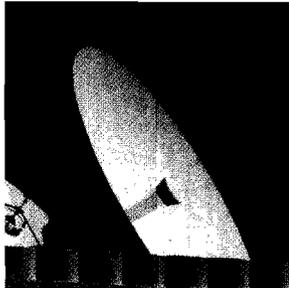
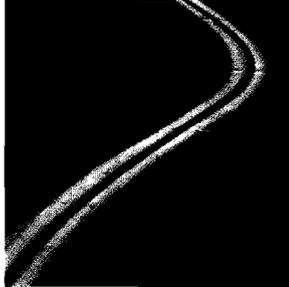
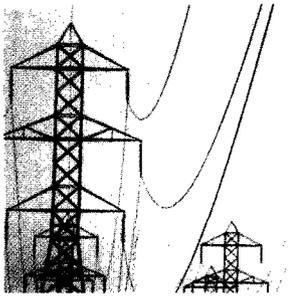


PUBLIC POLICY FOR THE Private sector

JUNE 1995



THE PRIVATE INFRASTRUCTURE INDUSTRY

- 5 A Global Market of US\$30 Billion a Year
Jae So and Ben Shin
- 9 Company Strategies
Jae So and Ben Shin

47579

FORECASTING

- 15 Reality Checks for Power Forecasts
Robert Bacon

LAW AND REGULATION

- 19 The Real World of Power Sector Regulation
Bernard Tenenbaum
- 23 Competitive Contracting for Privately Generated Power
Robert Bacon
- 27 Fiscal Systems for Oil—How Governments Compete for Exploration Investment
Chakib Khelil
- 31 Bankruptcy Reform—Breaking the Court Logjam in Colombia
Izak Atiyas
- 35 To Buy or Lease? Farm Revival in Eastern and Central Europe
Omar Razzaz

FINANCE

- 39 Money Laundering and International Efforts to Fight It
David Scott
- 43 Protecting Bank Depositors
Samuel Talley



Private Sector is an open forum intended to encourage dissemination of and debate on ideas, innovations, and best practices for expanding the private sector. The views published are those of the authors and should not be attributed to the World Bank or any of its affiliated organizations. Nor do any of the conclusions represent official policy of the World Bank or of its Executive Directors or the countries they represent.



PUBLIC POLICY FOR THE
Privatesector

Quarterly No. 3, June 1995

The Private Infrastructure Industry

A Global Market of US\$30 Billion a Year 5

Since 1984, 54 countries have privatized 286 infrastructure companies in such sectors as waste, power, water, transport, telecommunications, and natural gas. In addition, at least 272 private greenfield projects are under way. These investments are substantial—US\$200 billion for the privatizations and more than US\$100 billion for the new projects. Drawing on a new World Bank database, **Jae So** and **Ben Shin** sketch the recent growth of the industry and profile future projects.

Company Strategies 9

In the past, infrastructure was generally managed by national, single-sector utilities. But technological development and regulatory change have allowed companies to cross traditional boundaries, and the recent growth of the infrastructure industry has attracted more than 700 companies. **Jae So** and **Ben Shin** look at some of the major players, their growth strategies, and the risks they face—developmental, financing, and regulatory.

Forecasting

Reality Checks for Power Forecasts 15

In some of the poorer countries now starting to look at large power projects, the information on past power demand patterns is not good enough to make reliable demand forecasts. Forecasters often end up simply projecting current growth rates. But this can produce forecasts that are inconsistent with macroeconomic developments—such as the real price rises that occur when governments remove subsidies. **Robert Bacon** outlines two simple reality checks to help prevent forecast error.

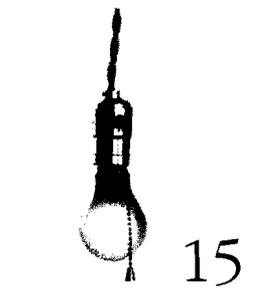
Law and Regulation

The Real World of Power Sector Regulation 19

More than twenty countries are now reforming their power sectors. For many politicians, this reform means simply restructuring and privatizing state-owned enterprises. But, what they forget or may not know is that a government cannot regulate private power companies the way it once regulated state enterprises. **Bernard Tenenbaum** argues that if a government is serious about attracting private investors, it has no choice but to adopt a new regulatory system that keeps promises and exercises restraint—one that is independent and open to public scrutiny.

Competitive Contracting for Privately Generated Power 23

Introducing independent power producers (IPPs) into a power system where existing generators are inefficient can deliver more efficient investment. But it is not sufficient to achieve the operating benefits of competition. Key to determining whether or not the IPPs and the system as a whole will operate efficiently are the power and energy sales contracts with the IPPs. **Robert Bacon** surveys a range of power purchase agreements and highlights their risks and benefits for operational efficiency.





Fiscal Systems for Oil—How Governments Compete for Exploration Investment 27

Exploration for petroleum occurs on the basis of government-granted concessions, leases, or contracts whose terms and conditions are established by law or negotiated case by case. An important part of these arrangements is the fiscal terms and conditions—bonuses, rentals, royalties, taxes. **Chakib Khelil** looks at fiscal systems around the world and draws some conclusions about how governments compete for exploration investment.

Bankruptcy Reform—Breaking the Court Logjam in Colombia 31

Many developing countries suffer from logjam in the courts, a condition that tends to reduce the effectiveness of bankruptcy law in relieving financial distress. Colombia's bankruptcy reform provides some useful lessons for these countries. In particular, it shows that when traditional court procedures are hard to change, an alternative is to legally empower another entity to handle the entire process. **Izak Atiyas** explains how it was done in Colombia.

31



To Buy or Lease? Farm Revival in Eastern and Central Europe 35

Buying, selling, and mortgaging farmland are still rare in Eastern and Central Europe. Not surprisingly, given the economic risk in many of these countries, short-term leasing is much more common. These short-term transactions do almost as well as land sales in allocating resources. **Omar Razzaz** argues that facilitating leasing arrangements by improving simple registration and enforcement systems and increasing access to information on what's for rent and at what price would do much to help revive the farm sector.

35



Finance

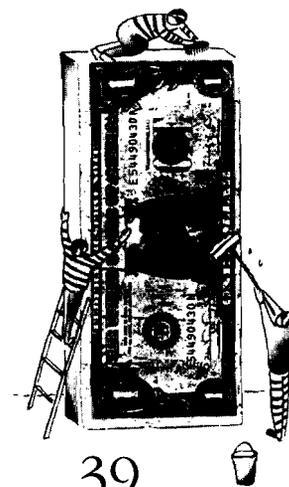
Money Laundering and International Efforts to Fight It 39

According to one estimate, US\$300 billion to US\$500 billion in proceeds from serious crime is laundered each year. Left unchecked, money laundering could criminalize the financial system and undermine development efforts in emerging markets. **David Scott** reviews efforts by international bodies to fight it.

Protecting Bank Depositors 43

Depositor protection is now part of most banking systems. In industrial countries a common approach is deposit insurance. Among developing countries, most still rely on implicit protection—in which the government rescues banks that would otherwise fail—but there has been a gradual shift to deposit insurance, and this trend is likely to continue. **Samuel Talley** looks at the pros and cons of the two approaches and suggests good design characteristics for insurance-based systems.

39

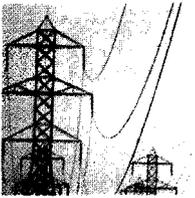


In the September issue . . .

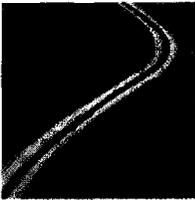
Privatization by concession · Regulating railways, electricity, gas and telecommunications · Post-privatization performance of BT in the United Kingdom · Enterprise reform · Business advisory and charge management services · Financing power projects

43

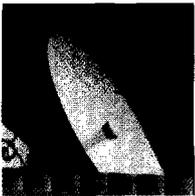




Editor:
Suzanne Smith
Room G8105
The World Bank
1818 H Street, NW
Washington, D.C. 20433



Telephone:
202 458 7281
Facsimile:
202 676 9245
Email:
ssmith7@worldbank.org



The entire contents of *Private Sector* ©1995 World Bank. You are authorized to reproduce, duplicate, and disseminate all or part of this publication so long as you include the name of the publication and the name of the respective author. You may not, however, modify, alter, or otherwise change any part of this publication or sell, transfer, or otherwise disseminate any part of the publication for profit.



♻ Printed on recycled paper.

The Private Infrastructure Industry— A Global Market of US\$30 Billion a Year

Jae So and Ben Shin

Private infrastructure projects have boomed around the world since the early 1980s, in such sectors as waste, power, water, transport, telecommunications, and natural gas. Much of this activity has its origins in the deregulation policies in the United States during the 1970s and in the privatization experiences of Chile, New Zealand, and the United Kingdom during the 1980s. These deregulation and privatization policies were driven by disenchantment with public sector performance, fiscal crises (often related), and technology changes that have increased the scope for competition. Since 1984,

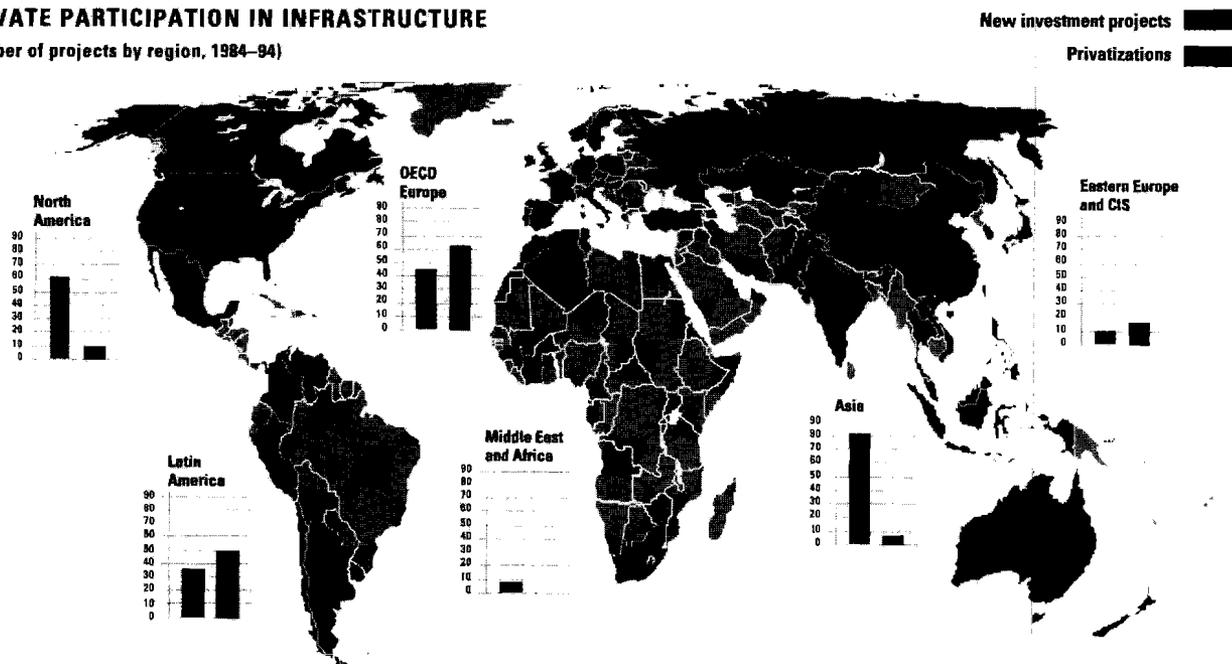
fifty-four countries have privatized 286 infrastructure companies in these sectors, and at least 272 private greenfield projects are under way in some fifty-two countries (see figure 1 for sectoral distribution). This Note sketches the growth of the industry.¹

A US\$30 billion annual market

Over the past ten years, the value of privatizations has totaled US\$200 billion and that of new investment projects more than US\$100 billion. Thus, private investment activity in infrastructure

PRIVATE PARTICIPATION IN INFRASTRUCTURE

(number of projects by region, 1984–94)



The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the World Bank Group, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

Source: World Bank, Private Infrastructure Project Database.
December 1994

TABLE 1 TEN LARGEST NEW PRIVATE INFRASTRUCTURE INVESTMENT PROJECTS, 1984-94

Country	Project	Contract	Cost (US\$ millions)
France/United Kingdom	Channel Tunnel	BOT, 55 years	19,000
Japan	Kansai International Airport	BOT	15,000
China	Daya Bay Nuclear Power Plant	BOD	3,700
Malaysia	North-South Toll Expressway	BOT, 30 years	3,400
Argentina	Buenos Aires Water and Sewer Services	ROT, 30 years	3,000
Thailand	Bangkok Elevated Road and Train System	BOT, 30 years	2,981
Algeria/Morocco/ Portugal/ Spain	Maghreb Gas Pipeline	BOT	2,800
Belgium/Germany/Norway	Zeepipe Gas Pipeline, Phase 1	BOD	2,506
Australia	Loy Yang B Power Station	ROO	2,350
Malaysia	Malaysian Wastewater	BOT, 28 years	2,332

BOD = build-operate-own; BOT = build-operate-transfer; ROO = rehabilitate-operate-own; ROT = rehabilitate-operate-transfer.

