.2	35.5
FISIM	-	-	-	-4.3	-3.4	-3.5	-4.6	-3.9	-3.9	-3.2
Net Taxes on Products	9.9	14.0	11.7	12.3	14.2	14.9	14.8	16.0	16.0	15.3

	1985	1990	1991	1992	1993	1994	1995	1996
	(previous year=100)							
GDP (at purchasers' prices)	99.7	96.5	88.1	96.9	99.4	102.9	101.5	101.3
o/w Gross Value Added of Industries (at basic prices)	99.0	96.2	89.3	94.9	100.6	104.3	100.5	102.2
o/w Agriculture, Hunting, Forestry and Fishing	95.7	95.4	91.9	83.5	92.1	99.6	102.7	104.1
Industry	98.0	92.4	82.2	93.3	103.0	106.0	107.0	103.2
Construction	95.4	78.1	85.0	101.9	94.5	104.7	100.2	92.8
Trade, Repair, Hotels and Restaurants	103.6	111.8	91.7	83.9	96.2	96.1	96.8	99.6
Transport, Storage and Communications	99.1	92.7	88.6	95.7	94.6	101.4	112.4	103.1
Other Services	104.5	104.0	97.6	103.3	104.6	107.3	93.9	103.0

Source: Central Statistics Office.

Table 2.2: GDP by Expenditure in Current Values, 1985-96

	1985	1990	1991	1991	1992	1993	1994	1995	1995	1996
	(Billions of Current Forint)									
Government Consumption	104.6	221.8	289.3	264.6	336.456	491.428	527.111	629.5	617.7	703.619
Private Consumption	649.3	1282.5	1605.5	1746.9	2141.06	2639.87	3151.719	3715.0	3723.955	4415.857
Total Consumption	753.9	1504.3	1894.7	2011.5	2477.516	3131.298	3678.83	4344.4	4341.655	5119.476
Gross Fixed Investment	232.1	402.4	440.9	522.9	584.739	669.988	878.473	1059.6	1125.389	1475.538
Change in Stocks	26.3	248.3	34.3	-12.0	-111.661	38.06	90.122	279.7	218.346	373.825
Total Investment	258.4	530.4	475.2	511.0	473.078	708.048	968.595	1339.2	1343.735	1849.363
Total Domestic Use	1012.3	2034.7	2369.9	2522.5	2950.594	3839.346	4647.425	5683.7	5685.39	6968.839
Exports, GNFS	436.2	650.7	743.4	818.4	925.322	937.046	1262.476	1914.8	2091.797	2678.706
Imports, GNFS	414.8	596.1	804.9	842.6	933.248	1228.13**	1545.09	2036.6	2163.145	2753.611
Resource Balance	21.4	54.6	-61.5	-24.2	-7.9	-291.1	-282.6	-121.8	-71.3	-74.9
	(in % of GDP)									
GDP at market prices	1033.7	2089.3	2498.3	2498.3	2942.668	3548.5	4364.8	5614.0	5614.0	6893.9
Government Consumption	10.1	10.6	11.6	10.6	11.4	13.8	12.1	11.2	11.0	10.2
Private Consumption	62.8	61.4	64.3	69.9	72.8	74.4	72.2	66.2	66.3	64.1
Total Consumption	72.9	72.0	75.8	80.5	84.2	88.2	84.3	77.4	77.3	74.3
Gross Fixed Investment	22.5	19.3	17.6	20.9	19.9	18.9	20.1	18.9	20.0	21.4
Change in Stocks	2.5	11.9	1.4	-0.5	-3.8	1.1	2.1	5.0	3.9	5.4
Total Investment	25.0	25.4	19.0	20.5	16.1	20.0	22.2	23.9	23.9	26.8
Total Domestic Use	97.9	97.4	94.9	101.0	100.3	108.2	106.5	101.2	101.3	101.1
Exports, GNFS	42.2	31.1	29.8	32.8	31.4	26.4	28.9	34.1	37.3	38.9
Imports, GNFS	40.1	28.5	32.2	33.7	31.7	34.6	35.4	36.3	38.5	39.9
Resource Balance	2.1	2.6	-2.5	-1.0	-0.3	-8.2	-6.5	-2.2	-1.3	-1.1
GDP at market prices	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Yearbook.

The Hungarian Central Statistical Office has recently adopted the U.N. System of National Accounts methodology for measuring Hungary's national account data. This been applied to data for 1991 through 1993. The data presented in tables 2.1-2.4 present national account data for 1975-1991 using the former Hungarian methodology and 2.6 present data for 1991-1994 using SNA methodology.

	1985	1990	1991	1992	1993	1994	1995	1996
	(percentage change)							
Government Consumption	4.1	2.6	-2.7	4.9	27.5	-12.7	-4.1	-4.2
Private Consumption*	1.3	-3.6	-5.6	0	1.9	-0.2	-6.4	-2.7
Total Consumption	1.7	-2.7	-5.1	0.6	5.4	-2.3	-6.6	-2.9
Gross Fixed Investment	-3.0	-7.1	-10.4	-2.6	2	12.5	-4.3	6.7
Change in Stocks								
Total Investment	-3.5	-4.2	-21.1	-20.4	32.3	19.8	8.2	12.8
Domestic Demand	0.4	-3.1	-9.1	-3.6	9.9	2.2	-3.1	0.8
Exports, GNFS	5.2	-5.3	-13.9	2.1	-10.1	13.7	13.4	7.4
Imports, GNFS	7.8	-4.3	-6.1	0.2	20.2	8.8	-0.7	5.7
GDP at market prices								

Source: Central Statistical Yearbook.

The Hungarian Central Statistics

been applied to data for 1991 through 1993. The data presented in tables 2.1-2.4 present national account data for 1975-1991 using the former Hungarian methodology and 2.6 present data for 1991-1994 using SNA methodology.

* starting from 1992 it includes the balance of tourism

** included the imports of military equipments from Russia (ithout custom and VAT)

Table 2.3: Income Generation of Non-Financial Corporations, 1994-96

	1994	1995	1996	1994	1995	1996
	in billion HUF			in % of GDP		
Generation of Income						
Value Added, gross	1989.0	2586.2	3180.8	45.6	46.1	46.1
Compensation of Employees, total	1387.2	1695.2	2071.6	31.8	30.2	30.0
Wages and Salaries	986.1	1237.7	1543.0	22.6	22.0	22.4
Employers' Social Security Contributions	401.1	457.4	528.6	9.2	8.1	7.7
Other Taxes on Production	35.0	10.8	15.4	0.8	0.2	0.2
Other Subsidies on Production	60.2	28.5	26.5	1.4	0.5	0.4
Operating Surplus, gross	626.9	908.8	1120.3	14.4	16.2	16.3
Allocation of Primary Income						
Property Income, total	-258.1	-389.4	-529.4	-5.9	-6.9	-7.7
Interest, net, o/w:	-132.7	-170.5	-172.7	-3.0	-3.0	-2.5
<i>Interest Received</i>	83.5	128.7	148.4	1.9	2.3	2.2
<i>Interest Paid</i>	216.3	299.1	321.1	5.0	5.3	4.7
Income on Direct Investments, net	-68.8	-91.0	-159.2	-1.6	-1.6	-2.3
Reinvested Earnings on Direct Foreign Investment	-39.4	-99.6	-170.0	-0.9	-1.8	-2.5
Other Income	-17.2	-37.4	-27.6	-0.4	-0.7	-0.4
Entrepreneurial Income, gross	509.5	717.4	944.3	11.7	12.8	13.7
Balance of Primary Incomes, gross	368.8	510.4	590.9	8.4	9.1	8.6
Secondary Distribution of Income						
Current taxes on Income	82.1	92.3	113.9	1.9	1.6	1.7
Other Current Transfers, net	-39.7	-47.7	-69.6	-0.9	-0.8	-1.0
Disposable Income, gross	246.9	370.2	407.2	5.7	6.6	5.9
GDP	4364.8	5614.0	6893.9	100.0	100.0	100.0

Source: Central Statistics Office.

Table 2.4: Distribution of Household Income, 1991-97

	1991	1992	1993	1994	1995	1996	1997
	in billion HUF						
1 Wages and Salaries	1030.9	1166.0	1353.9	1576.3	1905.1	2324.0	
2 Employers' Social Contribution	354.9	440.1	552.3	639.8	729.9	823.5	
3 Compensation of Employees (1+2)	1385.8	1606.1	1906.2	2216.1	2635.0	3147.5	
4 Operating Surplus	106.1	131.0	161.3	205.1	279.5	356.3	
5 Mixed Income	255.6	367.1	421.7	531.1	720.1	935.0	
6 Property Income, net	68.1	95.7	131.2	177.4	196.7	305.8	
7 Balance of Primary Incomes (3+4+5+6)	1815.5	2199.9	2620.3	3129.7	3831.4	4744.5	
8 Other Current Transfers, net	113.9	84.4	26.9	90.6	-272.0	-361.5	
9 Taxes	192.0	233.5	296.3	335.6	-	-	
10 Disposable Income (7+8-9)	1737.5	2050.8	2350.9	2884.6	3559.4	4383.0	
11 Social Transfers in Kind	392.8	470.3	578.4	693.5	763.2	890.8	
12 Adjusted Disposable Income (10+11)	2130.4	2521.1	2929.3	3578.1	4322.6	5273.8	
13 Actual Final Consumption	1746.9	2141.1	2639.9	3151.7	3724.0	4415.9	
14 Saving (12-13)	383.4	380.0	289.4	426.4	598.6	857.9	
15 Capital Transfers, net	86.4	26.2	30.2	44.3	41.7	56.7	
16 Gross Capital Formation	147.4	145.0	180.9	209.1	277.4	347.5	
17 Net Lending/Borrowing	322.5	261.2	138.7	261.6	362.9	567.1	
18 Devaluation Difference	-	-	-	-	115.5	45.7	
20 Net Change in Financial Asstes	-	-	-	-	478.4	612.8	
	in % of GDP						
GDP (in billion HUF)	2498	2943	3548	4365	5614	6894	8541
1 Wages and Salaries	41.3	39.6	38.2	36.1	33.9	33.7	
2 Employers' Social Contribution	14.2	15.0	15.6	14.7	13.0	11.9	
3 Compensation of Employees (1+2)	55.5	54.6	53.7	50.8	46.9	45.7	
4 Operating Surplus	4.2	4.5	4.5	4.7	5.0	5.2	
5 Mixed Income	10.2	12.5	11.9	12.2	12.8	13.6	
6 Property Income, net	2.7	3.3	3.7	4.1	3.5	4.4	
7 Balance of Primary Incomes (3+4+5+6)	72.7	74.8	73.8	71.7	68.2	68.8	
8 Other Current Transfers, net	4.6	2.9	0.8	2.1	-4.8	-5.2	
9 Taxes	7.7	7.9	8.3	7.7	-	-	
10 Disposable Income (7+8-9)	69.5	69.7	66.3	66.1	63.4	63.6	
11 Social Transfers in Kind	15.7	16.0	16.3	15.9	13.6	12.9	
12 Adjusted Disposable Income (10+11)	85.3	85.7	82.6	82.0	77.0	76.5	
13 Actual Final Consumption	69.9	72.8	74.4	72.2	66.3	64.1	
14 Saving (12-13)	15.3	12.9	8.2	9.8	10.7	12.4	
15 Capital Transfers, net	3.5	0.9	0.9	1.0	0.7	0.8	
16 Gross Capital Formation	5.9	4.9	5.1	4.8	4.9	5.0	
17 Net Lending/Borrowing	12.9	8.9	3.9	6.0	6.5	8.2	
18 Devaluation Difference	-	-	-	-	2.1	0.7	
20 Net Change in Financial Asstes	-	-	-	-	8.5	8.9	

Note: Due to methodological changes, figures for 1991-1994 are not directly comparable to figures for 1995-1997

Source: Central Statistics Office.

Table 3.1: Balance of Payments, 1989-95
(in millions of US\$)

	1989	1990	1991	1992	1993	1994	1995
Goods, net	537	348	189	-48	-3247	-3635	-2242
Exports	6446	6346	9258	10028	8094	7613	12810
Imports	5909	5998	9069	10076	11340	11248	15252
Services and Income	-2100	-948	-782	-487	-940	-1185	-1365
Travel, net	-349	345	560	590	442	503	659
Travel, credit	738	818	1006	1231	1181	1428	1714
Travel, debit	1087	473	446	641	739	925	1056
Direct Investment Income, net	0	-24	-32	-45	-56	-117	-194
Investment Income, net	-1387	-1414	-1331	-1216	-1130	-1286	-1599
Investment Income, credit	218	230	297	420	456	661	758
Investment Income, debit	1605	1644	1628	1636	1586	1947	2357
Other Services, net	-364	145	21	184	-196	-285	-231
Current transfers, net	126	727	860	859	732	909	1127
Current Account	-1437	127	267	324	-3455	-3911	-2480
Direct Investment, net							
Abroad, net	-11	-49	-43
In Hungary	187	311	1459	1471	2339	1146	4453
Other capital flows, net	1339	-843	89	-1027	3732	2323	3387
Overall balance	89	-405	1815	768	2605	-491	5317
Changes of Reserves	70	562	-2720	-761	-2635	656	-4532
Net credit from IMF	-159	-157	905	-7	30	-165	-785

Note: BoP methodology changed in 1996

Source: NBH.