Source: World Bank, Private Infrastructure Project Database.

TABLE 2 TEN LARGEST INFRASTRUCTURE PRIVATIZATIONS, 1984-94

Country	Privatization	Share sold (percent)	Price (US\$ millions)
Japan	Nippon Telegraph & Telephone (NTT)	35	70,500
United Kingdom	British Telecom	100	22,800
United Kingdom	British Gas	100	7,600
France	Elf Aquitaine	38	6,200
Mexico	Telefonos de Mexico (Telmax)	100	5,590
Germany	Veag	100	5,144
Netherlands	Koninklijke PTT Nederland	50	3,900
Singapore	Singapore Telecom	11	3,800
United Kingdom	Scottish Power	100	3,665
Argentina	Telecom Argentina (Entel North)	100	3,200

Source: World Bank, Private Infrastructure Project Database.

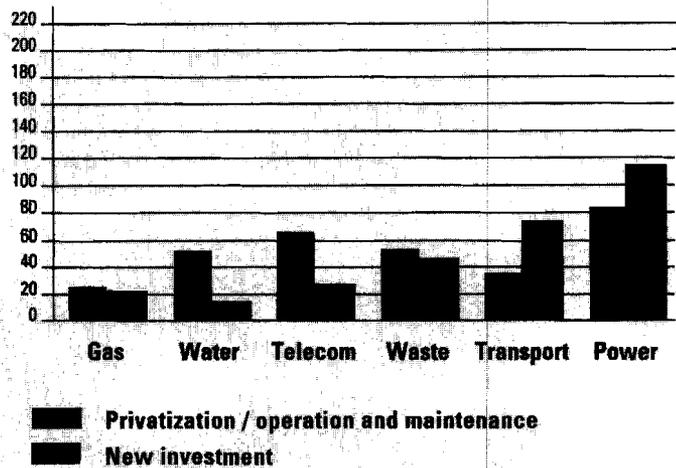
amounted to some US\$30 billion a year during the past decade. The average project was valued at about US\$0.5 billion, although about two-thirds of projects were valued at less.

Privatization revenues generally have been dominated by sales of telecommunications companies. Also contributing a large share of revenues have been energy and water companies, often through service concessions. Greenfield investment was most prevalent in power and transport projects, mostly toll roads, tunnels, and bridges. (See tables 1 and 2 for the ten largest projects in both categories.) Of course, the line between privatization and greenfield investment is fluid. Many freshly private telecommunications companies invest heavily in new facilities. Telecommunications investments tend to be funded mostly with retained earnings, reflecting strong market growth and consumers' willingness-to-pay. Many other infrastructure ventures face more uncertain financial prospects because of political difficulties in raising and regulating utility tariffs. Investors often try to manage risks by seeking limited recourse or nonrecourse project finance.

Some geographic patterns have emerged. Not surprisingly, the fast-growing countries of East Asia emphasize new investment, which accounts for more than 80 percent of the private infrastructure investment activity in these countries (see map on first page). Two countries in the region are the clear frontrunners—the Philippines, with thirty-three new private projects, mostly in power, and Malaysia, with twenty-four, mostly in transport and wastewater treatment. Privatization activity is concentrated in Latin America and Europe and in New Zealand. Argentina privatized almost all its infrastructure companies, a total of twenty-nine. The United Kingdom was the most active country, with some forty-nine privatizations. Privatization is spreading in Latin America: major programs are under way in Bolivia and Peru, as well as a host of privatizations, mostly in telecommunications, in countries ranging from Belize to Chile.

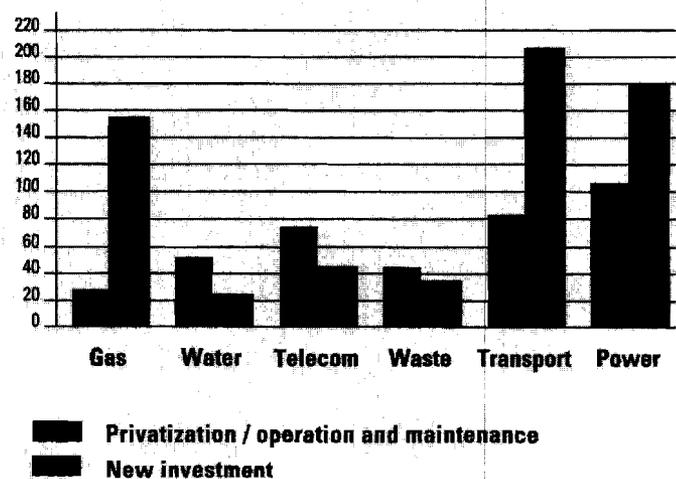
And the future? The World Bank's new Private Infrastructure Project Database is tracking 788 potential projects—168 privatizations worth some

FIGURE 1 PRIVATE INFRASTRUCTURE PROJECTS, BY SECTOR, 1984–94



Source: World Bank, Private Infrastructure Project Database.

FIGURE 2 POTENTIAL PRIVATE INFRASTRUCTURE PROJECTS, BY SECTOR, AS OF 1994



Source: World Bank, Private Infrastructure Project Database.

TABLE 3 TEN LARGEST POTENTIAL PRIVATE INFRASTRUCTURE PROJECTS, AS OF 1994

Country	Project	Contract	Cost/price (US\$ millions)
Hong Kong	Chek Lap Kok Airport	BLO	20,000
Taiwan (China)	Taipei-Kaohsiung High-Speed Rail	BOT, 30 years	20,000
India	Hopewell Power	BOT	12,700
Germany	DBP Telekom	Privatization, 25 percent	8,059
Pakistan	Sindh Coast Coal-Fired Power Plant	BOO	8,000
China	Dapeng Power Complex	BOT, 15–20 years, or BOO	6,000
Germany	Berlin International Airport	BOT	6,000
United States	Texas High-Speed Rail	BOT, 50 years	5,800
Germany	Hamburg-Berlin Maglev Train	BOO	5,600
France	Maille Urbaine Souterraine Express	BOT, 25 years	5,400

BLO = build-lease-operate; BOO = build-operate-own; BOT = build-operate-transfer.

Note: Excludes the \$52 billion Three Gorges Dam in China, which is under consideration as an independent power project but for which no detailed proposal has appeared.

Source: World Bank, Private Infrastructure Project Database.

US\$70 billion and 620 new investment projects that could cost up to US\$340 billion (see figure 2; also see table 3 for the ten largest potential projects). The potential projects average about US\$0.5 billion. On that basis, about sixty new deals a year would keep the market at the current level of US\$30 billion. New investment will take over from privatization as the driver of the market.

The Private Infrastructure Project Database

This Note draws on a new database under development at the World Bank. The Private Infrastructure Project Database tracks private infrastructure activity worldwide and attempts to provide a comprehensive survey of private projects in gas, power, telecommunications, transport, water, and waste since 1984.

Contents

- 1,346 projects as of December 23, 1994.
- In transport, the database covers roads, railroads, airports, and ports, but excludes rolling stock and airline privatizations.
- The database does not track waste collection contracts.
- *New investment*: BOO (build-own-operate), BOT (build-operate-transfer), BOOT (build-own-operate-transfer), BLO (build-lease-operate), BLT (build-lease-transfer), ROO (rehabilitate-own-operate), ROT (rehabilitate-operate-transfer), LRO (lease-rehabilitate-operate), and other similar programs.

- *Privatization/O & M*: Includes sales of assets to private investors, operation and maintenance contracts, management contracts, and operating licenses.
- *Actual*: Includes new investment projects under construction, completed or operational and privatization/O & M projects for which bidding or negotiation is finished or that have begun operation.
- *Potential*: Includes all projects under active study or at some stage of bidding or negotiation.
- The database monitors projects without cost information but excludes them from summary cost totals.

Jae So, *Private Sector Development Specialist*,
Private Sector Development Department, email:
jso@worldbank.org, and Ben Shin, *Private*
Sector Development Department, email: bshin
@worldbank.org

The Private Infrastructure Industry— Company Strategies

Jae So and Ben Shin

The global private infrastructure industry has experienced rapid growth over the past fifteen years and attracted more than 700 companies.¹ Infrastructure was generally managed by national, single-sector utilities, but technological and regulatory change has allowed companies to cross traditional boundaries. Although core competencies in specific sectors are still critical to a company's success, companies are beginning to exploit new sources of competitive advantage, such as the ability to efficiently manage an integrated network of diverse services (table 1). Electric utilities in Germany—RWE, Viag, and Veba—are entering telecommunications markets on the strength of their extensive cable and electricity distribution networks and their experience operating massive, companywide internal telecommunications networks. WMX is adding wastewater treatment plants and waste-to-energy ventures to its repertoire of waste treatment plants.

This Note briefly surveys the origins of some of these global infrastructure companies (see table 2 for the ten most active ones and the annex for the top twenty by sector) and shows how major companies are diversifying across sectors and regions (tables 1 and 5). It summarizes the strategies companies are using to compete in the evolving market and discusses some of the risks they face.²

Origins

The growth of some companies has its origins in recent deregulation and privatization. Many U.S. utilities, faced with an increasingly mature home market, are trying to exploit the Public Utilities Holding Companies Act of 1992, which allows them to venture into new markets. Privatization has prompted such companies as British Gas and British Telecom to seek additional shareholder

TABLE 1 COMPANIES' DIVERSIFICATION ACROSS SECTORS, 1994

Company	Gas	Power	Telecom	Transport	Waste	Water	
Compagnie Générale des Eaux	■	■	■	■	■	■	
Bouygues SA	□	■	■	■	■	■	Potential projects □
Tribasa SA	□	□		■	■	□	
Bechtel	■	■		□	■		Ongoing projects ■
Électricité de France	■	■			■	■	
Tractebel	■	■			■	■	
China International Trust & Investment Corporation		□		■	■	□	
Grupo Mexicano de Desarrollo		■		■	□	■	
Lyonnaise des Eaux-Dumez		■		■	■	■	
Severn Trent		■		■	■	■	

Source: World Bank, Private Infrastructure Project Database.

TABLE 2 TOP TEN DEVELOPERS BY NUMBER OF PROJECTS, 1984–94

Company	Projects
WMX Technologies Inc.	38
Lyonnaise des Eaux-Dumez	35
Compagnie Générale des Eaux	34
Électricité de France	20
Tractebel	17
France Telecom	16
Bechtel	16
Hopewell Holdings Ltd.	14
AES Corp.	14
Bouygues SA	12

Source: World Bank, Private Infrastructure Project Database.

TABLE 3 TOP TEN DEVELOPERS WITH STATE OWNERSHIP, 1984–94

Company	Projects
Électricité de France (100 percent)	20
France Telecom (100 percent)	16
Telefónica de España (Spain, 35 percent)	10
Telecom Finland (100 percent)	6
CITIC (China, 100 percent)	4
Singapore Telecom (89 percent)	4
Telia (Sweden, 100 percent)	4
Deutsche Telekom (Germany, 100 percent)	3
IRI Group (Italy, 100 percent)	3
RWE AG (Germany, 29.3 percent)	3

Note: Country of ownership and percentage of state ownership are indicated in brackets.
Source: World Bank, Private Infrastructure Project Database.

TABLE 4 TOP TEN DEVELOPERS FROM EMERGING MARKETS, 1984–94

Company	Projects
Grupo Mexicano de Desarrollo	7
Perez Companc	6
Tribasa SA	6
CITIC	5
Grupo ICA	5
Grupo Gutsa	4
Endesa (Chile)	3
Grupo Macri	3
Gazprom	2
Corporación IMPSA	2

Source: World Bank, Private Infrastructure Project Database.

profits in overseas ventures. Some investors are driven by a need for secure supply. Germany's largest gas company, Ruhrgas, is investing in countries key to regular supply—countries in Eastern Europe and the former Soviet Union. Other companies are taking advantage of a historical head start. French water companies, for example, are exploiting their long experience in operating private water concessions at home in newly private ventures abroad.

Many companies competing in private infrastructure markets are publicly owned at home, such as Électricité de France (see table 3 for the top ten developers with state ownership). Telefónica of Spain and France Telecom bid aggressively for telecommunications companies in emerging markets. And firms from emerging markets are themselves poised to become developers. Tribasa, a Mexican construction company, building on its toll road experience, acquired the capability to arrange financing and is branching out into other infrastructure ventures, including water supply and waste disposal (see table 4 for the top ten developers from emerging markets).

Companies such as Asea Brown Boveri and General Electric, traditional equipment suppliers for public and private utilities, are diversifying into project development so as to benefit from control over the entire project, rather than only bidding for the equipment contract in the final stages. Along with equipment suppliers, engineering companies such as Bechtel and Black & Veatch are taking a more active role in financing projects previously in the public sector and in some cases are functioning as developers. And companies such as Hopewell Holdings have built on their experience as project managers to become project developers; able to build good working relationships with governments, they can expedite complex contractual arrangements in uncertain regulatory and legal environments.

Competitive strategies

From these origins, infrastructure companies are adopting a range of competitive strategies, from sectoral diversification based on core functional

TABLE 5 COMPANIES' GEOGRAPHIC DIVERSIFICATION, 1984-94

Sub-Saharan Africa	East Asia and the Pacific	Europe	Latin America and the Caribbean	Middle East and North Africa	North America	South Asia
FRANCE TELECOM US\$4,350						
South Africa	Japan New Zealand	France Greece Italy Poland Portugal	Russia Spain Turkey United Kingdom	Argentina	Israel Morocco	Canada United States
LYONNAISE DES EAUX-DUNEEZ US\$22,469						
Gabon Guinea-Bissau	China Malaysia Thailand	Czech Republic France Germany	Hungary Lithuania United Kingdom	Argentina	United States	
COMPAGNIE GÉNÉRALE DES EAUX US\$21,100						
	Malaysia	France Germany Italy	Spain United Kingdom	Argentina Mexico	Canada United States	Pakistan
TRACTEBEL US\$1,000						
		Belgium France Germany Luxembourg Norway	Portugal Spain United Kingdom	Argentina	Canada United States	
ÉLECTRICITÉ DE FRANCE US\$1,000						
Côte d'Ivoire Gabon Guinea Guinea-Bissau Mali	China	Poland Slovak Republic		Argentina	Tunisia	
BOUYGUES SA US\$1,000						
Côte d'Ivoire Guinea Mali		France Poland Spain	United Kingdom	Argentina		
TELEFÓNICA DE ESPAÑA US\$9,335						
		Romania		Argentina Chile Colombia	Peru Puerto Rico Venezuela	
CABLE & WIRELESS US\$2,100						
		Belarus Bulgaria France	Germany Latvia	Barbados Jamaica		
ENRON CORPORATION US\$1,000						
	Philippines	Germany United Kingdom		Argentina Guatemala	Dominican Republic	United States
WMX TECHNOLOGIES INC. US\$3,642						
	Australia Hong Kong New Zealand	Germany Netherlands United Kingdom			United States	

Note: Dollar amounts indicate total cost of projects (in millions); for a project involving more than one developer, the full cost is added to each developer's total.
Source: World Bank, Private Infrastructure Project Database.

skills to a focus on subsectors and single functions:

- *Municipal focus.* Compagnie Générale des Eaux focuses on developing and maintaining relationships at the municipal level and has expanded into municipally managed services other than water supply, such as hospitals, cable television, parking facilities, passenger transport, and urban property development.
- *Regional development.* Some companies aim to use their project management expertise to develop regionwide infrastructure networks. Tribasa plans to develop integrated, intermodal transport corridors with ports, toll roads, and service facilities to improve logistics for manufacturing firms relying on just-in-time delivery.
- *Household focus.* Companies such as Citizens Utilities in the United States have begun to explore the potential for efficient distribution and delivery to households of integrated services: gas, power, water, and telecommunications.
- *Geographic focus.* Telefónica de España attributes its aggressive pursuit of Latin American telecommunications privatizations to its familiarity with the culture and language. Hong Kong-based Hopewell Holding's established reputation with the Chinese government has helped it to develop two power plants in China.
- *Construction focus.* Large construction companies such as Grupo Mexicano de Desarrollo have focused on projects with big construction components, such as toll roads, transport infrastructure, and wastewater distribution systems, to take advantage of their expertise.
- *Narrow segment focus.* Enron, the U.S. gas and power company, focuses on gas transport and distribution and gas-fired power plants. Its financial and risk management skills have enabled it to develop innovative financing and to tap new classes of investors.

Risks

Infrastructure companies face three key challenges. First, as companies adopt more of an ownership approach to infrastructure projects, they must have the ability to pull the deal together and connect the network of companies that will supply services. Development costs—mostly staff

time and travel to put the deal together—can be 3 to 5 percent of the cost of projects worth several hundred million dollars. Second, to conclude a deal, companies must also be able to arrange a favorable financing package. Companies have approached the issue with a variety of strategies. ABB makes full use of export credit financing for its projects. Enron constantly pushes the frontier in tapping capital markets.

Third, although development teams breathe a sigh of relief once a project is funded and construction begins, regulatory problems may be just about to start. Highly visible problem cases have been Cogasco, a natural gas pipeline project in Argentina that went awry in 1982, and the more recent troubles of the Bangkok Expressway. In both instances, regulatory authorities failed to live up to the spirit of the contract. Whether the trend toward private infrastructure is sustained depends on price regulation that balances the interests of developers, consumers, and governments. Ultimately, it is in the developer's interest to pursue transparent and competitive solutions that render price regulation unnecessary or, where that is not possible, to help establish the system that will regulate its behavior.⁵ Such companies as AT&T, Germany's RWE, and Hong Kong's China Light and Power have actively helped to develop regulatory solutions, which allowed them to deflect pressure for nationalization.

¹ See D. Lorrain, "Les opérateurs internationaux des services urbains" (Ministère de l'Équipement, des Transports et du Tourisme, Paris, 1994).

² This Note draws on a new database under development at the World Bank. The Private Infrastructure Project Database tracks private infrastructure activity worldwide and attempts to provide a comprehensive survey of private projects in gas, power, telecommunications, transport, water, and waste since 1984.

³ See *Back to the Future—The Potential in Infrastructure Privatization*, Michael Klein and Neil Roger, Private Sector, December 1994.

Jae So, *Private Sector Development Specialist*, Private Sector Development Department, email: jso@worldbank.org, and Ben Shin, *Private Sector Development Department*, email: bshin@worldbank.org

ANNEX TOP TWENTY DEVELOPERS BY SECTOR, 1984-94

GAS		TRANSPORT		POWER	
Company	Projects	Company	Projects	Company	Projects
Ruhrgas AG	5	Lyonnaise des Eaux	8	WMX Technologies	16
Tractebel	4	Kumagai Gumi	7	AES Corp.	14
Shell	3	Hopewell Holdings	6	USGen (Bechtel/P&G&E)	14
British Gas	3	Dragados Group	6	Électricité de France	14
Gazprom	2	G. Mex. de Desarrollo	5	Tractebel	11
Wintershall	2	Tribasa SA	5	Mission Energy	11
Bechtel	2	Grupo ICA	3	Hopewell Holdings	10
Grupo Macri	2	Grupo Gutsa	3	Enron Corp.	10
Italgas	2	First Corporate Shipping	3	Cie Générale des Eaux	6
SNI	2	CITIC	3	Endesa (Spain)	5
CNG Transmission	2	Cie Générale des Eaux	2	Asea Brown Boveri	4
Camuzzi Gazometri	2	Eiffage	2	Entergy Corp.	4
Total	2	Bouygues SA	2	SAUR	4
Perez Companc	2	New World	2	CMS Energy Corp.	3
Gaz de France	1	John Laing	2	Duke Power	3
Enagas	1	Lockheed	2	Endesa (Chile)	3
ENI	1	Corporación IMPSA	2	Enersis	3
Statoil	1	Trafalgar House	2	Mitsubishi	3
Hydro	1	Nishimatsu	2	Mitsui & Co.	3
Esso	1	Taylor Woodrow	2	National Power	3

(continued on following page)

ANNEX TOP TWENTY DEVELOPERS BY SECTOR, 1984-94 (continued)

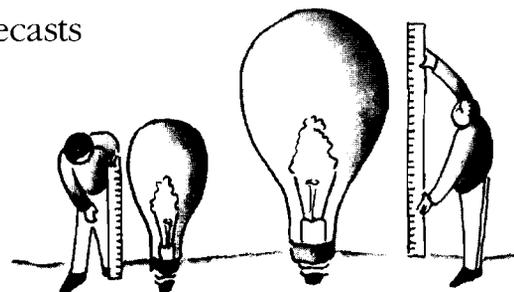
WASTE		TELECOM		WATER	
Company	Projects	Company	Projects	Company	Projects
WMX Technologies	37	France Telecom	16	Cie Générale des Eaux	19
Cie Générale des Eaux	22	Telefónica de España	9	Lyonnaise des Eaux	19
Lyonnaise des Eaux	16	US West	8	SAUR (Bouygues/EdF)	6
Severn Trent	3	Cable & Wireless	8	Tractebel	2
North West Water	3	Telecom Finland	6	G. Mex. de Desarrollo	2
Resource Control Inc.	2	Singapore Telecom	4	Grupo ICA	2
OMI	2	Submarcom	4	Meller SA	1
Dragados Group	2	Telia	4	Anglian Water	1
CITIC	2	AT&T	4	Soldati	1
Soldati	1	Siemens	3	Jetama Sdn. Bhd.	1
Meller SA	1	Deutsche Telekom	3	La Nacional	1
Anglian Water	1	TeleDanmark	3	Companhia BPO	1
AIMS Worldwide	1	Bell Atlantic	3	Siemens	1
Berjaya Group Bhd.	1	Ameritech	3	Thyssen AG	1
Grupo ICA	1	Millicom	2	Severn Trent	1
Sun Hung Kai Properties	1	BellSouth	2	SAMSA	1
Browning Ferris Industries	1	British Telecom	2	Kembangan Dinamki	1
Swire Pacific Ltd.	1	GTE	2	Pilecon Engineering Bhd.	1
SAMSA	1	Grupo Carso	1	Thames Water Plc.	1
Kin Ching Besser	1	Southwestern Bell	1	Ipco (Leighton/Promet)	1

Note: Companies with single projects selected on the basis of project size.
Source: World Bank, Private Infrastructure Project Database.