Table 3.2: Balance of Payments, 1996-98

(in millions of US\$)

	1996	1997	1998
Goods, net	-2645	-1734	-2121
Exports	14183	19637	20749
Imports	16828	21371	22870
Services total, net	1426	1177	678
Travel, net	1288	1428	1298
Travel, credit	2246	2582	2504
Travel, debit	957	1153	1205
Other services, net	138	-251	-620
Income, net	-1454	-1421	-1872
Income, credit	..	1380	1112
Income, debit	..	2800	2984
Direct investment income, net	-256	-431	-936
Direct investment income, credit	23	23	24
Direct investment income, debit	279	454	960
Portfolio investment income, net	-618	-588	-683
Portfolio investment income, credit	597	718	714
Portfolio investment income, debit	1215	1306	1397
Other, net	-580	-402	-253
Current transfers, net	922	996	1018
Current Account	-1678	-981	-2297
Capital Account	156	117	188
Financial account	-1144	399	2833
Direct Investment, net	1987	1654	1453
Abroad	3	-431	-481
Equity capital, net	3	-286	-462
Other capital, net (Intercompany loans)	0	-146	-19
In Hungary	1983	2085	1935
Equity capital, net	1788	1811	1410
Other capital, net (Intercompany loans)	195	274	525
Portfolio investment, net	-407	-1047	1983
Assets	-18	-121	92
Equity securities, net	-15	-32	-46
Bonds and notes, net	0	-53	-82
Money market instruments, net	-20	-49	34
Financial derivatives, net	18	12	185
Liabilities	-389	-926	1892
Equity securities, net	358	1003	554
Bonds and notes, net	-688	-1871	1432
Money market instruments, net	-58	-53	-56
Financial derivatives, net	-1	-4	-38
Other Investments, net	-2724	-208	-603
Net errors and omissions	1410	296	232
Overall balance	-1255	-170	957
International Reserves	1458	170	-797
Net credit for IMF	-203	0	-160

Note: BoP methodology changed in 1996

Source: NBH.

Table 3.3: International Reserves and Other Foreign Assets, 1985-1998
 (US\$ Millions at end of period)

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
International Reserves	3017.1	1969.4	4723.3	4427.6	6781.3	6780.6	12010	9718	8429	9341
Gold	640	97	83	33	45	42	43	37	29	30
Other Foreign Assets	3538.5	4757.3	4602.2	5185.5	3549.7	3372.4	3304	3454	3841	4730

Source: NBH.

Table 3.4: Commodity Pattern of External Trade, 1991-97

	1991	1992	1993	1994	1995	1996	1997
	in million HUF						
	Exports						
Food, Beverages and Tobacco	176,447	183,900	156,314	208,817	329,686	367,429	462,700
Crude Materials	56,639	56,736	55,120	69,253	89,084	105,495	135,800
Fuels, Electric Energy	22,307	29,043	33,220	44,942	51,834	81,272	94,100
Manufactured Goods	339,677	398,738	377,931	517,009	735,955	936,240	1,262,800
Machinery and Transport Equipment	169,204	175,148	197,329	288,673	415,432	511,217	1,611,400
Total	764,274	843,565	819,914	1,128,694	1,621,991	2,001,653	3,566,800
	Imports						
Food, Beverages and Tobacco	46,717	48,343	65,020	96,911	102,077	122,712	167,100
Crude Materials	47,062	36,140	37,807	61,094	85,631	99,512	129,600
Fuels, Electric Energy	132,292	131,889	154,971	181,081	225,942	334,446	378,700
Manufactured Goods	364,390	399,460	479,400	673,956	926,852	1,157,723	1,621,700
Machinery and Transport Equipment	265,212	262,670	425,293	523,959.00	595,885	753,657	1,664,000
Total	855,673	878,502	1,162,491	1,537,001	1,936,387	2,468,050	3,961,100
	Volume Index (previous year = 100)						
	Exports						
Food, Beverages and Tobacco	107.4	92.0	72.4	109.8	125.4	93.5	n.a
Crude Materials	128.0	94.8	83.8	97.7	94.6	107.8	n.a
Fuels, Electric Energy	91.2	130.6	104.0	122.7	93.3	114.8	n.a
Manufactured Goods	94.0	110.0	86.5	115.4	105.0	110.0	n.a
Machinery and Transport Equipment	79.9	91.4	101.1	121.9	111.4	101.5	n.a
Total	95.1	101	86.9	116.6	108.4	104.6	n.a
	Imports						
Food, Beverages and Tobacco	97.8	98.1	117.4	122.6	80.9	96.8	n.a
Crude Materials	79.8	80.7	103.8	125.3	100.1	104.9	n.a
Fuels, Electric Energy	86.1	95.9	115.8	106.2	96.7	112.8	n.a
Manufactured Goods	123.1	96.4	108.4	121.4	102.6	106.5	n.a
Machinery and Transport Equipment	100.7	85.3	146.3	104.9	89.8	102.6	n.a
Total	105.5	92.4	120.9	114.5	96.1	105.5	n.a

Source: Central Statistics Office.

Table 3.5: Value of External Trade by Trading Partners, 1991-97

	1991	1992	1993	1994	1995	1996	1997
	(in million USD)						
	Exports						
Developed Countries	6,921.9	7,627.8	6,023.1	7,707.8	8,937.6	9,187.1	14801.5
o/w European Union	4,659.4	5,326.7	4,139.9	5,456.6	8,079.6	8,250.0	13602.3
Developing Countries	856.6	570.7	483.7	419.9	500.6	475.7	509.4
Central and Eastern European Countries*	2,354.0	2,460.6	2,198.8	2,366.0	2,993.5	3,082.7	3659.0
Other	54.4	46.0	201.3	207.1	435.3	399.2	130.0
Total	14,846.3	16,031.8	13,046.8	16,157.4	20,946.6	21,394.7	32702.2
	Imports						
Developed Countries	7,577.4	7,721.8	8,133.4	10,274.8	10,893.0	11,169.3	15,429.7
o/w European Union	4,659.4	5,326.7	4,139.9	5,456.6	8,079.6	8,250.0	13,325.8
Developing Countries	900.1	466.3	547.2	655.0	856.2	921.0	1,504.7
Central and Eastern European Countries*	2,685.5	2,752.3	3,619.8	3,322.7	3,538.9	3,869.8	3,957.6
Other	219.1	138.5	229.9	301.3	178.2	248.8	342.1
Total	16,041.5	16,405.6	16,670.2	20,010.4	23,545.9	24,458.9	34,559.9
	(as share of total)						
	Exports						
Developed Countries	46.6	47.6	46.2	47.7	42.7	42.9	45.3
o/w European Union	31.4	33.2	31.7	33.8	38.6	38.6	41.6
Developing Countries	5.8	3.6	3.7	2.6	2.4	2.2	1.6
Central and Eastern European Countries*	15.9	15.3	16.9	14.6	14.3	14.4	11.2
Other	0.4	0.3	1.5	1.3	2.1	1.9	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Imports						
Developed Countries	47.2	47.1	48.8	51.3	46.3	45.7	44.6
o/w European Union	29.0	32.5	24.8	27.3	34.3	33.7	38.6
Developing Countries	5.6	2.8	3.3	3.3	3.6	3.8	4.4
Central and Eastern European Countries*	16.7	16.8	21.7	16.6	15.0	15.8	11.5
Other	1.4	0.8	1.4	1.5	0.8	1.0	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Volume Index						
	Exports						
Developed Countries	121.7	105.5	84.3	123.3	103.2	105.7	n.a.
o/w European Union	128.1	108.0	82.8	127.8	105.1	105.7	n.a.
Developing Countries	105.6	68.8	87.1	85.5	101.5	96.2	n.a.
Central and Eastern European Countries*	52.4	101.2	96.9	105.1	119.2	104.3	n.a.
Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	95.1	101.0	86.9	116.6	108.4	104.6	n.a.
	Imports						
Developed Countries	132.5	93.6	110.1	124.0	96.0	104.2	n.a.
o/w European Union	115.2	93.8	111.6	129.4	97.3	103.9	n.a.
Developing Countries	108.7	60.1	127.1	114.2	115.6	105.9	n.a.
Central and Eastern European Countries*	56.3	98.4	149.8	90.2	92.8	108.0	n.a.
Other	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	105.5	92.4	120.9	114.5	96.1	105.5	n.a.

* Until 1992 includes Asiatic member Republics of the Soviet Union

Source: Central Statistics Office.

Table 3.6: Share of Hungarian Products in EU External Imports by Major Product Categories, 1989-1996

PRODUCT GROUP	1989	1990	1991	1992	1993	1994	1995	1996	1997
All food products (0+1+22+4)	2.00	1.99	2.35	2.16	1.82	1.78	1.74	1.77	1.63
Agricultural materials (2-22-27-28)	0.88	1.00	1.34	1.31	1.14	1.02	0.92	1.02	1.24
Textile fibres (26)	0.38	0.51	0.66	0.52	0.30	0.39	0.34	0.39	0.55
Ores, Minerals and Metals (27+28+68)	0.77	1.01	0.87	1.04	0.94	1.26	1.46	1.19	1.23
Energy (3)	0.30	0.25	0.30	0.26	0.26	0.28	0.30	0.34	0.09
All Manufactured Goods (5 to 8 - 68)	0.70	0.85	0.98	1.13	1.09	1.27	1.54	1.76	2.13
chemical elements (51)	1.48	1.63	1.48	1.53	1.47	1.43	1.48	1.50	1.42
leather and goods (61)	2.35	2.85	4.03	4.58	4.40	3.64	3.54	3.72	3.75
wood manufactures (63)	1.74	2.30	2.38	2.02	1.63	1.83	2.33	2.47	2.59
textile yarn and fabric (65)	0.98	1.17	1.11	1.10	1.03	1.10	1.27	1.31	1.17
Iron and Steel (67)	2.54	3.11	2.49	2.54	1.93	2.93	2.49	2.65	2.16
metal manufactures (69)	1.34	1.87	2.30	2.67	2.37	2.27	2.55	2.83	2.88
nonelectric machinery (71)	0.31	0.43	0.55	0.56	0.59	0.85	1.47	1.76	2.80
electrical machinery (72)	0.48	0.65	0.84	1.01	1.03	1.38	1.61	2.12	2.60
transport equipment (73)	0.10	0.12	0.21	0.34	0.34	0.53	1.15	1.32	1.59
furniture (82)	2.64	2.89	3.54	3.70	2.94	2.99	3.43	3.89	2.61
clothing (84)	1.72	1.91	2.04	2.41	2.33	2.36	2.25	2.44	2.31
footwear (85)	1.79	2.21	2.29	2.95	2.52	2.49	2.75	2.88	2.95
scientific instruments (86)	0.09	0.09	0.13	0.18	0.19	0.23	0.34	0.38	0.47
All goods (0 to 9)	0.78	0.86	1.00	1.09	1.03	1.18	1.38	1.51	1.71

Source: Derived from data in the UN COMTRADE database.

Table 3.7: RCA and Shares in EU Imports of Major Product Groups in Terms of their Factor Intensities, 1989-95

A. Revealed Comparative Advantage Indices									
Relative Factor Intensity Groups	1989	1990	1991	1992	1993	1994	1995	1996	1996, 1993=100
Natural Resource Intensive	1.15	1.05	1.08	0.97	0.90	0.85	0.76	0.66	73
Unskilled Labor Intensive	1.61	1.71	1.67	1.73	1.77	1.61	1.41	1.40	79
Technology Intensive	0.61	0.67	0.68	0.70	0.75	0.82	0.95	1.00	133
Human Capital Intensive	0.92	1.01	0.93	1.06	1.03	1.20	1.34	1.46	142
B. Share in EU Imports, in percent									
Natural Resource Intensive	0.90	0.91	1.08	1.06	0.93	1.01	1.04	1.00	108
Unskilled Labor Intensive	1.26	1.47	1.67	1.89	1.82	1.89	1.95	2.12	116
ethnology Intensive	0.48	0.58	0.68	0.76	0.77	0.97	1.31	1.51	196
Human Capital Intensive	0.72	0.87	0.93	1.16	1.07	1.42	1.85	2.21	207

Source: Derived from the UN COMTRADE database as reported by the EU imports.