Reality Checks for Power Forecasts

Two simple checks relating power sector demand forecasts to the macroeconomy

Robert Bacon



In some of the poorer countries now starting to look at large power projects, the information on past power demand patterns is not good enough to make reliable demand forecasts. Forecasters often end up simply projecting current growth rates. But this can produce forecasts that are totally inconsistent with macroeconomic developments—such as the real price rises as governments remove subsidies. This Note outlines two simple reality checks to help prevent forecast error.

The approach

Power demand forecasts are usually expressed as an average growth rate over a certain period—for example, 10 percent a year for twenty years. The forecasts are often based on trend projections of the power sector. When they are, it is important to ensure that they are consistent with the likely trends in the principal macroeconomic determinants of demand. In the poorest countries, however, where there is often too little information on historical demand patterns to support a reliable forecast, a simple extrapolation of demand growth rates has often been used instead. The problem with this approach is that it can lead to projections of very high growth rates continuing over a long period. These projections may well be inconsistent with macroeconomic developments (for example, large real increases in electricity prices as the government removes subsidies to comply with loan agreements) and with typical patterns of power demand over the longer term.

When there are such data gaps, international experience can be an important comparator for checking the plausibility of trend projections. This Note describes two simple methods of checking projections against the experience of other countries. The first check calculates im-

PLICIT price and income elasticities for the demand scenario that can be compared with international values based on more intensive investigations. The second check, a simplified version of the first, calculates a country's projected power-to-income ratio. This ratio too can be compared with actual values for countries at a similar stage of development.

Calculating implicit price and income elasticities of power demand

The starting point is a relationship that is assumed to link demand growth with growth rates for real income and real electricity prices. Based on a "constant elasticity" demand equation, this long-term relationship can be expressed as follows:

The rate of growth in demand is equal to the rate of growth in prices times the price elasticity, plus the rate of growth in income times the income elasticity.

This is expressed formally as:

$$d = pb + ga \quad (1)$$

where d is average annual rate of growth in demand, p is average annual rate of change in real power prices, b is price elasticity of demand (nega-

tive), g is average annual rate of growth in real income, and a is income elasticity (positive).

This relationship can be used to show which values of income and price elasticities would make the macroeconomic variables consistent with the growth in demand for power that is assumed. These possible combinations of elasticities can then be compared with experience for other developing countries to see whether the total scenario appears plausible, or whether the demand forecast would be consistent with

increase in real prices between 1995 and 2005 is therefore 9.3 percent.

The basic formula in equation 1 can now be applied period by period. For 1995–2005, the equation becomes:

$$0.1 = 0.093b + 0.05a \quad (2)$$

Table 1 gives combinations of price and income elasticities consistent with the macroeconomic data of equation 2. A complete set of possible combinations can be obtained by plotting price and income elasticities on a graph. Since the relationship is a straight line, plotting any two points and passing a line through them will describe all the possible solutions. Because price elasticities are always negative and income elasticities for power are always positive, attention can immediately be focused on just one subset of all solutions to equation 2.

For the period 2005–25, the equation becomes:

$$0.1 = 0.00b + 0.05a \quad (3)$$

When the rate of change in prices is zero, the value of price elasticity is immaterial. Thus, the only value of income elasticity that is compatible with the data is 2.

International benchmarks

The implicit values of the elasticities can be compared with those established by more detailed investigation for other countries at a similar level of development. If the sets of values are fairly close, the forecast power demand for the country in question can be considered reliable. But if the values are very different, the power demand forecast should be viewed more critically.

Systematic evidence on international values of price and income elasticities for electricity demand comes from econometric studies that have correlated year-by-year changes in power demand with changes in income and prices, as well as with other variables, when appropriate. There is a large body of such work for

TABLE 1 POSSIBLE COMBINATIONS OF PRICE AND INCOME ELASTICITIES FOR THE POWER DEMAND FORECAST AND MACROECONOMIC SCENARIO, 1995–2005

Price	Income
0.00	2.00
-0.50	2.93
-1.00	3.86

the macroeconomic variables only if the income and price elasticities in the country were atypical. In the second case, an in-depth review would be necessary to ensure that the demand forecast was well founded—that is, that the country would indeed follow a growth path out of line with experience elsewhere.

Test case

Assume in the forecast that power demand will grow at a steady 10 percent a year for a thirty-year period (1995–2025). At this growth rate, demand will reach 1,745 percent of its initial level by the end of the period. Real income is forecast to grow at an average of 5 percent a year for the entire period. But it is assumed that the total increase in real prices, equivalent to 3 percent a year for thirty years (243 percent in total), will be concentrated in the first ten years and that the last twenty years will see no further real price increase. The annual rate of

industrial countries, but relatively little for developing countries, especially the poorest. Glenn D. Westley, however, has surveyed a wide range of studies for electricity demand.¹ For a group of Latin American countries (Colombia, Costa Rica, the Dominican Republic, Mexico, and Paraguay), the mean price elasticity is -0.48 , and the mean income elasticity is 0.47 for residential and commercial demand and 1.18 for industrial demand. For a sample of twenty-six studies of industrial countries, the mean long-run price elasticity is -1.15 , and the income elasticity is 1.10 . The two sets of income elasticities are fairly similar despite the large differences in per capita income between the two country groups. The price elasticities appear to be higher for the industrial countries, but are still substantial for the Latin American countries.

Some economists have suggested that income elasticities tend to fall as income levels rise, but again little systematic testing of this hypothesis has been carried out. The econometric evidence that does exist supports a view that the long-run price elasticity could well center around -0.5 , but might be higher. The long-run income elasticity is likely to be greater than unity. Values larger than 2 have been reported for relatively short periods for some rapidly industrializing countries, but values greater than 3 are rare.

In many projections, the total growth in real income over the period is likely to be much greater than the total change in real electricity prices, so that the key to forecasting demand would be the value of the income elasticity. But for periods in which prices are allowed to change very rapidly (typically in order to catch up to costs), price elasticities can be just as important as income elasticities in estimating overall power demand.

Results

This simple test shows that a scenario in which demand grows at 10 percent, income grows at 5 percent, and real prices grow at 9.3 percent for the first decade of the forecast is at the very edge of credibility. With a price elasticity of -0.5 , the

income elasticity for the period would have to be almost 3 for this forecast to be consistent with the macroeconomic scenario. A value of 3 for income elasticity is outside the range of experience reported for other countries.

For the period $2005-25$, when the income elasticity would have to be 2 , the scenario is consistent with international evidence. But again, the persistence of such a value over a long period during which income grows very substantially is certainly at the higher end of the range of experience.

Calculating electricity-to-income ratios

The second check is simply to calculate the electricity (energy) intensity ratio of a country over the life of a power project and relate this to projected per capita income. Projections in which demand runs too far out of line with expected income growth will imply an energy intensity inconsistent with the experience of countries with similar living standards and economic conditions. This check ignores price effects, but it is easier to obtain energy intensities for a wide range of countries than to obtain econometric models for demand in low-income countries.

The starting values for demand and income need to be known in order to calculate changes in energy intensity over the period. For a hypothetical country in 1995, gross national product (GNP) is set at US\$200 (1990 dollars) per capita, derived from a total GNP of US\$5 billion and a population of 25 million (table 2). The population is projected to increase at 2.5 percent a year, so that real per capita income will grow at 2.5 percent for the period if GNP grows at the projected rate of 5.0 percent. In 1995, 800 gigawatt-hours (GWh) of power are used. From 1995 on, power demand and GNP are assumed to grow at 10 percent and 5 percent, as in the scenario used for the previous elasticity analysis.

In this hypothetical country, energy intensity more than quadruples over the thirty-year period. This is not surprising given that the growth rate for power demand is projected to be 5 percentage

**TABLE 2 ELECTRICITY INTENSITY AND GNP FOR A
HYPOTHETICAL COUNTRY, 1995–2025**

Year	GWh	GNP (US\$ millions)	GWh/GNP	GNP per capita (US\$)
1995	800	5,000	0.160	200
2000	1,288	6,381	0.202	226
2005	2,075	8,144	0.255	256
2015	5,381	13,266	0.406	327
2025	13,960	21,610	0.646	420

**TABLE 3 ELECTRICITY DEMAND AND GNP IN SELECTED
DEVELOPING COUNTRIES, 1990**

Country	GWh	GNP (US\$ millions)	GWh/GNP	GNP per capita (US\$)
Bangladesh	8,057	22,738	0.354	210
Kenya	3,215	8,939	0.360	370
Malawi	587	1,701	0.345	200
Rwanda	195	2,215	0.088	320

Source: World Bank data.

points higher than the growth rate for income over a twenty-year period.

A comparison of the hypothetical case with actual data for 1990 for a sample of developing countries with similar per capita incomes suggests that the energy intensities implied in the demand projections for the hypothetical country are again at the limits of experience for developing countries (table 3). The projected energy intensity for 2015 is well above that for countries such as Kenya, whose present real per capita income is substantially higher than that of the hypothetical country after twenty years.

Illustration by Ruth Sofair Ketler.

¹ *New Directions in Econometric Modeling of Energy Demand: With Applications to Latin America* (Washington, D.C.: Inter-American Development Bank, 1992).

Robert Bacon, Oxford University, Oxford,
England, email: econ46@vax.ox.ac.uk

The Real World of Power Sector Regulation

Bernard Tenenbaum

“Governments throughout the world engage in three main activities: they tax, they spend, and they regulate. Regulation is the least understood . . .”¹

Confusion

Regulation is government intervention. When a government regulates, it imposes direct and indirect controls on the actions of state-owned or private enterprises in a particular sector. Government controls on prices are the most common form of economic regulation in the power sector. But regulation often goes beyond simple price or tariff controls. State-owned power enterprises are commonly required to get government approval for many minor operating and investment decisions.

A government may regulate openly and directly through published rules, decrees, and licenses. Or it may regulate through informal contacts between ministries and the managers of the regulated enterprise. State-owned enterprises are especially vulnerable to this “hidden” regulation. As a top official in an Asian government-owned utility explains, “What matters most is not what the ministry writes in its decrees, but what the minister says in his telephone calls.” Regulation is therefore not a new phenomenon for most countries, but there is often much confusion about what it means. A typical reaction from politicians and officials hoping to privatize some or all of their power sector, and at the receiving end of advice on regulatory policy, is, “But this is nothing new! Our government has always controlled the activities of state-owned enterprises through different ministries. And these controls have created many

problems. We don’t need to reinvent the past and put a new label on it.”

What the prime minister needs to know: One word, two meanings

Much of the confusion comes from one word being given two meanings. There is old-style regulation and new-style regulation. Old-style regulation (often labeled coordination, review, or oversight) has been the prevailing mode in countries where state monopolies run the power sector. Typically, it involves extensive control by one or more ministries over the operations and investments of a vertically integrated state power enterprise. This state power enterprise is protected from competition but usually is not allowed to charge tariffs that recover its costs.

Old-style regulation is not an option for any country serious about encouraging significant, sustained private investment in its power sector. Private investors simply will not show up (or, if they do come, they won’t stay long) if a country tries to maintain a regulatory system that is unlimited in scope, unclear in operation, and inclined toward micromanagement. Private investment requires new-style regulation that is limited, transparent, and “lets managers manage.” The choice between the two regulatory approaches is ultimately a pragmatic one. If a country really wants private investment in its power sector, it has no choice but to adopt a new regulatory system that keeps promises and exercises self-restraint.

Why sector-specific regulation?

Why should there be a special set of rules for the power sector? The usual answer is that regulation is needed to prevent the exercise of monopoly power by a natural monopoly. There is, of course, no point in having sector-specific regulation when competition is feasible. But for a developing or formerly socialist economy just beginning to privatize its power sector, the main benefits of regulation do not come from eliminating the efficiency losses due to monopoly

Investors also want protection. Once they have invested in generating plants or distribution systems that have no value in other uses, they are vulnerable to being held (economic) hostage. Independent power producers (IPPs), for example, often talk about the need for a “stable regulatory environment.” This is a polite way of saying, “Once I have signed the power sales contract, I expect it to be honored.” Investors will not invest in a country if they believe that their investment will disappear through direct expropriation or through many small regulatory actions that add up to de facto expropriation. In a country with little or no history of private ownership in the power sector, regulation is needed to convince private investors that they will recover reasonable costs and earn a profit commensurate with the risk they take.

BOX 1 THE EIGHT BASIC DESIGN QUESTIONS

- **Should there be a single regulator or a commission?**
- **Should the regulatory entity have jurisdiction over one sector or several?**
- **What activities or parameters should be regulated?**
- **What are the control mechanisms for price and quality?**
- **How are regulatory rules created and enforced?**
- **What are the desired political and legal attributes?**
 - **Should the regulatory entity be “independent” of government?**
 - **Should the regulatory process be transparent?**
- **Who “regulates the regulator?”**
- **How should responsibility be divided between the regulatory entity and other government authorities?**

power that are described in economics textbooks. The big gains come from creating a system of private ownership that can reduce the economic losses produced by the capacity shortages, cost overruns, and inefficient operations so common in state-run utilities. Privatization, by itself, does not always trigger a need for sector-specific regulation. But privatization in the power sectors of developing and formerly socialist economies usually goes hand in hand with the government’s granting legal monopolies to one or more new private entities. Consumers don’t care whether a new monopoly is natural or unnatural; they simply want to be protected from monopoly prices. If they believe that the government is not protecting them from the new monopolists, privatization won’t last long.

Regulation, then, is simply a system that allows a government to formalize and institutionalize its commitments to protect consumers and investors. Ideally, the policies to be implemented by the regulatory entity should be specified in the energy or regulatory law. But a new regulatory institution is not always required. If privatization is limited to IPPs’ making long-term power sales to state-owned utilities, regulation need be no more than a series of transaction-specific contracts between the government and the IPPs. When privatization is more comprehensive—involving, for example, privatization of distribution—a regulatory agency must be created because it is impossible to prespecify the complete terms of regulation in one or more contracts.

The “independence” question

Eight basic design questions must be answered whenever a new regulatory system is required (box 1). While it is not possible to address all eight questions in this Note, it is worth focusing on the question that always generates the most controversy: Should the regulatory entity be independent of the government? Most presidents and prime ministers react to the idea of an independent regulatory entity with dismay and disbelief. The typical response is, “Why would I want

BOX 2 MINISTER VERSUS REGULATOR: WHO DOES WHAT ...**Minister of energy**

- Translates general government policy into sector policy.
- Approves major capital expenditures (while-state owned).
- Mandates fuel stocks for national security reasons.
- May require use of certain fuels during supply interruptions.
- Controls imports if there are real national security concerns.

Electricity regulator

- Issues and enforces licenses and concessions.
- Sets prices when there is no competition.
- Monitors financial viability of operators.
- Sets service standards and monitors compliance.
- Arbitrates disputes between operators.
- Arbitrates disputes between operators and consumers.
- Provides information and advice to the ministry.

to create a regulatory entity that I can't control? Elections can be won or lost because of electricity prices. Electricity prices are too important to be left to an independent regulatory commission."

This strongly negative reaction to the notion of an independent regulatory commission is the result, in part, of three misunderstandings. The first comes from the fact that the word *independence* is confusing. No regulatory entity can be truly independent. Even if a regulatory entity is a nonministerial commission or office, it is still a creature of government because it was created by government. What people really mean by an independent regulatory entity is a government entity that does not have to get the approval of the prime minister or other high-level political authorities to raise (or lower) tariffs. A conscious political decision has been made to give the regulator autonomy in tariff changes and other decisions. Independence does not mean the absence of accountability. There is still accountability, but it is to the tariff standards in the law, not to the minister.

A second misunderstanding is the belief that the regulatory entity must be given complete authority over all policy decisions that affect the power sector. This is a mistaken presumption. In countries with independent regulatory entities, executive departments or ministries retain control over many fundamental policy decisions affecting the sector. The basic split is between policy development by the ministry and policy implementation by the regulatory entity (box 2 shows how decisions could be divided between a ministry and an independent regulatory entity).

The third and perhaps most important misunderstanding arises from confusion about the reason for independence. Independence is not an

end in itself. Instead, it is a means to an end. What ultimately matters is not whether the regulatory entity is independent, but whether the government can give a credible commitment to investors and consumers. If a government can give credible commitments without an independent regulatory entity, there is no real need for independence. But in most countries, prime ministers and presidents have found it difficult to resist the temptation to keep tariffs low when they have direct or hidden, indirect control over tariffs. Thus, the basic rationale for creating an independent regulatory entity insulated from day-to-day political pressures is that such an entity may be better able to give a commitment that investors can believe in. Of course, a regulatory entity could be legally independent and still renege on its commitments, becoming a "rogue" regulatory body. Therefore, independence must be combined with well-specified tariff-setting criteria—and backstops that encourage compliance.

An alternative to independence is a completely specified regulatory regime that leaves little or no discretion to the regulatory entity. This is the approach taken in Chile and Peru. It arises out of a fundamental mistrust of government, both inside and outside the regulatory commission. It is appealing because it is perceived as the regulatory equivalent of going on "autopilot," but it is likely to work only when a government has a clear idea of the industry structure it wants, moves quickly to this structure, and then doesn't change its mind.

Backstops to regulation?

A country may adopt all the formal trappings of an independent regulatory entity while, behind the legal facade, the prime minister still retains effective control over the fundamental regulatory decision—tariff levels. Are there "backstops to

regulation" that will make the prime minister think twice about renegeing on regulatory commitments? Two backstops are worth considering. The first is widespread domestic ownership of the private power companies. This backstop works when enough voters have been converted into investors. For example, in Chile, about 35 percent of the equity shares of private electricity companies are owned by Chilean pension funds. It is relatively easy for authorities to quash tariff increases when the owners of the power companies are foreigners or a few friends of the former prime minister. It is much harder to do so when the pensions of many local citizens depend on the dividends paid by these companies.

The second backstop is through international guarantees of regulatory performance. The World Bank recently created stand-alone guarantees for various sovereign risks, including government regulatory actions. The guarantees are limited to protecting private lenders against debt service default. The guarantee fee ranges from 40 to 100 basis points and is in addition to the interest rate charged by the lenders. As a condition for issuing a guarantee, the Bank will require a counter-guarantee from the government that, if it fails to live up to its regulatory commitment, it will reimburse the Bank for the amount paid out in compensation. The guarantee program is likely to work only if governments can be persuaded to take out insurance against their own possible misbehavior and if future regulatory performance can be described precisely enough to make it clear when the guarantee would be triggered.

Transparency

Regulators are always under suspicion—especially new regulators in developing and formerly socialist countries, because often their first big task is to lift prices up to costs. (In contrast, regulators in the United States and other industrial countries work hard to get prices down to costs.) The need to raise prices often coincides with privatization, so consumers will inevitably suspect that the regulator has "sold out" to the new private power companies. If the regulatory agency is to have any legitimacy, it must be able

to convince the public that the price increases reflect costs previously suppressed or subsidized by the government, not monopoly profits.

The best way to do this is to make the regulatory process as transparent as possible. Transparency means openness. It has three principal dimensions: specifying the rules, opening up the process, and explaining the decisions. The British regulator, for example, specifies its rules in the licenses issued to each power sector entity. The advantage of putting all the rules in a single place is that it increases certainty. The U.S. system, dominated by lawyers, places an excessively high premium on the openness of the process. The typical U.S. rate case involves expert witnesses, cross-examination, written briefs, and counterbriefs—all open to public view—and strongly resembles a court case. It is a slow and costly system, and there is no clear evidence that it produces better decisions. Probably more important than the openness of the process is the requirement that the regulator issue written explanations of its decisions. The discipline of justifying in writing decisions that could be appealed reduces the chances of the regulator's becoming a "rogue" regulator.

A common mistake

Currently, more than twenty countries are reforming their power sectors. For most prime ministers, this reform simply means restructuring and privatizing state-owned enterprises. What they forget or may not know is that a government cannot regulate private power companies in the same way that it regulated state enterprises. Power sector reform will succeed only when governments reform both the sector and the way it is regulated.

¹ Scott H. Jacobs, "Building Regulatory Institutions: The Search for Legitimacy and Efficiency" (OECD, Centre for Cooperation with Economies in Transition, Paris, 1994).

*Bernard Tenenbaum, Industry and Energy
Department, email: btenenbaum@
worldbank.org*

Competitive Contracting for Privately Generated Power

What to do in the absence of competition in the market

Robert Bacon

The importance of competition

Independent power producers (IPPs) are an increasingly important type of power generation project in developing countries. In many of these countries, power sector reform involves unbundling generation from transmission and introducing private capital. Rather than privatizing existing generators, some governments prefer to create an enabling environment for IPPs. They have two objectives in doing so. First, by using truly competitive bidding to procure new generation capacity, governments seek to minimize the costs of expanding power supply. And second, by introducing the profit motive and competition in the power and energy sector, they seek gains in operational efficiency that lead to lower prices for electricity users than would otherwise have been possible without subsidies.

The second result is especially hard to achieve, and when achieved, it can be even harder to sustain. Governments in most developing countries lack the proven track record of transparent regulation of their power sectors that is needed to attract private investment. Thus, long-term contracts (power purchase agreements) are required both to encourage entry by potential investors and to safeguard their interests. Such contracts attempt to share the risks between the parties in a predictable fashion. But because it is difficult to write legal clauses that cover uncertainties about future marketing conditions, they cannot be fully contingent, so inefficiencies arise in system operation. For example, at the time of signing a power purchase agreement, the IPP may be the most efficient plant in the merit order and should indeed run on base load as specified in the typical contract. But circumstances can change, and after a few years, running the

IPP as baseload might no longer be optimal. When a contract does not allow for such a contingency, the operational efficiency of the system tends to decline. And contracts that provide for guaranteed sales to reduce private investors' risk reduce the competitive pressure on them to operate their plants efficiently.

There is inevitably a tension between designing contracts to reduce uncertainty for the private investor and running the power system as efficiently as possible. The characteristics of power sales agreements are pivotal in resolving this tension. This Note surveys a range of selling agreements—from the most rigid to the most flexible—and highlights their risks and benefits for operational efficiency.