Table 3.8: Bindings and Levels of MFN Tariff Rates After the Uruguay Round

	Percentage of imports GATT bound	Percentage of imports GATT bound below applied rates	Applied Rate weighted by 1989 imports	Post-Uruguay Bound Rate
Agricultural products, ex. fish (est. 2)	EU -100.0 HUN -100.0	EU - 41.4 HUN - 27.0	EU - 3.7 HUN - 16.5	EU - 3.8 HUN - 21.6
Industrial products	EU -100.0 HUN - 93.6	EU - 43.3 HUN - 55.6	EU - 2.9 HUN - 6.7	EU - 3.2 HUN - 6.1
wood, pulp, paper, and furniture	EU -100.0 HUN - 100.0	EU - 16.7 HUN - 34.5	EU - 0.3 HUN - 3.3	EU - 0.5 HUN - 3.3
textiles and clothing	EU -100.0 HUN - 98.5	EU - 70.5 HUN - 80.6	EU - 8.7 HUN - 8.5	EU - 8.5 HUN - 8.6
Leather, rubber, footwear	EU -100.0 HUN - 100.0	EU - 59.7 HUN - 72.7	EU - 4.9 HUN - 6.5	EU - 4.9 HUN - 6.6
Metals	EU -100.0 HUN - 100.0	EU - 21.6 HUN - 61.7	EU - 1.0 HUN - 3.9	EU - 1.7 HUN - 4.5
chemical and photographic supplies	EU -100.0 HUN - 97.3	EU - 44.5 HUN - 56.1	EU - 3.8 HUN - 4.2	EU - 4.4 HUN - 4.3
Transport Equipment	EU -100.0 HUN - 54.0	EU - 22.2 HUN - 14.3	EU - 5.5 HUN - 16.1	EU - 6.2 HUN - 11.8
non-electric machinery	EU -100.0 HUN - 98.3	EU - 66.3 HUN - 83.2	EU - 1.4 HUN - 7.5	EU - 1.6 HUN - 7.5
Electric Machinery	EU -100.0 HUN - 92.9	EU - 65.9 HUN - 60.1	EU - 5.4 HUN - 8.8	EU - 5.2 HUN - 8.9
Mineral products, Precious stones, & metal	EU -100.0 HUN - 96.9	EU - 20.0 HUN - 18.6	EU - 0.5 HUN - 2.5	EU - 0.7 HUN - 2.3
Manufactures nes	EU -100.0 HUN - 98.2	EU - 54.1 HUN - 53.7	EU - 2.5 HUN - 4.6	EU - 2.6 HUN - 4.5
All Merchandise Trade	EU -100.0 HUN - 94.4	EU - 38.6 HUN - 49.9	EU - 2.9 HUN - 6.8	EU - 3.2 HUN - 6.6

Source: Derived from J.M. Finger, M. D Ingco and U. Reincke, *The Uruguay Round. Statistics on Tariff Concessions Given and Received*, The World Bank, Washington D.C. 1996.

Table 4.1: General Government Finance Statistics, 1991-97

	1991	1992	1993	1994	1995	1996	1997
	in million HUF						
Total Revenue	1,312,144	1,548,981	1,828,446	2,235,683	2,677,862	3,157,520	3,740,487
Current Revenue	1,293,290	1,506,557	1,765,485	2,153,035	2,598,811	3,069,969	3,632,261
Tax Revenue	1,053,768	1,235,072	1,469,850	1,725,247	2,153,061	2,533,655	3,052,806
Nontax Revenue	239,522	271,485	295,635	427,787	445,750	536,314	579,455
Capital Revenue	18,854	41,854	62,960	82,335	76,620	87,182	106,280
Grants	0	570	0	314	2,430	369	1,946
Total Expenditure & Lending Minus Repayments	1,384,672	1,727,129	2,040,722	2,562,720	2,856,075	3,101,419	3,897,115
Total Expenditure	1,408,526	1,777,418	2,157,443	2,635,114	3,045,845	3,377,221	4,202,617
Current Expenditure	1,253,999	1,554,415	1,818,505	2,264,488	2,723,975	3,010,756	3,682,157
Wages & Salaries	231,455	282,896	343,376	420,649	469,147	519,687	622,350
Other Purchases of Goods & Services	239,207	319,264	417,129	445,104	452,969	535,424	659,249
Interest Payments	92,098	160,473	161,621	296,028	519,402	570,067	839,903
Subsidies & Other Current Transactions	689,149	791,132	896,198	1,102,551	1,282,457	1,382,379	1,558,875
Other Current Expenditure	2,091	195,885	181	156	0	3,199	1,629
Capital Expenditure	154,527	223,004	338,938	370,626	321,870	0	520,460
Acquisition of Fixed Capital Assets	89,552	143,285	241,972	250,353	167,386	240,498	390,615
Capital Transfers	50,557	66,992	90,261	113,093	121,888	106,091	103,222
Other Capital Expenditure	0	0	0	0	0	0	0
Lending Minus Repayments	-23,855	-50,289	-116,720	-72,394	-189,771	-275,802	-305,502
Privatization Revenue	2,173	32,392	22,559	37,741	178,388	260,621	
Overall Deficit/Surplus	-72,527	-178,148	-212,277	-327,037	-178,213	56,102	-156,628
							252,363
Overall Deficit excluding Privatisation Revenues	-74,700	-210,541	-234,836	-364,778	-356,601	-204,519	-408,991
	in % of GDP						
GDP (in million HUF)	2,498,319	2,942,668	3,548,262	4,364,811	5,614,042	6,893,934	8,541,000
Total Revenue	52.5	52.6	51.5	51.2	47.7	45.8	43.8
Total Revenue (A.II)	52.5	52.6	51.5	51.2	47.7	45.8	43.8
Current Revenue	51.8	51.2	49.8	49.3	46.3	44.5	42.5
Tax Revenue	42.2	42.0	41.4	39.5	38.4	36.8	35.7
Nontax Revenue	9.6	9.2	8.3	9.8	7.9	7.8	6.8
Capital Revenue	0.8	1.4	1.8	1.9	1.4	1.3	1.2
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Expenditure & Lending Minus Repayments	55.4	58.7	57.5	58.7	50.9	45.0	45.6
Total Expenditure	56.4	60.4	60.8	60.4	54.3	49.0	49.2
Current Expenditure	50.2	52.8	51.3	51.9	48.5	43.7	43.1
Wages & Salaries	9.3	9.6	9.7	9.6	8.4	7.5	7.3
Other Purchases of Goods & Services	9.6	10.8	11.8	10.2	8.1	7.8	7.7
Interest Payments	3.7	5.5	4.6	6.8	9.3	8.3	9.8
Subsidies & Other Current Transactions	27.6	26.9	25.3	25.3	22.8	20.1	18.3
Other Current Expenditure	0.1	6.7	0.0	0.0	0.0	0.0	0.0
Capital Expenditure	6.2	7.6	9.6	8.5	5.7	0.0	6.1
Acquisition of Fixed Capital Assets	3.6	4.9	6.8	5.7	3.0	3.5	4.6
Capital Transfers	2.0	2.3	2.5	2.6	2.2	1.5	1.2
Other Capital Expenditure	0.6	0.4	0.2	0.2	0.6	0.3	0.3
Lending Minus Repayments	-1.0	-1.7	-3.3	-1.7	-3.4	-4.0	-3.6
Privatization Revenue	0.1	1.1	0.6	0.9	3.2	3.8	0.0
Overall Deficit/Surplus	-2.9	-6.1	-6.0	-7.5	-3.2	0.8	-1.8
Overall Deficit excluding Privatisation Revenues	-3.0	-7.2	-6.6	-8.4	-6.4	-3.0	-4.8

Source: Ministry of Finance.

Table 4.2: Local Government Financial Statistics, 1991-97 *

	1991	1992	1993	1994	1995	1996	1997
	in million HUF						
Total Revenue	127,562	196,975	206,187	256,022	314,142	408,901	533,355
Current Revenue	115,964	175,428	171,121	204,019	257,954	342,697	452,496
Tax Revenue	65,019	91,821	89,067	105,729	153,949	204,827	273,105
Nontax Revenue	50,945	83,607	82,054	98,290	104,005	137,870	179,391
Capital Revenue	11,598	21,547	35,066	52,003	56,188	66,204	80,859
Grants	262,579	311,581	374,925	446,621	478,492	513,624	571,112
Current	242,224	280,245	337,275	394,586	435,020	477,097	524,539
Capital	20,355	31,335	37,650	52,035	43,472	36,527	46,573
Total Expenditure & Lending Minus Repayment	369,726	493,038	590,671	738,820	775,135	874,977	1,040,678
Total Expenditure	370,773	496,586	597,537	750,193	800,830	913,294	1,129,740
Current Expenditure	310,029	400,968	482,467	580,219	663,226	767,679	910,334
Wages & Salaries	119,454	146,506	181,829	223,098	248,700	279,469	332,959
Other Purchases of Goods & Services	122,960	157,749	183,338	192,241	219,849	264,925	312,196
Interest Payments	2,217	2,177	2,771	6,774	13,989	12,127	8,670
Subsidies & Other Current Transactions	16,515	32,365	33,816	57,634	60,454	78,677	91,442
Other Current Expenditure	48,883	62,171	80,713	100,473	120,234	132,481	165,067
Capital Expenditure	60,744	95,618	115,070	169,974	137,604	145,615	219,406
Acquisition of Fixed Capital Assets	48,679	79,275	88,955	141,484	108,513	115,533	187,475
Capital Transfers	12,065	16,343	26,115	28,490	29,091	30,082	31,931
Lending Minus Repayments	-1,047	-3,548	-6,866	-11,373	-25,695	-38,317	-89,062
Privatization Revenue	1,047	3,548	5,419	11,038	24,400	40,741	90,509
Overall Deficit/Surplus	20,415	15,518	-9,559	-36,177	17,499	47,548	63,789
Overall Deficit/Surplus excl. Privatization Revenue	19,368	11,970	-14,978	-47,215	-6,901	6,807	-26,720
	in % of GDP						
GDP (in million HUF)	2,498,319	2,942,668	3,548,262	4,364,811	5,614,042	6,893,934	
Total Revenue	5	7	6	6	6	6	6
Current Revenue	5	6	5	5	5	5	5
Tax Revenue	3	3	3	2	3	3	3
Nontax Revenue	2	3	2	2	2	2	2
Capital Revenue	0	1	1	1	1	1	1
Grants	11	11	11	10	9	7	7
Current	10	10	10	9	8	7	7
Capital	1	1	1	1	1	1	1
Total Expenditure & Lending Minus Repayment	15	17	17	17	14	13	13
Total Expenditure	15	17	17	17	14	13	13
Current Expenditure	12	14	14	13	12	11	11
Wages & Salaries	5	5	5	5	4	4	4
Other Purchases of Goods & Services	5	5	5	4	4	4	4
Interest Payments	0	0	0	0	0	0	0
Subsidies & Other Current Transactions	1	1	1	1	1	1	1
Other Current Expenditure	2	2	2	2	2	2	2
Capital Expenditure	2	3	3	4	2	2	2
Acquisition of Fixed Capital Assets	2	3	3	3	2	2	2
Capital Transfers	0	1	1	1	1	0	0
Lending Minus Repayments	0	0	0	0	0	-1	-1
Privatization Revenue	0	0	0	0	0	1	1
Overall Deficit/Surplus	1	1	0	-1	0	1	1
Overall Deficit/Surplus excl. Privatization Revenue	1	0	0	-1	0	0	0

* Consolidated for Local governments, but not for General Government
Source: Ministry of Finance.

Table 4.3: Tax and Contribution Rates, 1993-2000

	1993	1994	1995	1996	1997	1998 expected	1999 budgeted	2000
Personal Income Tax								
highest rate	40	44	44	48	42	42	40	
average effective rate ¹	19.9	18.1	20.6	22.9	20.6	20.8	20.9	
Corporate income tax								
normal rate	40	36	18	18	18	18	18	
dividend-withholding tax ²	-	-	23	23	20	20	20	
VAT								
normal rate	25	25	25	25	25	25	25	
reduced rate	6	10	12	12	12	12	12	
pharmaceuticals and other ³	0	0	0	0	0	0	0	
Payroll	63	60.8	60	58.5	59.5	59	54.4	54.8
Covered wage bill (% of GDP)			23.6%	22.2%	21.7%	21.5%		
Breakdown in payroll taxes								
Employer's	51	49.3	48.5	47	47	47.5	41.9	41.3
o/w Pension	24.5	24.5	24.5	24.5	24	24	22	21
Health	19.5	19.5	19.5	18	15	15	11	11
Flat Health Tax ⁴	-	-	-	-	3.5	3.8	5.3	5.5
Income Related Health Tax (11%) ⁵	-	-	-	-	-	0.7	0.6	0.5
Labour Market Fund	7	5	4.2	4.2	4.2	3.7	2.7	3
Wage guarantee	-	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Employee's	12	11.5	11.5	11.5	12.5	11.5	12.5	13.5
o/w Pension	6	6	6	6	7	7	8	9
o/w in multi-pillar								
2nd pillar			-	-	-	6	7	8
PAYG			-	-	-	1	1	1
Health	4	4	4	4	4	3	3	3
Labour Market Fund	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5

1/ progressive taxes/progressively taxed income

2/ additional tax paid on distributed dividend

3/ electricity in 1993, school books and paper nappies in 1999

4/ for the purpose of this table, the revenues from flat health tax have been expressed as percentage of the payroll tax base

5/ for the purpose of this table, the revenues from the income related health tax (11%) have been expressed as percentage of payroll tax base

Source: Ministry of Finance.