Some of the most common contractual arrangements for IPPs place no competitive pressure on existing suppliers. These arrangements will not help improve the efficiency of the sector. They will only increase supply capacity—though that can be valuable in a system facing public financing constraints. When the entry of IPPs fails to put competitive pressure on other suppliers, governments need to design other efficiency-enhancing reforms, such as performance contracts for the nonprivate generators. And if the contract does not lead to head-to-head competition between new IPPs and the other suppliers, it should include performance incentives to ensure that the IPP remains an efficient supplier.

Methods of contracting for the sale of IPP power and energy

There are three principal dimensions to power sales agreements: the selling prices for power

and energy, the amount of power and energy sold, and incentives to improve performance and disincentives to ensure that performance does not fall below a basic standard. Sales agreements generally are based on a two-part pricing structure—with separate payments for capacity and energy. But there are substantial differences in the way they deal with quantities—ranging from “must-run” or “take-or-pay” contracts on the plant’s entire output to competitive dispatch. The stronger a sales agreement’s guarantee of a market for the IPP’s output, the more attractive the IPP becomes for the IPP sponsor and financiers, but the less pressure is created to generate that output efficiently and the less competitive pressure is applied to other generators. The choice of contract structure must therefore take into account the two—sometimes conflicting—aims of attracting private finance and improving sector efficiency.

The price of capacity in the power sales agreement usually is related to the capacity declared available, rather than to the actual capacity run. It is likely to be set so that, at a given level of operation, the discounted revenue from capacity payments will cover capital costs over the life of the project. Contracts tend to set a target level for availability (say, 80 percent) over the year, plus a bonus zone above this availability and a penalty zone below it. Setting the target well below the feasible availability under good operating practices reduces the financing risk of the IPP and thus the incentive for the operators to be efficient. If the IPP is one of the lowest-cost generators, it should be used as much as possible. A bonus payment for availability above the target can be used as an incentive for higher production. Similarly, if the price for capacity allows an IPP to earn an economic return on capital at a capacity utilization below the target, penalties are needed to ensure that the IPP remains efficient. Recent U.S. experience with IPPs shows that, in most cases, penalties and bonuses are an important part of the incentive scheme.

The price of energy usually is tied to an initial cost estimate and a series of cost indexation fac-

tors. An initial heat rate and initial fuel and operating and maintenance (O&M) costs are assessed for the plant, together with the appropriate indexes (for example, the consumer price index for O&M costs and the average fuel price index of the sector for fuel costs). These determine the energy price. Often, the price is set to just cover such costs, and as long as the indexes track the actual costs exactly, there will be no change in the net revenue per unit of energy supplied. The energy price is then designed, as in certain U.S. power pools, so that the IPP is indifferent to whether or not it is dispatched. The capacity price is collected because the plant was declared available, not because it actually ran, and since it earns no net revenue per unit of energy, there is no gain from being dispatched. If strong enough, the profit motive can encourage the firm to try to “beat the index” in fuel purchases or O&M costs so that the firm’s actual costs rise less than its allowed costs. (The firm is allowed to keep the difference—it is not passed on to the consumer.)

The contractual arrangements for determining how much energy and power are sold can vary greatly. The rest of the Note examines their importance for the sector.

Must-run or take-or-pay contracts

The least risky form of contract for IPPs guarantees the sale of a stipulated amount of power and energy for the life of the contract. When this guarantee covers the entire projected output of the plant, the IPP has an assured market that it cannot lose without compensation, but it also cannot increase its market share. Under this must-run contract, there is no issue of economic dispatch for the plant even when other plants have lower costs. The subsequent entry of additional IPPs, each with a long-term contract, can compound this problem. The purchaser must pay for any contracted output that it does not take from the IPP.

This arrangement has three separate effects on the performance of the sector. First, there is *no competitive pressure* for the IPP to lower costs,

so that efficient operation depends *solely on the profit motive*. For costs that are indexed, the incentives to improve performance center on “beating the index” to benefit from the difference. Second, dispatch can occur out of merit order, leading to the loss of a system’s productive efficiency. And third, the lack of competition for market share between the IPP and other generators means that, even if operated efficiently, the IPP poses no threat to other generators because it has no spare capacity to capture their market share. In the United States, early PURPA¹ projects were of this kind, and the result was such problems as excess production of off-peak energy, which the buying utility was obligated to purchase. The IPP projects in the Philippines are on a take-or-pay basis, as is a project in Belize and another in Colombia.

Economic dispatch

The natural development from must-run contracts has been to introduce economic dispatch. In these contracts, capacity price is again related to availability, and the energy price is paid only for the energy dispatched according to costs. The IPP can declare its available capacity and thus can cover its capital costs, but it is not guaranteed energy sales. Under this form of contract, the plants are dispatched according to their economic ranking. That is the main benefit of the arrangement, but it requires establishing an entity to determine dispatch on a cost-related basis. Energy prices linked to a cost index, however, do not allow cost savings to be passed on to consumers or reflected in the prices that influence dispatch decisions. That is because this arrangement bases dispatch on the contractual energy costs, which relate to the initial settlement level and the values of the indexes since the start of the contract. If the initial costs (for example, the heat rate) were incorrectly estimated or if the fuel prices obtained by the IPP diverge from the index, the actual cost of generation can be quite different from the cost taken into account for dispatch. In this case, dispatch might not occur according to a true merit order, and systemwide generation costs could be unnecessarily high.

The use of bonuses and penalties for capacity availability can lead to some competitive pressure between plants. If the IPP tries to increase its market share by bidding a higher availability (under the incentive of a bonus payment), other generators may lose market share and respond by trying to reduce their capacity costs so as to improve their availability. Dispatch based on economic costs, however, provides no competitive incentives for the supply of energy. Because generators cannot bid market prices, but instead offer cost-related prices determined at the outset of contracts, there is no way for IPPs or for other generators to increase market share through price competition. Contracts that guarantee a “minimum take” below normal capacity availability combine aspects of the must-run contract with those of an economic dispatch contract. Economic dispatch is used in IPP contracts in Jamaica and the Dominican Republic, and a second project in the Dominican Republic has take-or-pay for up to 130 megawatts (MW) of its 185-MW capacity.

Generator trading

Another step to improve efficiency is to allow generators to trade in a market based on economic dispatch. The contract prices for energy are predetermined for all generators, but the generators bid availability for the next period (typically the next day). The dispatch agency or power purchaser determines least-cost dispatch on the basis of the contract prices and announces the schedule. Generators can then trade energy among themselves, buying from lower-cost generators not fully committed in dispatch to meet some of their contractual commitments.

Opportunities for trade emerge when actual costs for energy are below the contract prices. The power purchaser is informed of such trades and adjusts the dispatch schedule while paying in accord with the original schedule. This system lowers the total costs of generation, but once again these benefits are not passed on to consumers, because generator prices are tied to the cost index. The system can lead to competitive pressure for generators to improve efficiency



once actual costs start to diverge from the index. But it is complicated to operate because the power purchaser must determine dispatch in advance and keep records of transactions between companies, and generators need to have sophisticated systems. Generator trading is used in the reformed power sector in Chile.

Competitive pool

The distinctive feature of competitive pools (as they exist in England and Wales, Argentina, the ELEX pool in New South Wales, and, to a limited extent, Norway) is that *prices for energy are bid rather than related to costs by a formula*. That allows prices to be lowered when there is real competition, as generators struggle to increase or to hold onto their market shares. Generators bid their capacity availability and their offered energy price. The pool operator then determines economic dispatch and pays for energy on the basis of marginal bid prices and for capacity on the basis of declared availability and a formula that gives signals for long-term investment. In principle, this system can be highly efficient in producing the lower consumer prices associated with competition. But experience in the system in England and Wales suggests that there are many problems associated with setting up and running such a pool. This demanding system is probably feasible only for a sizable market with several generators and sophisticated management.

Conclusion

Introducing independent power producers in a power system where existing generators are inefficient can bring about more efficient investment, but it is not sufficient to achieve the operating benefits of competition. Power and energy sales contracts are crucial to ensuring efficient operation of the IPPs, true merit order dispatch to achieve least-cost generation with current operating practices, and competition among generators to ensure efficient operating practices throughout the sector.

Take-or-pay contracts, although attractive to producers because they remove demand risk,

achieve none of these benefits. Economic dispatch contracts, possibly coupled with minimum-take provisions, can be designed to provide incentives for the IPP to generate efficiently and can ensure merit order dispatch on indexed costs. Where dispatch is related to a predetermined cost index, however, there is no competition between generators to sell energy. But including a bonus in the capacity price structure can create limited competition for the sale of capacity declared available. Generator trading can ensure that dispatch occurs on the basis of actual costs. Where these costs are likely to diverge substantially from the cost indexes used in the IPP contract, generator trading can be an attractive option if there are enough generators to create a true market and a pool of suitably qualified managers to operate the system.

Full competition through an open pool is suitable only for large, mature systems with spare capacity. Even in the system in England and Wales, generators have taken several years to learn how to benefit fully from the complexities caused by rapid changes in prices. These prices sometimes have been too high because the two dominant generators have taken advantage of their market power, restricting the capacity offered to the market to drive up the price of available capacity.

Among developing countries, only the largest can expect to establish systems that bring the benefits of true competition, such as a competitive power pool or generator trading. Countries with small power systems (about ninety have less than 500 MW) that are growing slowly could introduce IPPs only slowly. Here, the need to provide low demand risk to potential investors (to compensate for the other risks of doing business in unfamiliar markets) suggests using long-term contracts that are carefully designed.

¹ PURPA is Public Utility Regulatory Policies Act (1978).

Robert Bacon, Oxford University, Oxford, England, email: econ46@vax.ox.ac.uk

Fiscal Systems for Oil—How Governments Compete for Exploration Investment

Chakib Khelil

Until the 1960s, petroleum exploration on an international scale was carried out by only a few large petroleum corporations. But in the past few decades, the number of oil companies has increased substantially. Now, more than 300 oil companies explore in two or more countries, and exploration by private companies takes place in more than 150 countries.

Exploration for petroleum occurs on the basis of concessions, leases, or contracts granted by governments. The terms and conditions of such arrangements are established by law or negotiated case by case. One important aspect of the arrangements is the fiscal terms and conditions—these include bonuses, rentals, royalties, production sharing arrangements, carried interest provisions, corporate income taxes, and special taxes.¹ Together, all the payments to government required under a petroleum arrangement can be called a “fiscal system.” In some countries, a single fiscal system applies to the entire country; in others, a variety of fiscal systems exist.

The large number of governments involved in setting terms and conditions for fiscal systems, the wide diversity of areas available, and the large number of oil companies interested in exploration have created an “international market” for exploration acreage. Governments offer exploration acreage through formal bidding rounds or case by case. The “price” for the acreage is the government take—the total effect of the fiscal system on the cash flow of an oil field—and is expressed as a percentage. For example, a government take of 55 percent means that the total government revenues resulting from the fiscal system represent 55 percent of the cash flow from the oil field. The world average govern-

ment take is 64 percent. Ireland has a very low government take, at 25 percent, and Yemen a very high one, at 95 percent. Most government takes are between 40 percent and 85 percent.

How governments compete for exploration and development investments by private oil companies is still poorly understood—by governments and by companies. This Note analyzes the process of competition among governments.

BOX 1 FISCAL SYSTEM RATINGS IN OIL-PRODUCING AREAS

Very favorable: Ireland, Spain, United Kingdom, Argentina, New Zealand, Pakistan (zone 1), and Denmark (fourth round).

Favorable: Northwest Territories (Canada), Illinois, Peru, Australia (offshore), and U.S. outer continental shelf (Gulf of Mexico, deep).

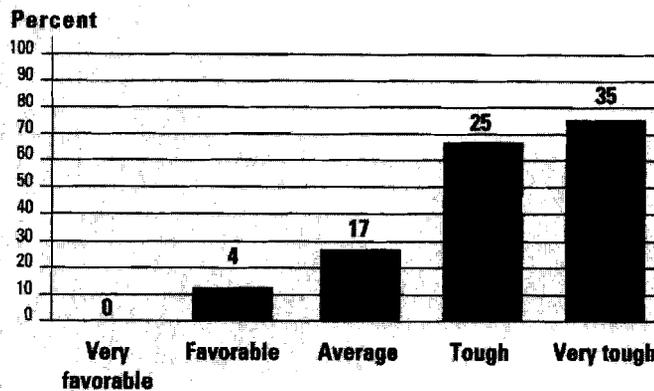
Average: The Philippines, U.S. outer continental shelf (Gulf of Mexico, shallow), Thailand (gulf, 1995 terms), China (offshore), Malaysia (deep water), Nigeria (offshore to 200 meters), Viet Nam, and Trinidad and Tobago (onshore).

Tough: Kazakhstan, Alaska (onshore), Ecuador (regular terms), Texas (offshore), Alberta (third-tier oil), Netherlands (1995 terms), Norway, and India.

Very tough: Louisiana, Russia (production sharing contract), Venezuela (new model contract), Indonesia (1994 terms), Malaysia (conventional), Angola, Nigeria (Niger Delta), Syria, and Yemen.

Note: This is not an exhaustive list of the study results.
Source: Van Meurs 1994.

FIGURE 1 EXPORTING AREAS AS A SHARE OF EACH FISCAL SYSTEM GROUP



Fiscal system ratings

In a study initiated and supported by the World Bank and private oil companies, 226 fiscal systems in 144 countries were rated on the basis of a standard economic analysis of oil fields assuming the same prices and costs across the world. The oil fields ranged in size from 3 million to 300 million barrels. The rating is based on eight different economic yardsticks, including such familiar economic indicators as rate of return and net present value, the government take, and the geological risk in exploring for oil and gas fields.

A point system based on the eight criteria was developed that simulates an investor's decision-making. Using this point system, the fiscal systems were divided into five groups, ranging from "very favorable" (the best systems for investors) to "very tough" systems (box 1).

In a competitive world, areas with the least favorable geology, the highest costs, and the lowest wellhead prices would be expected to offer the best fiscal terms—and areas with the best geology, the lowest costs, and the highest wellhead prices the toughest terms. That pattern of competition does in fact exist. Countries with unfavorable conditions typically offer very favorable or

favorable terms, and countries with favorable conditions, such as the oil-exporting countries, demand tough or very tough terms (figure 1). Provinces and states also follow that pattern: the exporting states of Louisiana and Texas set tough or very tough terms, and the importing province of Ontario offers favorable terms.

The study found that the correlation between fiscal terms and geological and economic conditions is much stronger at the regional level than at the global level. Thus, while companies compete globally, governments seem to compete regionally.

Governments respond to market forces in setting terms and conditions for their acreage. But they set these terms and conditions primarily in reference to the region. In other words, governments in the Asia-Pacific region tend to compete with other governments in that region rather than with governments in Europe or Latin America. There are two reasons for this behavior. First, some governments, particularly those of smaller countries, have limited information about fiscal terms and conditions around the world, but usually have better knowledge of the terms in neighboring countries. Second, it is often difficult for governments to defend terms and conditions significantly more favorable to foreign oil companies than those set by their neighbors. A good political defense for the terms of a contract is that they are similar to those of contracts in surrounding countries. This behavior by most governments leads to a regionalization of fiscal systems, creating important anomalies.

Anomalies created by government behavior

The first anomaly is that regions seem to "disconnect" from other regions. The government take for most fiscal systems in Europe ranges from about 35 percent to 65 percent—though a few outlier values stretch the actual range for the region from 18 percent to just over 80 percent (figure 2). In Sub-Saharan Africa, North America, and the Asia-Pacific region, government takes typically range from roughly 40 percent to 80 percent. In the central region, which includes North Africa, the Middle

East, and the countries of the former Soviet Union, government takes are 60 percent to 95 percent. Countries in each region seem to compete within that region's range of government takes. Latin America is the only region in which countries compete more or less globally, setting government takes that range over the entire spectrum—from 25 percent to 90 percent.

North America does not seem globally competitive. To compete with Europe and Latin America, several importing areas in North America should offer very favorable terms. Yet none of the importing states and provinces of the United States and Canada offers very favorable terms—remarkable, because the United States is an important oil importer.

The second anomaly has to do with importing countries with modest geological prospects. These countries need to adopt very favorable or favorable terms to be globally competitive. Yet, driven by regional concepts of competition, many of these countries offer rather tough fiscal terms. Consequently, there are countries that are regionally, but not globally, competitive, including the Republic of Korea, Nepal, Lao People's Democratic Republic, Bangladesh, India, Papua New Guinea, Tanzania, Mozambique, Ghana, South Africa, Albania (offshore), Morocco, Romania, Jordan, and Mauritania.

The average fiscal system is regressive and front-end-loaded

To examine the global characteristics of fiscal systems, the study determined a "world average fiscal system" by calculating the arithmetic average of all 226 fiscal systems. This calculation produced some interesting results.

1. The world average fiscal system is regressive for small fields.

Regressive means that the government take is a higher percentage of the cash flow for small and marginal fields than for large and profitable fields. The average government take on a 10 million barrel field is 68 percent and on a 300 million

barrel field 64 percent. As a result, the rate of return of a 10 million barrel field declines significantly when the government take is taken into account. Most fiscal systems make small but potentially profitable fields uneconomic. Oil-producing and oil-exporting countries set fiscal terms so as to capture the biggest rent possible from large oil finds and may neglect to promote private investment on small marginal fields. But oil-importing and self-sufficient countries need more oil and thus have an incentive to ensure that private investment also reaches small marginal fields. World oil production could be significantly increased if governments of oil-importing and self-sufficient countries and provinces provided fiscal incentives for production on small fields.

2. The world average fiscal system is front-end-loaded.

On a standard 30 million barrel field, the government take is 68 percent during the first six

FIGURE 2 RANGE OF GOVERNMENT TAKE, BY REGION

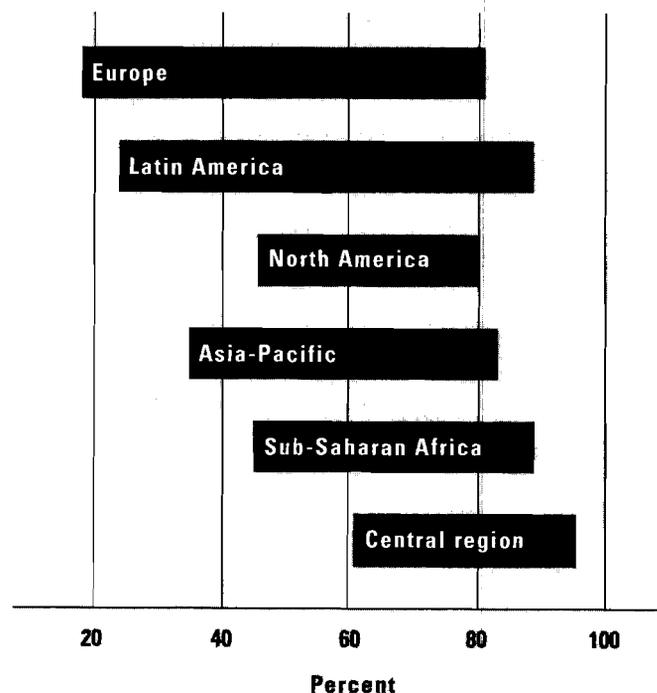


TABLE 1 GOVERNMENT TAKE IN ONSHORE AND DEEP WATER CONDITIONS (percent)

Country or State	Onshore	Deep water
Portugal	43.2	39.7
Louisiana (federal)	69.3	47.2
Thailand	67.0	57.5
Nigeria	84.8	64.2
Malaysia	89.4	68.1
Indonesia	89.8	81.1

years of production and 61 percent during the rest of production. Adopting back-end-loaded systems could significantly increase the attractiveness of exploration and development.

Trends point to lower government take and greater differentiation in terms

Over the past decade, fiscal terms and conditions have changed significantly. Of the 226 fiscal systems analyzed, 130 have been changed. In almost all these systems, the changes reduced the government take. At the same time, the supply of exploration acreage has increased. Many countries have opened new areas, including China (onshore), Viet Nam, Cuba, Myanmar, Yemen, the countries of Eastern Europe and the former Soviet Union, and, recently, Venezuela. Many other countries have decided to accelerate the process of offering acreage, such as Argentina and Peru. These changes have almost doubled the acreage available for exploration by private oil companies during the past ten years.

At the same time, the demand for acreage has fallen because of lower oil prices and smaller cash flows for the oil industry. As a result, the “price” for acreage—the government take—has been declining. This trend can be expected to continue until a new balance is established between supply and demand for acreage.

Another important development is the increased differentiation of terms within countries. Many

countries have begun differentiating terms more to reflect differences among areas in such factors as costs, geology, logistical conditions, depth of water, and gravity of the oil. Governments compete by setting different government takes for different environments—for example, for onshore conditions and for offshore or deep water conditions. Thus, Thai onshore terms compete with Indonesian and Malaysian onshore terms, and Thai deep water terms compete with Indonesian and Malaysian deep water terms (table 1). This differentiation is intensifying the global competition for private investment in petroleum exploration.

Conclusions

The study shows that there is an active international market for exploration acreage. The “price” of the acreage is the government take, generally between 40 percent and 85 percent of the cash flow of an oil field.

Governments compete to attract investments. But the competition is primarily regional, and as a result, some countries or areas are not competitive at a global level. On average, fiscal systems make small but potentially profitable oil fields uneconomic. Although this approach might be expected from oil-producing and oil-exporting countries, it is not in the best interests of oil-importing and self-sufficient countries. Moreover, world oil production could be increased significantly if importing and self-sufficient countries offered better terms for such fields.

Over the past decade, government takes have declined, and many countries have differentiated the terms they offer to reflect different economic and geological conditions.

For a copy of the report on the study's findings, “A Comparative Study of World Fiscal Systems for Oil and Government to Government Competition,” by Pedro van Meurs (Gordon Barrows, New York, 1994), call Ms. Shirley Rajan, 202-458-2317.

¹ In this Note, fiscal terms do not include downstream fuel taxes.

Chakib Khelil, Petroleum Advisor, Industry and Energy Department, email: ckhelil@worldbank.org

Bankruptcy Reform—Breaking the Court Logjam in Colombia

Izak Atiyas

Ideally, bankruptcy policy should encourage the reorganization of companies whose liquidation value is smaller than their value as a going concern, and the liquidation of companies for which the opposite is true. In addition, it should encourage a speedy resolution of financial distress. The longer a company stays in bankruptcy, the greater the loss of value and the more difficult it becomes to rehabilitate the company and to pay off its creditors. The crucial issue in bankruptcy is designing a process that will distribute decisionmaking authority among the debtor, the creditors, and the oversight agency in a way that achieves these objectives. When that process gives the debtors too much power, they can simply delay in order to force concessions from creditors, with the result that firms that should be liquidated may end up being reorganized. And when it gives creditors too much power, too many liquidations may occur, leading to the loss of going concern values.