Table 4.4: Budget Transfers to Agriculture, 1992-98
(million HUF)

	1992	1993	1994	1995	1996	1997	1998 (*)
Market support	30,192	42,707	41,600	47,530	45,059	38,565	41,010
<i>Export subsidy</i>	22,841	25,531	34,600	45,055	42,982	27,273	-
<i>Domestic price support</i>	7,301	17,176	7,000	2,475	2,097	11,292	-
Production subsidies	7,369	4,556	12,350	11,620	16,388	18,550	31,480
<i>Interest rate subsidies</i>	5,487	626	11,850	11,620	6,092	6,496	-
<i>Deficiency payments</i>	-	-	-	-	5,969	6,071	-
Investment subsidies	3,574	2,686	10,192	5,946	17,204	22,845	31,160
Support to restructuring	352	1,225	4,750	7,454	10,878	4,147	3,000
Other subsidies	190	118	-	796	3,090	3,492	4,120
Total	41,677	51,291	68,922	73,346	92,639	87,599	110,770
<i>Total in US\$ (million)</i>	527	558	750	584	608	469	540

(*) Planned

Source: Ministry of finance, Hungary.

Table 5.1: Banking Survey, 1989-98^a
(billion HUF, end of period)

	1989	1990	1991	1992 ^b	1993	1994	1995 ^c	1996	1997 ^d	1998 ^e
Net Foreign Assets ^f	-1019.4	-983.1	-1024.4	-995.5	-1202.8	-1604.1	-1548.4	-1323.6	-1127.2	-1001.5
Convertible	-1053.0	-1038.7	-1075.7	-998.8	-1207.6	-1605.9	-1550.4	-1323.6	-1127.2	-1001.5
Nonconvertible	33.6	55.6	51.3	3.3	4.8	1.8	2.0	0.0	0.0	0.0
Domestic Credit ^g	2011.6	2204.4	2532.4	2849.1	3441.1	4065.0	4619.9	4972.8	5569.8	6328.3
General Government, Net ^h	1187.3	1215.2	1540.2	1916.7	2410.2	2860.1	3302.5	3413.3	3463.5	3850.5
of which interest-free debt	460.7	519.2	777.9	888.9	1183.0	1499.2	2154.4	2090.2	333.2	286.1
Local Governments	13.4	15.7	13.6	13.0	22.7	47.6	49.9	38.5	30.3	44.4
Non-profit organizations	4.8	6.2	9.4	6.0	6.4	13.4	15.0	19.8	33.5	43.4
Non-government sector	806.1	966.1	967.3	913.1	1001.6	1143.5	1250.3	1493.8	2013.3	2338.9
Enterprises ⁱ	473.9	592.1	703.9	635.4	676.2	780.5	925.0	1197.2	1709.3	1983.7
Households ^j	313.5	330.0	202.0	209.1	239.7	273.8	254.5	233.7	240.2	263.1
Small Entrepreneurs	18.7	44.0	61.4	68.6	85.7	89.2	70.8	62.9	63.8	92.1
Other Assets, Net	-217.0	-211.9	-138.2	-110.3	-221.8	-181.8	-335.2	-298.1	-436.1	-700.6
Net Domestic Assets	1794.6	1992.5	2394.2	2738.8	3219.3	3883.2	4284.8	4674.7	5133.7	5627.6
Broad Money	775.2	1009.4	1369.8	1743.4	2016.5	2279.1	2736.4	3351.1	4009.3	4300.8
Currency Outside Banks ^k	180.6	209.8	260.2	322.2	371.2	410.6	443.9	497.7	562.6	649.4
Other Deposits	73.8	103.0	166.3	172.1	191.8	192.7	220.2	144.7	175.7	337.9
Household Deposits ^k	273.4	323.8	432.0	582.4	696.0	866.4	1079.7	1342.7	1663.2	2334.9
Enterprise Deposits ^k	179.9	277.7	324.5	424.2	499.7	518.3	610.3	749.8	954.3	947.5
Bonds & Savings Notes ^l	67.5	95.1	186.8	242.5	257.8	291.2	382.3	497.2	485.3	31.2
Savings Notes	32.4	35.6	48.6	74.5	83.2	85.9	86.9	96.1	108.9	-
Bonds and Other Securities ^l	35.1	59.5	138.2	168.0	174.6	205.3	295.4	401.1	376.4	31.2

a) Data of the National Bank of Hungary and credit institutions. The data from December 31, 1991 onwards also reflect the structural changes effected in the balance sheet of the NBH.

b) Instead of December 31, 1992 this column contains data for January 1, 1993, enterprise sector borrowing, the stock of enterprise deposits, deposits of small enterprises and other deposits, thus the stock of broad money cannot be fully compared with earlier data. From 1 January 1993 data reflect the impact of debtor and creditor consolidation.

c) From 1 January 1995, credit figures include total interest and commission fallen due but unpaid. The majority of these increased claims on enterprises.

d) Preliminary data. The following changes were made in comparison with end-1996: from early 1997 official rates are based on market prices, so balance sheet items denominated in foreign currency on 1 January are calculated at market rates, and CIB (Central-European International Bank) has been classified as a resident bank.

e) Preliminary data. From January 1998 on, securities include only bonds and certificates of deposits. Savings notes and similar obligations are part of deposits of the sector concerned.

f) At current exchange rate. They exclude, from December 31, 1992, the stock of ruble claims to a value of Ft 48.3 billion taken over by the state. Blocked foreign currency deposits of the government are included in the net credit to central government. Tables contain revised time series for the whole period.

g) Including the state debt due to valuation changes. Includes from December 31, 1992 on, the stock of government bonds issued in a value of Ft 48.3 billion against ruble claims taken over by the state, from January 1, 1993 on, the stock of consolidation government bonds and from May 31.

h) Including social security fund and extrabudgetary funds. Includes the state debt due to valuation changes and the blocked foreign exchange deposits of the government. Includes, from April 30, 1991 on, the stock of old preferential housing loans taken over by the state; from December 31, 1992 the stock of government bonds issued in a value of Ft 48.3 billion against ruble claims taken over by the state; and from March 31, 1993 the stock of credit consolidation

i) Without the old preferential housing loans taken over by the state. From January, 1998 on credits to small entrepreneurs include foreign exchange credits to small entrepreneurs as well. (Previously they were included in foreign exchange credits of enterprises.)

j) From 1991 on, the households' deposits has been calculated according to a new method.

k) Due to changes in classification, from January 1, 1993 the stock of enterprise deposits, deposits of small enterprises and other deposits, thus the stock of broad money cannot be fully compared to earlier data. From January, 1998, on, deposits of small entrepreneurs include foreign exchange deposits of small entrepreneurs as well. (Previously they were included in foreign exchange deposits of enterprises.)

l) From January 1995 on, includes the stocks of certificates of deposits.

Source: NBH.

Table 5.2: BANKING SURVEY, 1989-98^{a)}
A) ASSETS (billions of forints)

End of period	Net credit to central government ^(*)	Of which:		Credits to enterprises				Credits to households and small entrepreneurs			Credits to other financial institutions	Domestic credit stock ^(b)	Other assets, net	Net domestic assets
		Interest free debt and public debt securities	Foreign exchange debt securities	Investment credits ^(c)	Foreign exchange credits ^(d)	Total	House-holds ^(e)	Small entrepreneurs ^(f)	Total					
										Foreign credits				
December 1989	1187.3	460.7		134.9	462.6	11.3	473.9	313.5	18.7	332.2	0.0	2011.6	-217.0	1794.6
December 1990	1215.2	519.2		134.9	564.3	27.8	592.1	330.0	44.0	374.0	1.2	2204.4	-211.9	1992.5
December 1991	1540.2	777.9		134.9	656.6	47.3	703.9	202.0	61.4	263.4	1.9	2532.4	-138.2	2394.2
December 1992 ^{a)}	1835.5	888.9		0.0	630.0	61.8	691.8	209.1	76.2	285.3	0.3	2946.2	-87.5	2858.7
December 1993	2410.2	1182.0		134.9	610.6	65.6	676.2	239.7	85.7	325.4	0.2	3441.1	-221.8	3219.3
December 1994	2860.1	1499.2		134.9	687.9	92.6	780.5	273.8	89.2	363.0	0.4	4065.0	-181.8	3883.2
December 1995 ^{a)}	3302.5	2154.4		134.9	707.2	217.8	925.0	254.5	70.8	325.3	2.2	4619.9	-335.2	4284.8
December 1996	3413.3	2090.2		134.9	847.1	350.1	1197.2	233.7	62.9	296.6	7.4	4972.8	-298.1	4674.7
December 1997 ^{b)}	3463.5	333.2	1886.7		1196.3	513.0	1709.3	238.0	63.8	301.8	31.4	5569.8	-436.1	5133.7
January 1998 ^{b)}	3338.9	333.2	1902.8		1196.2	511.4	1707.6	227.4	72.4	299.9	30.1	5438.9	-506.5	4932.5
February ^{b)}	3364.3	333.2	1917.7		1181.8	520.1	1701.9	224.1	73.6	297.7	27.8	5455.0	-544.5	4910.4
March ^{b)}	3425.0	333.2	1935.8		1217.6	538.4	1756.0	225.4	76.9	302.2	30.0	5576.4	-636.8	4939.7
April ^{b)}	3320.8	331.5	1945.5		1245.2	544.4	1789.6	227.5	79.4	306.9	34.7	5519.8	-698.6	4821.2
May ^{b)}	3336.3	331.5	1996.6		1255.7	588.6	1844.3	234.9	81.4	316.4	40.0	5605.7	-714.2	4891.5
June ^{b)}	3347.1	331.5	2011.0		1276.9	603.3	1880.2	241.1	83.7	324.8	36.6	5664.3	-651.0	5013.3
July ^{b)}	3261.0	331.5	2004.9		1277.8	610.0	1887.8	242.4	86.0	328.3	47.6	5596.7	-664.2	4932.5
August ^{b)}	3505.0	331.5	2087.7		1292.7	651.2	1943.9	247.8	86.6	334.3	55.0	5911.9	-694.2	5217.7
September ^{b)}	3665.4	331.5	2120.3		1363.0	630.1	1993.1	252.9	88.2	341.1	53.8	6128.0	-781.9	5346.1
October ^{b)}	3638.7	331.5	2113.8		1400.2	637.7	2037.9	254.5	89.5	344.0	52.6	6150.4	-751.8	5398.6
exchange rate change	-5.5	0.0	-5.7	0.0	0.0	-0.3	-0.3	0.0	0.0	0.0	0.1	-5.6	5.3	-0.3
November ^{b)}	3605.5	331.5	2110.1		1408.5	651.7	2060.2	272.8	89.8	362.6	59.0	6171.8	-775.5	5396.2
transactions	103.9	-8.4	0.0	0.0	-46.2	-11.5	-57.7	-9.7	2.7	-7.0	-7.9	34.6	183.1	217.6
exchange rate changes	9.0	0.0	8.1	0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.1	11.2	-20.6	-9.3
other volume changes	132.0	0.0	0.0	0.0	-14.9	-5.9	-20.8	0.0	-0.5	-0.5	0.0	110.7	-87.6	23.1
December ^{b)}	3850.5	286.1	2118.2		1347.4	636.3	1983.7	263.1	92.1	355.2	51.1	6328.3	-700.6	5627.6

^{a)} Data of the National Bank of Hungary and credit institutions. The data from December 31, 1991 onwards also reflect the structural changes effected in the balance sheet of the NBH.

^{b)} Including social security fund and extrabudgetary funds. Includes the state debt due to valuation changes and the blocked foreign exchange deposits of the government. Includes, from April 30, 1991 on, the stock of old preferential housing loans taken over by the state; from December 31, 1992 the stock of government bonds issued in a value of Ft 48.3 billion against ruble claims taken over by the state; and from March 31, 1993 the stock of credit consolidation government bonds issued in the course of the credit consolidation process as well. Includes, from December 1994 the deposits of SPA, later HPSHC.

^{c)} Without the old preferential housing loans taken over by the state.

^{d)} Including the state debt due to valuation changes. Includes from December 31, 1992 on, the stock of government bonds issued in a value of Ft 48.3 billion against ruble claims taken over by the state, from January 1, 1993 on, the stock of consolidation government bonds and from May 31.

^{e)} Data do not reflect the impact of credit consolidation.

^{f)} Due to changes in classification from 1 January 1993, enterprise sector borrowing is not fully comparable with earlier data. From 1 January 1993 data reflect the impact of debtor and creditor consolidation.

^{g)} From 1 January 1995, credit figures include total interest and commission fallen due but unpaid. The majority of these increased claims on enterprises.

^{h)} Preliminary data.

ⁱ⁾ The following changes were made in comparison with end-1996: from early 1997 official rates are based on market prices, so balance sheet items denominated in foreign currency on 1 January are calculated at market rates, and CIB (Central-European International Bank) has been classified as a resident bank.

^{j)} From January, 1998 on credits to small entrepreneurs include foreign exchange credits to small entrepreneurs as well. (Previously they were included in foreign exchange credits of enterprises.)

^{k)} Blocked foreign currency deposits of the government are included in the net credit to central government. Tables contain revised time series for the whole period.

Source: NBH.

Table 5.3: BANKING SURVEY, 1989-98^{a)}
B) LIABILITIES (billions of forints)

End of period	Broad money (M3)																						Net liabilities
	Non-convertible	Net foreign liabilities ^{b)}	Currency outside banks			Enterprise deposits			Household and small entrepreneur deposits			Other deposits				Bonds and saving notes ^{c)}				Grand total			
			Households ^{d)}	Other	Total	Forint	Foreign exchange ^{e)}	Total ^{f)}	Household deposits			Deposits of small entrepreneurs ^{g)}	Total ^{h)}	Local governments	Non-profit institutions	Other	Total	Savings notes	Certificates of deposits		Bonds and other securities ⁱ⁾	Total	
									Forint	Foreign exchange	Total												
December 1989	-33.6	1019.4	146.8	33.8	180.6	166.2	13.7	179.9	252.9	20.5	273.4	23.9	297.3	35.3	5.6	9.0	49.9	32.4	13.4	21.7	67.5	775.2	1794.6
December 1990	-55.6	983.1	165.8	44.0	209.8	228.2	49.5	277.7	261.3	62.5	323.8	36.6	360.4	43.6	10.8	12.0	66.4	35.6	33.6	25.9	95.1	1009.4	1992.5
December 1991	-51.3	1024.4	189.0	71.2	260.2	258.6	65.9	324.5	302.5	129.5	432.0	57.5	489.5	58.7	26.0	24.1	108.8	48.6	82.3	55.9	186.8	1369.8	2394.2
December 1992	-3.3	996.1	246.1	76.1	322.2	332.3	63.2	395.5	429.8	152.6	582.4	61.8	644.2	73.5	46.9	23.8	143.9	74.5	91.0	77.0	242.5	1748.3	2858.7
December 1993	-4.8	1202.8	294.7	76.5	371.2	374.7	125.0	499.7	491.3	204.7	696.0	33.2	729.2	74.7	53.3	30.6	158.6	83.2	91.7	82.9	257.8	2016.5	3219.3
December 1994	-1.8	1604.1	333.2	77.4	410.6	406.2	112.1	518.3	572.7	293.7	866.4	32.0	898.4	69.4	58.3	33.0	160.7	85.9	91.8	113.4	291.1	2279.1	3883.2
December 1995	-2.0	1548.4	380.4	63.5	443.9	422.8	187.5	610.3	640.7	439.0	1079.7	34.1	1113.8	80.7	67.9	37.5	186.1	86.9	295.4	382.3	2736.4	4284.8	
December 1996		1323.6	425.1	72.6	497.7	545.2	204.6	749.8	857.9	484.8	1342.7	48.6	1391.3	86.2	81.0	47.9	215.1	96.1	401.1	497.2	3351.1	4674.7	
December 1997 ^{j)}		1127.2	496.9	65.7	562.6	719.6	234.6	954.3	1140.4	522.8	1663.2	66.8	1730.0	115.8	91.7	68.2	275.7	108.9	375.1	484.0	4006.6	5133.7	
January 1998 ^{k)}		1123.8	478.5	60.3	538.8	600.4	224.4	824.9	1581.6	530.0	2111.6	69.3	2181.0	98.3	94.0	32.2	224.6		39.5	39.5	3808.8	4932.5	
February ^{l)}		1054.8	485.8	61.4	547.2	628.4	216.2	844.5	1595.2	533.0	2128.3	71.2	2199.5	97.8	95.5	33.2	226.5		37.8	37.8	3855.5	4910.4	
March ^{m)}		1006.9	489.4	62.3	551.7	654.8	227.0	881.8	1598.4	536.8	2135.2	70.4	2205.6	112.4	97.7	48.1	258.2		35.5	35.5	3932.8	4939.7	
April ⁿ⁾		882.5	521.3	63.0	584.3	623.4	237.0	860.5	1610.3	540.0	2150.3	69.9	2220.2	96.4	98.2	44.6	239.2		34.5	34.5	3938.7	4821.2	
May ^{o)}		883.0	522.4	65.2	587.6	665.2	226.4	891.6	1612.6	551.3	2163.8	76.4	2240.2	94.7	97.4	62.9	255.1		34.0	34.0	4008.5	4891.5	
June ^{p)}		932.9	521.4	66.3	587.7	709.2	233.9	943.1	1623.6	560.1	2183.7	77.4	2261.0	93.1	97.6	65.0	255.7		32.9	32.9	4080.4	5013.3	
July ^{q)}		811.3	549.1	66.1	615.2	706.5	230.7	937.1	1663.5	588.2	2221.7	78.5	2300.2	84.4	98.7	53.0	236.1		32.6	32.6	4121.2	4932.5	
August ^{r)}		964.8	573.6	69.0	642.6	734.2	242.8	977.1	1683.5	586.4	2270.0	86.7	2356.7	87.8	99.4	57.1	244.3		32.2	32.2	4252.9	5217.7	
September ^{s)}		1074.2	569.2	71.3	640.6	713.9	232.0	945.9	1704.5	600.6	2305.0	83.3	2388.3	113.3	99.0	53.1	265.3		31.8	31.8	4271.9	5346.1	
October ^{t)}		1097.7	579.3	70.1	649.4	696.6	250.9	947.5	1729.8	605.1	2334.9	84.0	2418.8	99.0	104.1	50.8	253.9		31.2	31.2	4300.8	5398.6	
November ^{u)}		1018.2	583.7	78.2	661.9	741.6	241.0	982.5	1747.6	608.1	2355.7	90.1	2445.9	93.4	103.2	60.6	257.2		30.5	30.5	4378.0	5396.2	
transactions	0.0	-28.8	5.9	-1.1	4.7	61.3	-11.8	49.4	151.3	6.2	157.5	-6.8	150.8	30.1	2.7	10.4	43.2	0.0	0.0	-1.6	-1.6	246.4	217.6
exchange rate changes	0.0	-11.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	1.3	1.3	0.0	1.3	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	1.6	-9.3
other volume changes	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1
December ^{v)}		1001.5	589.5	77.1	666.6	802.8	229.3	1032.1	1898.9	615.6	2514.5	83.4	2597.9	123.5	105.9	71.2	300.5		28.9	28.9	4626.0	5627.6	

a) Data of the National Bank of Hungary and credit institutions. The data from December 31, 1991 onwards also reflect the structural changes effected in the balance sheet of the NBH.

b) At current exchange rate. They exclude, from December 31, 1992, the stock of ruble claims to a value of Ft 48.3 billion taken over by the state.

c) From 1991 on, the households' deposits has been calculated according to a new method.

d) Due to changes in classification, from January 1, 1993 the stock of enterprise deposits, deposits of small enterprises and other deposits, thus the stock of broad money cannot be fully compared to earlier data.

e) From January 1995 on, includes the stocks of certificates of deposits.

f) Preliminary data.

g) The following changes were made in comparison with end-1996: from early 1997 official rates are based on market prices, so balance sheet items denominated in foreign currency on 1 January are calculated at market rates, and CIB (Central-European International Bank) has been classified as a resident bank.

h) From January 1998 on, securities include only bonds and certificates of deposits. Savings notes and similar obligations are part of deposits of the sector concerned.

i) From January, 1998 on, deposits of small entrepreneurs include foreign exchange deposits of small entrepreneurs as well. (Previously they were included in foreign exchange deposits of enterprises.)

j) Blocked foreign currency deposits of the government are included in the net credit to central government. Tables contain revised time series for the whole period.

Source: NBH.

Table 6.1: Price Indices of the Industrial Sector, 1985-98

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(previous year = 100)									
Producer Price Index	105.0	122.0	132.6	111.5	110.8	111.3	128.9	121.8	120.4	111.3
Domestic Sales Price Index	104.5	124.2	131.9	109.3	110.5	110.2	127.3	122.6	120.8	110.6
External Trade Sales Price Index	104.3	112.4	130.2	115.2	112.5	115.0	134.0	119.7	119.5	112.5
Consumer Price Index	107.0	128.9	135.0	123.0	122.5	118.8	128.2	123.6	118.3	114.3

Note: Data for 1992 and 1993 are determined by the new "Standard Industrial Classification" introduced in 1992.

Source: Central Statistical Office.

Table 6.2: Labor Income, Wage Bill and Covered Wage Bill, 1985-98
in billion HUF, current prices

	1995	1996	1997	1998	1995/98
GDP	5614	6893.9	8541.4	10235	-
Total Labour Income/GDP	54.3%	53.4%	51.9%	51.9%	95.5%
Employer Contribution/GDP	13.0%	11.9%	12.0%	11.9%	91.4%
Labor part of Mixed Income/GDP	7.4%	7.8%	6.8%	6.7%	91.3%
Wage Bill/GDP	33.9%	33.7%	33.1%	33.3%	98.0%
Wage Bill/ Total Labour Income	62.5%	63.1%	63.7%	64.1%	102.6%
Covered Wage Bill/Wage Bill	69.6%	65.8%	65.6%	64.7%	92.9%
Covered Wage Bill/GDP	23.6%	22.2%	21.7%	21.5%	91.1%

Source: Central Statistics Office.

Table 7.1: FDI Inflows into Hungary (m US\$), 1991-97

	1991	1992	1993	1994	1995	1996	1997
Cash	1459	1471	2339	1147	4453	1983	2085
In kind	155	170	142	173	117	57	22
<i>Total</i>	1614	1641	2481	1320	4570	2040	2107

Source: Hungarian National Bank and Ministry of Trade & Industry.

Table 7.2: Hungary: FDI by Sector 1992 and 1996

	All companies	Joint Ventures Number	FDI b HuF	JV to AC (%)	FDI to all assets (%)
1992					
A. Agriculture	3,088	164	2.6	5.3	0.8
B. Fishing	43	2	0.0	4.7	1.5
C. Mining	137	45	6.4	32.8	15.0
D. Manufacturing	11,620	2,548	197.5	21.9	20.5
E. Electricity, gas, steam, water supply	151	13	2.5	8.6	0.3
F. Construction	5,523	693	15.7	12.5	16.8
G. Wholesale and retail trade, & motor repairs	19,706	5,422	54.2	27.5	14.9
H. Hotels & restaurants	1,825	433	12.6	23.7	15.9
I. Transport, storage & communication	2,237	516	6.7	23.1	2.6
J. Financial intermediates	615	110	38.2	17.9	22.1
K. Real estate, renting, business activities	9,771	1,923	34.1	19.7	5.6
L. Public administration	339	69	0.1	20.4	6.6
M. Education	367	91	0.5	24.8	30.6
N. Health & social work	1,686	334	3.0	19.8	7.3
All	57,108	12,363	374.1	21.6	10.1
1996					
A. Agriculture	5,808	677	18.6	9.4	6.1
B. Fishing	82	12	0.2	13.2	12.3
C. Mining	233	74	18.4	46.9	34.9
D. Manufacturing	18,288	3,893	647.7	68.0	51.1
E. Electricity, gas, steam, water supply	343	37	227.3	40.3	21.4
F. Construction	8,776	928	58.1	47.1	41.5
G. Trade & repair of motor vehicles	36,833	9,271	190.5	44.7	36.2
H. Hotels & restaurants	3,452	739	39.8	54.6	38.6
I. Transport, storage & communication	4,013	698	141.3	32.8	22.9
J. Financial intermediates	350	213	145.2	65.6	43.6
K. Real estate, renting, business activities	20,788	3,064	111.6	25.7	20.5
M. Education	674	101	0.4	24.3	12.7
N. Health & social work	1,063	128	2.4	53.8	45.6
O. Other community, social & personal services	4,012	442	6.8	7.3	5.2
P. Private households with employed persons	1	0	0	0	0
Q. Extra-territorial organizations and bodies	1	1	0	100	90
All	105,717	20,278	1,608.1	23.1	15.7

AC = all companies, JV = partially or totally foreign owned firms.

Source: Hamar (1998) from double entry firms' balance sheet reports to Tax Office. Data exclude firms under bankruptcy & liquidation.

Table 7.3: Manufacturing Firms' Indicators: 1992 and 1996

Indicators	Joint ventures		Domestic firms		All	
	1992	1996	1992	1996	1992	1996
Employee per firm	89	76	72	30	75	40
Net income on sales per employees (m HUF/person)	2.3	10.6	2.0	4.0	2.1	6.7
Exports/employees (m HUF/person)	0.6	4.5	0.4	0.8	0.5	2.3
Exports/net income on sales (%)	26.3	42.5	21.3	20.6	22.7	34.7
Own results/own capital (%)	1.5	17.6	-3.0	12.4	-1.7	16.2
Own results/all assets (%)	1.4	27.2	-3.8	15.5	-2.0	23.4
Investment/own capital (%)	6.8	9.9	3.6	5.5	4.5	8.7
Investment/all assets (%)	7.2	15.3	4.8	6.9	5.6	12.6
Investment/FDI (stock) (%)	10.9	20.3	0.0	0.0	25.7	24.6
Results after tax/results before taxation (%)	-126.8	91.2	-112.2	54.5	-114.8	86.0
Long term credit/own capital (%)	22.8	24.3	10.0	17.5	14.0	22.5
Short term credit/own capital (%)	62.3	69.2	56.2	101.1	57.9	78.0

Notes: Firms showed aggregate losses in 1992 and profits in 1996.

Source: Hamar 1998.

Table 7.4: Business Links with Other Owners

Type of majority owner	Percentage of trade (purchases & sales) with other owners					N
	None	1-20%	21-80%	Above 80%		
Foreign	25.7%	24.8%	37.6%	11.9%		101
Hungarian Individual	32.4%	48.6%	18.9%	0%		37
Domestic company	39.0%	32.2%	28.8%	0%		59
Public	25.0%*	75.0%*	0,0	0%		4
Mixed	40.0%*	10.0%*	50.0%*	0%		5
All firms	31.3%	31.3%	31.8%	5.7%		(100%) =206

*Sample size less than 10

Source: Toth (1998).

Table 7.5: International Comparison: Enterprise Losses (in % of GDP), 1992-97

	1992	1993	1994	1995	1996	1997
GROSS LOSSES						
INDUSTRY						
<i>Czech Republic</i>		4.1	2.6	2.0	2.5	2.2
<i>Slovenia</i>	10.0	4.8	3.8	3.7	4.7	3.4
<i>Poland</i>			2.0	2.1	1.7	
<i>Slovak Republic</i>		5.6	4.1	3.2	5.4	5.3
MANUFACTURING						
<i>Czech Republic</i>		3.7	2.3	1.8	2.3	1.9
<i>Slovenia</i>	6.8	3.3	2.6	3.0	3.4	2.2
<i>Poland</i>			2.0	1.7	1.5	
<i>Slovak Republic</i>		4.7	3.7	2.9	4.6	4.5
NET PROFITS						
INDUSTRY						
<i>Czech Republic</i>		4.4	5.1	5.5	2.8	2.6
<i>Slovenia</i>	-9.1	-3.6	-1.9	-1.7	-2.5	-0.4
<i>Poland</i>			3.8	4.0	3.0	
<i>Slovak Republic</i>		7.2	5.8	6.6	3.9	2.9
MANUFACTURING						
<i>Czech Republic</i>		0.3	1.7	2.4	0.7	1.5
<i>Slovenia</i>	-6.0	-2.2	-0.9	-1.2	-1.5	0.3
<i>Poland</i>			2.3	2.9	2.7	
<i>Slovak Republic</i>		-0.2	0.3	1.5	-0.1	-0.1

Notes: Data are before tax and before distribution of dividends. In the Czech Republic, data are for non-financial enterprises with 100 or more employees. In Slovak Republic, data through 1996 are for enterprises with 25 or more employees, and in 1997 with 20 or more employees. In Slovenia until 1994 data was compiled according to the Uniform Classification of activities, since 1995 data have been classified according to Standard Classification of Activities

Sources: Statistical Offices of the respective countries.

Table 7.6: Number of Owners, and Whether They Held Majorities, 1995

<i>Number of owners</i>	<i>Percentages of firms</i>	<i>Percentage of firms with single majority owner¹</i>
One	19	19
Two	31	29
Three	25.2	19
No more than three	75.2	66.2
More than three	24.8	14.8
Sample size (N)	210	210

¹Manufacturing firms with 100 to 200 employees
Source: Ábrahám (unpublished manuscript, February 1996).

**Table 7.7: Ownership Links among the Larger Exporting Manufacturing Firms
(1996 and 1997)**

		<i>Is another domestic firm among the firm's owners?</i>					
		<i>EXPORT96 - 1996</i>			<i>TOP98/1 - 1997</i>		
		No	Yes	Total	No	Yes	Total
Does the firm own a domestic firm?	No	49.3% ^a	10.4%	59.7%	53% ^a	20%	73%
	Yes	26.5%	13.7%	40.3%	13.7%	13.3%	27%
	<i>Total</i>	75.9%	24.1%	100%	66.7%	33.3%	100%
				(N=289)	(N=300)		

^a Percentage of disconnected firms
Source: Toth (1998).

Table 7.8: Trade Links among Firms with Ownership Links

Type of <i>majority</i> owner	<i>Percentage of purchases & sales with owner firms</i>				<i>Sample size</i>
	None	1-20%	21-80%	> 80%	
Foreign	25.7	24.8	37.6	11.9	N= 206
Hungarian Individual	32.4	48.6	18.9*	0	37
Domestic company	39	32.2	28.8	0	59
Public	25	75*	0,0	0	4
Mixed	40*	10*	50*	0	5
<i>Total number of firm with ownership links</i>	31.3%	31.3%	31.8%	5.7%	=100%

*Sample size less than 10
Source: Toth (1998).

**Table 8.1: General Government Employment¹
Annual Average Employment 1993 - 97 (in thousands)**

	1993	1994	1995	1996	1997	1997%
Public Servants	650	634	616	590	586	72.0
Education	301	300	292	274	237 ²	29.1
Health & social service	252	246	239	225	216	26.5
Research	10	9	8	7	7	0.9
Other	87	79	77	84	126	15.5
Civil Servants³	108	105	102	102	106	13.0
Central	64	63	52	52	54	6.6
Local	44	42	50	50	52	6.4
Other	155	165	162	145	122	15.0
Total	913	904	880	837	814	100.0
Note						
Population	10,310	10,277	10,246	10,212	10,135	----
Labor Force	4,346	4,203	4,095	4,048	3,995	----

¹ The Ministry of Labor uses year-average employment figures, and collects data from a variety of sources as well as making its own calculations. Ministry of Interior data (dealing exclusively with the civil service) is a "snapshot" of the situation on a given date. The two data series differ, notably with regard to civil service employment numbers and trends. In this text, data on general government employment and wages is drawn from the Ministry of Labor. The source for detailed information on the employment and social profile of civil servants is the Ministry of Interior. Due to ongoing changes in statistical systems, comparisons among years should be treated with caution.

² As of 1997, education workers in small communities are classified in the "other" category.

³ The apparent shift of civil servants between central and local administration results from changes in the statistical structure rather than actual redistribution of staff.

Sources: Ministry of Labor, Central Statistical Office.

**Table 8.2: General Government Employment by Economic Sector
1997 (in thousands)**

Sector	Central	Self-Gov't	Total	%
Research	7.3	0.0	7.3	0.9
Administration	172.0	89.3	261.3	32.1
Education	33.8	203.6	237.4	29.2
Health	53.4	171.5	224.9	27.6
Culture & Sport	7.4	19.9	27.3	3.3
Other ¹	6.6	49.2	55.8	6.9
Total	280.5	533.5	814.0	100.0

¹ Calculated as a residual. Includes public works and, as of 1997, education workers in small communities.

Source: Ministry of Labor.

Box 8.3: Remuneration Systems for the Public Service and Civil Service

CIVIL SERVICE. The Civil Service Act of 1992 lays out the remuneration scale for the civil service based upon years of service and educational qualifications. There are four major classes, which are further divided into grades and steps. Promotion within a class is based upon tenure, and is largely automatic upon completion of the requisite term of service. In 1997, professional staff accounted for 79% of civil servants (35% in class I and 44% in class II). Clerical staff and blue collar workers made up 10% and 11%, respectively, of civil servants.

Civil service remuneration consists of a basic wage plus a complex array of other payments. The basic wage is determined by multiplying a remuneration base figure by a coefficient corresponding to the individual's class, grade and step. The remuneration base is set by parliament each year, following negotiations between the Ministry of Finance and the civil servants union. In 1998, it was HUF 26,000 per month, up from HUF 23,400 in 1997. To this is added a remuneration supplement, defined as a percentage of the individual's basic wage. All civil service employees automatically receive this supplement, but the percentage amount varies according to the individual's class and employing institution.

Central government entities must adhere strictly to both the remuneration base and coefficient structure in calculating basic salaries. Self-governments, on the other hand, are afforded the flexibility to increase the remuneration base, or reduce it by up to 10% if their financial situation warrants, but they are obligated to use the same coefficient structure. Self-governments may also reduce the percentage of the remuneration supplement.

In addition to the basic wage and remuneration supplement, civil servants receive a wide range of other supplements, allowances (i.e. for hazardous or shift work, special qualifications acquired through training or study, and foreign language skills) and bonuses (such as a "thirteenth month" bonus), some of which are standard across government while others vary by institution.

PUBLIC SERVICE. The public service remuneration structure is largely similar to that for the civil service, with staff assigned to categories based upon educational attainment. Categories are divided into grades (reflecting term of service), with a corresponding coefficient structure. A significant difference, however, is that the coefficient structure represents a minimum that must be paid but may be exceeded, in contrast to the rigid coefficients for civil servants.

Prior to 1997, there was one annually-set remuneration base figure (generally hovering near the official minimum wage) with seven wage categories. In 1997, this structure was revised to increase differentiation of earnings within each category. Under the revised system there are 10 categories (A to J) each containing 14 grades, and with its own remuneration base, ranging from HUF 19,700 to HUF 48,700 in 1998. The remuneration bases are set by parliament following negotiations between the Ministry of Labor and public sector unions. The lowest remuneration base is generally close to the official minimum wage (HUF 19,500 in 1998).

Like civil servants, public servants also receive a wide array of benefits and allowances for hazardous work, foreign language skills, outstanding performance and a jubilee bonus after 25, 30 and 40 years of service. Additional allowances may be set by individual ministers.

University educated staff (categories H to J) make up only 13.5% of public servants, while staff with college training (E-G) account for an additional 29.5%. The remainder are secondary school graduates (C-D) and blue collar workers (A-B) who make up 26.9 and 30.1% of public service employment, respectively.

**Table 8.4: Average Remuneration in the Civil Service and Public Service 1994-97
(HUF per month)**

	1994	1995	1996	1997
Total Earnings¹				
<i>Nominal</i>				
Civil service	41,052	53,395	62,321	77,633
Public service	32,990	35,088	38,419	47,544
<i>1994 HUF</i>				
Civil Service	41,052	41,650	33,697	41,415
Public Service	32,990	27,370	22,144	25,368
Basic Wages²				
<i>Nominal</i>				
Civil service	33,595	41,600	48,970	62,052
Public service	24,349	26,479	29,186	37,469
<i>1994 HUF</i>				
Civil service	33,595	32,449	30,905	33,103
Public service	24,349	20,654	18,419	19,989

¹ Includes allowances, supplements, 13th month bonus, and overtime earnings of public servants

² Includes basic wage and remuneration supplement

Source: Ministry of Labor, Central Statistical Office, and World Bank staff calculations.

Table 8.5: Earnings of White Collar Workers by Profession, 1997

Profession	Average total earnings HUF per month
Lawyer	164,811
Manager	128,056
Information technology specialist	122,227
Engineer	105,670
Scientist	97,012
Editor	92,535
Medical doctor	77,538
University instructor	75,510
Secondary school teacher	64,295
Cultural sphere (e.g. museum and library staff)	59,163
Elementary school teacher	54,511

Source: Ministry of Labor.

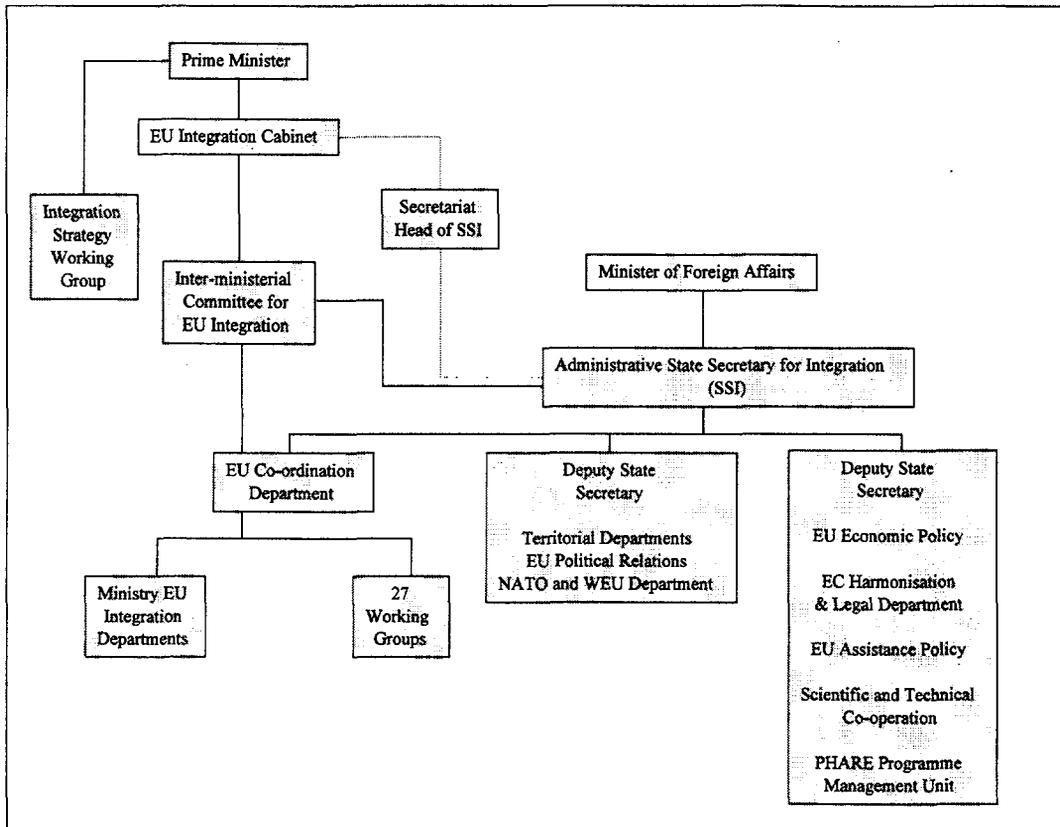
**Table 8.6: Civil Service – Enterprise Earnings Comparison by Rank
1997 (HUF)**

Occupational category	Enterprise (HUF)	Civil Service ¹ (HUF)	% enterprise
Director – State Secretary	175,523	--	--
Dep. Director – Dep. State Sec.	185,510	--	--
Head of Department	216,989	225,028	103.7
Deputy Head of Department	--	184,000	--
Head & Deputy Head	159,369	146,920	92.2
Univ. grad 0-1 yr. Experience	87,419	44,657	51.1
Univ. grad 1+ yrs experience	123,562	101,219	81.9
Secondary grad 0-1 yr. exp.	45,238	32,657	72.2
Secondary grad 1+ yrs exp.	64,800	62,067	95.8
Clerical, 0-0.5 yrs exp.	46,000	26,504	57.6
Clerical, 0.5+ yrs. exp.	51,322	50,112	97.6
Manual – unskilled	33,014	--	--
Manual – semi-skilled	42,370	40,477	95.5
Manual – skilled	49,780	46,547	93.5
Manual – highly skilled	83,686	--	--

¹ Includes civil servants in central administration and deconcentrated organs

Source: Ministry of Labor (National Labor Center).

Figure 8.1: Institutional Framework for EU Accession Activities in Hungary



Source: World Bank staff.

Table 8.7: Hungary EU Accession Employment Increase Cost Implications

		Scenario 1	Scenario 2	Scenario 3	Scenario 4
	Base Year	Employment-neutral scenario	Employment-neutral scenario	Wage-bill neutral scenario	Wage-bill neutral scenario
	1997	2002	2002	2002	2002
Civil Servants	106,000	106,000	106,000	103,922	88,333
Employment reduction requirement:					
Number				2,078	17,667
Percentage				2.0%	16.7%
Percentage salary increase:					
Top x% of skill structure		20%	20%	20%	20%
Remaining civil servants		0%	20%	0%	20%
Average total salary	\$ 388	\$ 396	\$ 466	\$ 396	\$ 466
Top x% of skill structure		\$ 466	\$ 466	\$ 466	\$ 466
Remaining civil servants		\$ 388	\$ 466	\$ 388	\$ 466
Total Wage Bill	\$534,891,370	\$545,589,197	\$641,869,644	\$ 534,891,370	\$ 534,891,370
Change in Wage Bill		\$ 10,697,827	\$ 106,978,274	\$ (0)	\$ -
Percentage of employment in targeted top of skill structure (x%)		10%	100%	10%	100%
No. of monthly salaries paid per year	13	13	13	13	13
Average Salary increase in targeted positions (1)		20%	20%	20%	20%
Min. gross departures (%)		10%	10%	10%	10%
Fraction of gross departures requiring severance payments		70%	70%	70%	70%
Gross departures (no.)		10,600	10,600	10,600	17,667
Severance payments					
Average no. months severance compensation		12	12	12	12
Total Severance Costs		\$ 34,562,212	\$ 34,562,212	\$ 34,562,212	\$ 57,603,686
Severance costs as % of base period wage bill		6.5%	6.5%	6.5%	10.8%
Scenario 1: Net employment neutral. Concentrate salary increases in top x% of skill structure					
Scenario 2: Net employment neutral. Raise all civil servants' salaries to approach EU country public-private pay relativities.					
Scenario 3: Wage bill neutral. Concentrate salary increases in top x% of skill structure.					
Scenario 4: Wage bill neutral. Raise all civil servants' salaries to approach EU country public-private pay relativities.					
Percentage salary increase assumptions reflect practices recently introduced in Hungary to attract EU-related skills.					
Severance payments assume 12-month package. This reflects typical international severance practices.					
(1) Average total salary increase would presumably be achieved by increasing salaries more among more highly skilled positions; i.e., by decompressing the salary structure.					
Exchange rate		200			

Source: World Bank staff estimates.

Table 8.8: Training Costs

Parameters		Negotiating skill personnel:			
Unit cost per 3-day training event	\$ 213	Already trained	1070		
Expected no. of 3-day training sessions/person	10	Fraction lost to Brussels	0.5		
Unit cost per study tour	\$ 2,260	Turnover rate	0.1		
Expected no. of study tours/person	1	Replacement requirements	642		
Language training unit cost	\$ 240	Increased staffing requirements as % of existing capacity	0.4		
1997 Total Class I & II Employment	106,000	Total additional required negotiating skilled personnel	1,070		
Cost Estimates	No. of trainees	Total Costs	Unit Cost	No. of events	Fraction of Class requiring this training
EU dedicated staff	1,070	\$ 7,306,260			
In-country training	1,070	\$ 2,277,260	\$ 213	10	1
Study tours	1,070	\$ 4,836,400	\$ 2,260	2	1
Language training	803	\$ 192,600	\$ 240	1	0.75
High level policy & technical experts (Class I)	37,100	\$ 84,190,585			
In-country training	22,260	\$ 47,375,513	\$ 213	10	0.6
Study tours	14,840	\$ 33,538,400	\$ 2,260	1	0.4
Language training	13,653	3,276,672	\$ 240	1	0.92
Mid-level technical personnel (Class II)	46,640	\$ 20,583,389			
In-country training	18,656	\$ 15,882,077	\$ 213	4	0.4
Study tours	-	\$ -	\$ 2,260	1	0
Language training	19,589	\$ 4,701,312	\$ 240	1	0.42
Total	91,940	\$ 112,080,233			

Source: World Bank staff estimates.

Distributors of World Bank Group Publications

Prices and credit terms vary from country to country. Consult your local distributor before placing an order.

ARGENTINA
World Publications SA
Av. Cordoba 1877
1120 Ciudad de Buenos Aires
Tel: (54 11) 4815-8156
Fax: (54 11) 4815-8156
E-mail: wpbooks@infovia.com.ar

AUSTRALIA, FIJI, PAPUA NEW GUINEA, SOLOMON ISLANDS, VANUATU, AND SAMOA
D.A. Information Services
648 Whitehorse Road
Mitcham 3132, Victoria
Tel: (61) 3 9210 7777
Fax: (61) 3 9210 7788
E-mail: service@dadirect.com.au
URL: http://www.dadirect.com.au

AUSTRIA
Gerold and Co.
Wetburggasse 26
A-1011 Wien
Tel: (43 1) 512-47-31-0
Fax: (43 1) 512-47-31-29
URL: http://www.gerold.at/online

BANGLADESH
Micro Industries Development Assistance Society (MIDAS)
House 5, Road 16
Dharmodip A/Road
Dhaka 1209
Tel: (880 2) 326427
Fax: (880 2) 811188

BELGIUM
Jean De Lannoy
Av. du Roi 202
1060 Brussels
Tel: (32 2) 538-5169
Fax: (32 2) 538-0841

BRAZIL
Publicações Técnicas Internacionais Ltda.
Rua Peixoto Gomide, 209
01409 Sao Paulo, SP
Tel: (55 11) 259-6644
Fax: (55 11) 259-6990
E-mail: postmaster@pti.uol.br
URL: http://www.uol.br

CANADA
Renout Publishing Co. Ltd.
5369 Canotek Road
Ottawa, Ontario K1J 9J3
Tel: (613) 745-2665
Fax: (613) 745-7660
E-mail: order.dept@renoutbooks.com
URL: http://www.renoutbooks.com

CHINA
China Financial & Economic Publishing House
8, Da Fo Si Dong Jie
Beijing
Tel: (86 10) 6401-7365
Fax: (86 10) 6401-7365
China Book Import Centre
P.O. Box 2825
Beijing
Chinese Corporation for Promotion of Humanities
52, You Fang Hu Tong,
Xuan Nei Da Jie
Beijing
Tel: (86 10) 660 72 494
Fax: (86 10) 660 72 494

COLOMBIA
Infoelance Ltda.
Carrera 6 No. 51-21
Apartado Aereo 34270
Santafé de Bogotá, D.C.
Tel: (57 1) 285-2798
Fax: (57 1) 285-2798

COTE D'IVOIRE
Center d'Édition et de Diffusion Africaines (CEDA)
04 B.P. 541
Abidjan 04
Tel: (225) 24 6510; 24 6511
Fax: (225) 25 0567

CYPRUS
Center for Applied Research
Cyprus College
6, Diogenes Street, Engomi
P.O. Box 2006
Nicosia
Tel: (357 2) 59-0730
Fax: (357 2) 66-2051

CZECH REPUBLIC
USIS, NIS Prodejna
Havelskova 22
130 00 Prague 3
Tel: (420 2) 2423 1486
Fax: (420 2) 2423 1114
URL: http://www.nis.cz/

DENMARK
Samfundslitteratur
Rosenbergs Allé 11
DK-1870 Frederiksberg C
Tel: (45 35) 351942
Fax: (45 35) 357822
URL: http://www.sl.cbs.dk

ECUADOR
Libri Mundi
Librería Internacional
P.O. Box 17-01-3029
Juan Leon Mera 851
Quito
Tel: (593 2) 521-606; (593 2) 544-185
Fax: (593 2) 504-209
E-mail: librimu1@librimundi.com.ec
E-mail: librimu2@librimundi.com.ec

CODEU
Ruiz de Castilla 763, Edif. Expocolor
Primer piso, Of. #2
Quito
Tel/Fax: (593 2) 507-383; 253-091
E-mail: codeu@impsat.net.ec

EGYPT, ARAB REPUBLIC OF
Al Ahram Distribution Agency
Al Galaa Street
Cairo
Tel: (20 2) 578-6063
Fax: (20 2) 578-6833

FINLAND
Akateeminen Kirjakauppa
P.O. Box 126
FIN-00101 Helsinki
Tel: (358 0) 121 4418
Fax: (358 0) 121-4435
E-mail: akafilaus@stockmann.fi
URL: http://www.akateeminen.com

FRANCE
Editions Eska; DBJ
48, rue Gay Lussac
75005 Paris
Tel: (33-1) 55-42-73-08
Fax: (33-1) 43-29-91-67

GERMANY
UNO-Verlag
Poppelsdorfer Allee 55
53115 Bonn
Tel: (49 228) 949020
Fax: (49 228) 217492
URL: http://www.uno-verlag.de
E-mail: unoverlag@aol.com

GHANA
Epp Books Services
P.O. Box 44
TUC
Accra
Tel: 223 21 778843
Fax: 223 21 779099

GREECE
Papasotiriou S.A.
35, Stournara Str.
106 82 Athens
Tel: (30 1) 364-1826
Fax: (30 1) 364-8254

HAITI
Culture Diffusion
5, Rue Capois
C.P. 257
Port-au-Prince
Tel: (509) 23 9260
Fax: (509) 23 4858

HONG KONG, CHINA; MACAO
Asia 2000 Ltd.
Sales & Circulation Department
302 Seabird House
22-28 Wyndham Street, Central
Hong Kong, China
Tel: (852) 2530-1409
Fax: (852) 2526-1107
E-mail: sales@asia2000.com.hk
URL: http://www.asia2000.com.hk

HUNGARY
Euro Info Service
Margitszigeti Europa Haz
H-1138 Budapest
Tel: (36 1) 350 80 24, 350 80 25
Fax: (36 1) 350 90 32
E-mail: eurolinfo@mail.mata.vu

INDIA
Allied Publishers Ltd.
751 Mount Road
Madras - 600 002
Tel: (91 44) 852-3938
Fax: (91 44) 852-0649

INDONESIA
Pt. Indira Limited
Jalan Borobudur 20
P.O. Box 181
Jakarta 10320
Tel: (62 21) 390-4290
Fax: (62 21) 390-4289

IRAN
Ketab Sara Co. Publishers
Khaled Estamoli Ave., 6th Street
Dezafroz Alley No. 8
P.O. Box 15745-733
Tehran 15117
Tel: (98 21) 8717819; 8716104
Fax: (98 21) 8712479
E-mail: ketab-sara@neda.net.ir

Kowlab Publishers
P.O. Box 19375-511
Tehran
Tel: (98 21) 258-3723
Fax: (98 21) 258-3723

IRELAND
Government Supplies Agency
Oilig an tSoláthair
4-5 Harcourt Road
Dublin 2
Tel: (353 1) 661-3111
Fax: (353 1) 475-2670

ISRAEL
Yozmot Literature Ltd.
P.O. Box 56055
3 Yohanan Hasandir Street
Tel Aviv 61560
Tel: (972 3) 5285-397
Fax: (972 3) 5285-397

R.O.V. International
PO Box 13056
Tel Aviv 61130
Tel: (972 3) 649 9469
Fax: (972 3) 648 6039
E-mail: roy@nevision.net.il
URL: http://www.royint.co.il

Paesitlanian Authority/Middle East Index Information Services
P.O. B. 19502 Jerusalem
Tel: (972 2) 6271219
Fax: (972 2) 6271634

ITALY, LIBERIA
Licosa Commissionaria Sansoni SPA
Via Duca Di Calabria, 1/1
Casella Postale 552
50125 Firenze
Tel: (39 55) 645-415
Fax: (39 55) 641-257
E-mail: licosa@ftbce.it
URL: http://www.ftbce.it/licosa

JAMAICA
Ian Randle Publishers Ltd.
206 Old Hope Road, Kingston 6
Tel: 876-927-2085
Fax: 876-977-0243
E-mail: irpl@coils.com

JAPAN
Eastern Book Service
3-13 Hongo 3-chome, Bunkyo-ku
Tokyo 113
Tel: (81 3) 3818-0851
Fax: (81 3) 3818-0864
E-mail: orders@svt-ebis.co.jp
URL: http://www.bekkoame.or.jp/~svt-ebis

KENYA
Africa Book Service (E.A.) Ltd.
Quaran House, Mfangano Street
P.O. Box 45245
Nairobi
Tel: (254 2) 223 641
Fax: (254 2) 330 272

Legacy Books
Lolla House
Mezzanine 1
P.O. Box 68077
Nairobi
Tel: (254) 2-330853, 221426
Fax: (254) 2-330854, 561654
E-mail: Legacy@form-net.com

KOREA, REPUBLIC OF
Dayang Books Trading Co.
International Division
783-20, Pangba Bon-Dong,
Socho-ku
Seoul
Tel: (82 2) 536-9555
Fax: (82 2) 536-0025
E-mail: saemap@chollian.net

Eulyoo Publishing Co., Ltd.
46-1, Susong-Dong
Jongro-gu
Seoul
Tel: (82 2) 734-3515
Fax: (82 2) 732-9154

LEBANON
Librairie du Liban
P.O. Box 11-9232
Beirut
Tel: (961 9) 217 944
Fax: (961 9) 217 434
E-mail: hsayegh@librairie-du-liban.com.lb
URL: http://www.librairie-du-liban.com.lb

MALAYSIA
University of Malaya Cooperative Bookshop, Limited
P.O. Box 1127
Jalan Pantai Baru
59700 Kuala Lumpur
Tel: (60 3) 756-5000
Fax: (60 3) 755-4424
E-mail: urnkoop@tm.net.my

MEXICO
INFOTEC
Av. San Fernando No. 37
Col. Toriello Guerra
14050 Mexico, D.F.
Tel: (52 5) 624-2800
Fax: (52 5) 624-2822
E-mail: infotec@rtn.net.mx
URL: http://rtn.net.mx

Mundi-Prensa Mexico S.A. de C.V.
c/Rio Panuco, 141-Colonia Cuauhtemoc
06500 Mexico, D.F.
Tel: (52 5) 533-5658
Fax: (52 5) 514-6799

NEPAL
Everest Media International Services (P) Ltd.
GPO Box 5443
Kathmandu
Tel: (977 1) 416 026
Fax: (977 1) 224 431

NETHERLANDS
De Lindeboom/Internationale Publicaties b.v.
P.O. Box 202, 7480 AE Haaksbergen
Tel: (31 53) 574-0004
Fax: (31 53) 572-9296
E-mail: lindedoo@worldonline.nl
URL: http://www.worldonline.nl/~lindedoo

NEW ZEALAND
EBSCO NZ Ltd.
Private Mail Bag 99914
New Market
Auckland
Tel: (64 9) 524-8119
Fax: (64 9) 524-8067

Oasis Official
P.O. Box 3627
Wellington
Tel: (64 4) 499 1551
Fax: (64 4) 499 1972
E-mail: oasis@actrix.gen.nz
URL: http://www.oasisbooks.co.nz/

NIGERIA
University Press Limited
Three Crowns Building Jericho
Private Mail Bag 5095
Ibadan
Tel: (234 22) 41-1356
Fax: (234 22) 41-2056

PAKISTAN
Mirza Book Agency
65, Shahrah-e-Quaid-e-Azam
Lahore 54000
Tel: (92 42) 735 3601
Fax: (92 42) 576 3714

Oxford University Press
5 Bangalore Town
Sharaf Faisal
PO Box 13033
Karachi-75350
Tel: (92 21) 446307
Fax: (92 21) 4547640
E-mail: ouppak@TheOffice.net

Pak Book Corporation
Aziz Chambers 21, Queen's Road
Lahore
Tel: (92 42) 636 3222; 636 0885
Fax: (92 42) 636 2328
E-mail: pbc@brain.net.pk

PERU
Editorial Desarrollo SA
Apartado 3824, Ica 242 Of. 106
Lima 1
Tel: (51 14) 285380
Fax: (51 14) 286628

PHILIPPINES
International Bookstore Center Inc.
1127-A Antipolo St. Barangay, Venezuela
Makati City
Tel: (63 2) 896 6501; 6505; 6507
Fax: (63 2) 896 1741

POLAND
International Publishing Service
Ul. Piekna 31/37
00-677 Warszawa
Tel: (48 22) 628-6089
Fax: (48 22) 621-7255
E-mail: books@ips@kp.atm.com.pl
URL: http://www.ipsog.waw.pl/ips/export

PORTUGAL
Livraria Portugal
Apartado 2681, Rua Do Carmo 70-74
1200 Lisbon
Tel: (1) 347-4982
Fax: (1) 347-0264

ROMANIA
Compania De Librari Bucuresti S.A.
Str. Lioscanti no. 26, sector 3
Bucharest
Tel: (40 1) 313 9545
Fax: (40 1) 312 4000

RUSSIAN FEDERATION
Isdatel'shno "Ves Mir"
9a, Kolpachnyy Perulok
Moscow 101831
Tel: (7 095) 917 87 49
Fax: (7 095) 917 92 59
ozimarin@glasnet.ru

SINGAPORE; TAIWAN, CHINA
MYANMAR; BRUNEI
Hemisphere Publication Services
41 Kallang Pudding Road #04-03
Golden Wheel Building
Singapore 349316
Tel: (65) 741-5166
Fax: (65) 742-9356
E-mail: ashgate@asianconnect.com

SLOVENIA
Gospodarski vestnik Publishing Group
Dunajska cesta 5
1000 Ljubljana
Tel: (386 61) 133 63 47; 132 12 30
Fax: (386 61) 133 80 30
E-mail: repansej@gvestnik.si

SOUTH AFRICA, BOTSWANA
Africa
Vasco Boulevard, Goodwood
P.O. Box 12119, N1 City 7463
Cape Town
Tel: (27 21) 595 4400
Fax: (27 21) 595 4430
E-mail: oxford@oup.co.za

For subscription orders:
International Subscription Service
P.O. Box 41095
Craighall
Johannesburg 2024
Tel: (27 11) 880-1448
Fax: (27 11) 880-6248
E-mail: iss@s.co.za

SPAIN
Mundi-Prensa Libros, S.A.
Castello 37
28001 Madrid
Tel: (34 91) 4 363700
Fax: (34 91) 5 753998
E-mail: libreria@mundiprensa.es
URL: http://www.mundiprensa.com/

Mundi-Prensa Barcelona
Consell de Cent, 391
08009 Barcelona
Tel: (34 3) 488-3492
Fax: (34 3) 487-7659
E-mail: barcelona@mundiprensa.es

SRI LANKA, THE MALDIVES
Lake House Bookshop
100, Sir Chittampalam Gardiner
Mawatha
Colombo 2
Tel: (94 1) 321105
Fax: (94 1) 432104
E-mail: LHL@sri.lanka.net

SWEDEN
Wennergren-Williams AB
P. O. Box 1305
S-171 25 Solna
Tel: (46 8) 705-97-50
Fax: (46 8) 27-00-71
E-mail: mail@wvi.se

SWITZERLAND
Librairie Payot Service Institutionnel
C/Im/les-de-Montbenon 30
1002 Lausanne
Tel: (41 21) 341-3229
Fax: (41 21) 341-3235

ADECO Van Diermen
Editions Techniques
Ch. de Lacuz 41
CH1807 Blonay
Tel: (41 21) 943 2673
Fax: (41 21) 943 3605

THAILAND
Central Books Distribution
305 Silom Road
Bangkok 10500
Tel: (66 2) 2336930-9
Fax: (66 2) 237-8321

TRINIDAD & TOBAGO AND THE CARRIBBEAN
Systematics Studies Ltd.
St. Augustine Shopping Center
Eastern Main Road, St. Augustine
Trinidad & Tobago, West Indies
Tel: (868) 645-8466
Fax: (868) 645-8467
E-mail: tobe@trinidad.net

UGANDA
Gustro Ltd.
PO Box 9997, Madhvani Building
Plot 16/4 Jinja Rd.
Kampala
Tel: (256 41) 251 467
Fax: (256 41) 251 468
E-mail: gus@swiftuganda.com

UNITED KINGDOM
Microinfo Ltd.
P.O. Box 3, Omega Park, Alton,
Hampshire GU34 2PG
England
Tel: (44 1420) 56848
Fax: (44 1420) 398989
E-mail: wban@microinfo.co.uk
URL: http://www.microinfo.co.uk

The Stationery Office
51 Nine Elms Lane
London SW8 5DR
Tel: (44 171) 873-8400
Fax: (44 171) 873-8242
URL: http://www.the-stationery-office.co.uk/

VENEZUELA
Tecniciencia Libros, S.A.
Centro Ciudad Comercial Tamanco
Nivel C2, Caracas
Tel: (58 2) 959 5547; 5035; 0016
Fax: (58 2) 959 5636

ZAMBIA
University Bookshop, University of
Zambia
Great East Road Campus
P.O. Box 32379
Lusaka
Tel: (260 1) 252 576
Fax: (260 1) 253 952

ZIMBABWE
Academic and Baobab Books (Pvt.)
Ltd.
4 Donald Road, Graniteside
P.O. Box 567
Harare
Tel: 263 4 755035
Fax: 263 4 781913

MAP SECTION





THE WORLD BANK

1818 H Street, N.W.
Washington, D.C. 20433 USA

Telephone: 202-477-1234

Facsimile: 202-477-6391

Telex: MCI 64145 WORLDBANK
MCI 248423 WORLDBANK

Internet: www.worldbank.org

E-mail: books@worldbank.org



ISBN 0-8213-4618-0