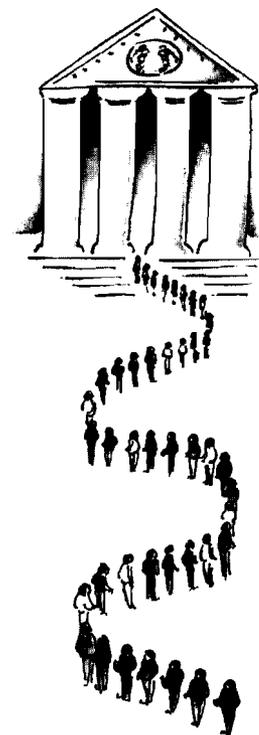
Recently, Ramachandran (1995) has suggested that the allocation of decisionmaking power in bankruptcy law affects only the tactics of the parties involved and not the eventual outcomes.¹ The view taken here is that if changes in the bankruptcy law, procedures, and institutional structure can help speed the pace at which companies move out of bankruptcy, outcomes are likely to improve. As Colombia's experience shows, that pace can be determined by the rules governing the process. Before undertaking reform in 1989, Colombia provided a good example of the kinds of problems and inefficiencies that arise when debtors are granted excessive power, there are multiple forums for dealing with bankruptcy, and the judicial system suffers from a lack of skills and limited processing capacity. The reform introduced an innovative institutional solution to these problems: it shifted the bankruptcy

procedures from the traditional judicial system to a credible administrative agency with more expertise in handling workouts.² The result was a process with more authority, more flexibility, and more speed. Colombia's reform provides a workable model for other countries suffering from congested courts.

Prereform: Two judicial forums, confusion, and high cost

In common with other countries, Colombia had two insolvency procedures. The first, the *concordato*, was basically a financial reorganization procedure, designed to reach a conciliatory agreement between a company experiencing financial difficulties and its creditors, with the purpose of rehabilitating the debtor's business. The second, the *quiebra*, was a liquidation procedure. Once a company entered *quiebra*, its assets were sold and the proceeds distributed to creditors. However, and in contrast to most other countries, Colombia had two institutions dealing with bankruptcy—the court system and the Superintendency of Companies. The Superintendency was mainly a watchdog agency that monitored companies' compliance with company law. It had oversight of firms with more than 100 workers, firms with foreign liabilities exceeding a third of their assets, and firms that were more than 50 percent government owned.

Reorganization procedures were of two types. The first was optional. It was used mainly by small and medium-size companies, and the competent authority was the district judge. By contrast, the larger firms under the supervision of the Superintendency of Companies had to go through a mandatory *concordato* if they were unable to repay their debts. These firms could not be liquidated



until after a reorganization had been attempted, overseen by the Superintendency.

Delays easy and disruptive

In mandatory *concordatos*, the debtor retained the management of the company unless fraud was established. Following admission to the process, the first step was to validate the list of claims. Any objections raised by the parties involved had to be resolved at this time. Once disagreements were resolved, the parties were convened in a hearing in which they voted on a proposal to reorganize the liabilities (and, in principle, the assets) of the company. If an agreement was reached, it went to the district judge for confirmation. If there was no agreement, the procedure was declared failed and a *quiebra* was initiated.

The *concordatos* were typically plagued by delays. From a sample of 190 firms that had entered bankruptcy between 1982 and 1989, there were 82 cases in which no agreement had been reached by May 1989. Of these, 54 had been going on for more than two years, 36 for more than three years, and 16 for more than five years.³ Most delays occurred during the validation of claims, a part of the process vulnerable to opportunistic behavior. Although the validation of claims was overseen by the Superintendency, objections had to be resolved by the district court. As a result, the resolution of bankruptcy procedures often depended on the lengthy resolution of several additional, parallel cases in different courts. Debtors wanting to delay procedures, in order to extract concessions from creditors or to strip the assets of the firm, could easily find excuses for filing objections. For example, the law required from the creditors “at least summary proof” of their loans; the fact that many loan documents, especially for smaller creditors, were inadequately prepared helped the debtors in that respect. There were no measures in the law to penalize debtors or creditors for filing objections simply to gain time or to disrupt the process.

There were other ways to delay bankruptcy procedures. To cause a hearing to be postponed,

debtors could simply fail to show up, behavior against which the creditors had no remedies. The parties could appeal almost every decision of the judge or the superintendent. Objections could also be raised by creditors who were free-riding, that is, blackmailing other creditors to gain favorable treatment in the negotiations. The limited processing capacity of the court system contributed to the delays. It could take judges a long time to confirm a plan already agreed to by the creditors and the debtor. In May 1989, of the sixteen cases in which an agreement had been reached and needed only to be confirmed by the judge, nine had been awaiting confirmation for more than a year.

High cost

As a result of these delays, bankruptcy procedures often failed to yield efficient outcomes. Firms that needed to be liquidated often ended up being reorganized. And firms that were liquidated often ended up with all their assets stripped, so that there was nothing left to repay creditors.

After a financial crisis in the early 1980s, mandatory reorganizations reached an economically significant scale in Colombia. In 1986 and 1987, for example, about 60 of the 1,000 or so manufacturing companies supervised by the Superintendency were under reorganization. These companies held assets valued at about 12 percent of the country’s total manufacturing assets, and as much as 20 percent of the assets in some sectors, such as textiles. Thus, the performance of the companies in bankruptcy weighed heavily in the performance of their industries.

Reform of the *concordato*: One forum and no delay tactics

In the 1989 reform of the mandatory reorganization procedures, the most significant change was the designation of the Superintendency as the sole competent authority. The Superintendency was thus endowed with the authority to decide on matters that had previously gone to the district judge. Most important, it was given the au-

thority to resolve disputes arising from objections raised during the validation of claims. It was also authorized to confirm any agreements reached between the parties. Granting these judicial powers to an administrative authority created a constitutional controversy, resolved only when a new constitution was introduced that permitted an administrative authority to assume the functions of a judge.

The reform also introduced time limits for the different stages of reorganization. For example, as soon as the Superintendency approves an application for a *concordato*, all evidence of claims on the firm must be provided within twenty days. The parties then have five days to object to the claims and must attend a preliminary hearing within the next fifteen days. The rules governing the final hearing are also quite strict. If the debtor does not show up and cannot justify his absence within three days, a new hearing is convened during which an agreement may be approved by vote of only the creditors. If the creditors do not show up or an agreement is not reached, the hearing can be convened only once or twice more, after which the *concordato* is declared failed.

In another move to expedite the process, the reform ruled out appeals for many decisions of the competent authority. Where appeals are possible, they do not suspend the process. The reform also allows the creditors to establish mechanisms for control and monitoring during the procedure. It requires the formation of a creditors committee of representatives of different classes of creditors (including workers, public agencies, and financial and nonfinancial creditors). It also requires the appointment of an examiner of the property, credits, and affairs of the debtor. Both the committee and the examiner have extensive functions. In particular, both can request that the competent authority remove the debtor from the management of the firm.

Impact and lessons

With the reform still relatively new, it is hard to evaluate its overall impact. But it seems that bank-

TABLE 1 DURATION OF REORGANIZATION PROCEDURES

Duration (months)	Procedures initiated before the reform	Procedures initiated after the reform
12 or less	28 (18)	8 (32)
13 to 24	51 (34)	7 (28)
25 to 48	44 (29)	2 (8)
49 or more	17 (11)	—
Unfinished	12 (8)	8 (32)
Total	152 (100)	25 (100)

Note: Figures in parentheses are percentage shares of the total. Preform figures cover the decade prior to reform. To make the results more comparable, the second column concentrates on those cases initiated between May 1989 and the end of 1991. (Without the cutoff more recent cases would not have had enough time to come to closure and so the ratio of unfinished cases under the new code would have been biased upwards.)
Source: Colombia Superintendency of Companies.

ruptcy cases are being resolved more quickly. The proportion of cases in which an agreement is reached within a year has increased from 18 percent to 32 percent (table 1). Before the reform, only 52 percent of cases resulted in an agreement within two years; this ratio has now increased to 60 percent. These percentages probably underestimate the real benefits of the reform. Since parties dissatisfied with the way the Superintendency handles the procedures have some room to appeal,⁴ in principle, the gains described above should be contrasted with any additional delays caused by appeals. But data on appeals are not available. However, the business community, including both creditor banks and debtors, have generally welcomed the reform, suggesting that improvements are real and substantial.⁵

No comparable data exist for the optional cases that still take place in the traditional court system. But there is a general consensus among professionals, lawyers, and the business community that, even though these cases are governed by similar legislation, it takes much longer to reach agreements in the optional *concordatos* under the court system than in the mandatory *concordatos* under the Superintendency. There are several reasons

for this difference. First, giving the Superintendency the sole legal authority to handle the entire bankruptcy process effectively prevents delays due to frivolous but time-consuming appeals. Second, the Superintendency staff are competent in analyzing the financial situation of companies, they are more likely than the courts to rule on the

are entities that, with a bit of nurturing, could assume a role like that of the Superintendency, deciding whether to improve the traditional court system or to switch to the alternatives by giving them the necessary legal powers is a matter of judgment. The greatest danger lies in creating parallel courts with overlapping jurisdictions.

Giving the Superintendency the sole legal authority to handle the entire bankruptcy process effectively prevents delays due to frivolous but time-consuming appeals.

merits of the claims, and they are better mediators. Third, setting time limits for each step in the process, together with the elimination of several judicial forums, has speeded the entire bankruptcy process.

Colombia's experience could teach other countries some useful lessons. First, setting time limits for the steps in the bankruptcy process has advantages—although, of course, unrealistic deadlines should be avoided. They are likely to be violated often, allowing appeals on procedural grounds. Second, when traditional court procedures for bankruptcy are difficult to change, an attractive alternative is to legally empower another entity to handle the entire process. In doing so, governments should guard against implicitly allowing multiple legal forums by permitting interim steps to be appealed in the traditional courts. The strength of a chain is determined by its weakest link, and allowing the traditional courts into any step of the process would slow the entire process. Not every country has an entity like the Superintendency ready to step into the breach. An important—and sometimes rare—attribute of the Superintendency is its reputation in both the banking system and the business community as an impartial and competent institution free from politics. When there

Illustration by Ruth Sofair Ketler.

¹ Ramachandran (1995) concentrated mainly on the transition economies of Eastern Europe and the former Soviet Union.

² This approach is an example of the out-of-court institutional solutions mentioned by Fleisig (1995).

³ In the United States, where bankruptcy reorganizations are also considered lengthy, the process is estimated to take an average of one and a half to two years between filing and resolution. In France and the United Kingdom, the period is shorter.

⁴ Ramachandran (1995) points out that one result of moving procedures out of the court system may be an increase in appeals.

⁵ Since in the new system most appeals cannot delay negotiations, objections cannot be used as a tactic. Thus, under the new system, frivolous objections intended to delay the process are less likely.

References

- Fleisig, H. "The Power of Collateral." *Private Sector*, March 1995.
 Ramachandran, S. "Bankruptcy's Role in Enterprise Restructuring: A Hammer to Turn a Screw?" *Private Sector*, March 1995.

Izak Atiyas, Private Sector Development Department, email: iatiyas@worldbank.org

To Buy or Lease?

Farm revival in Eastern and Central Europe

Omar Razzaz

Buying, selling, and mortgaging farmland are still rare in Eastern and Central Europe. Not surprisingly, given the economic risk in many of these countries, short-term leasing is much more common. These short-term transactions do almost as well as land sales in allocating resources. Thus, facilitating leasing arrangements by improving simple registration and enforcement systems and increasing access to information on what's for rent and at what price would do much to help revive the farm sector.

Sales slow to pick up

A recent World Bank–sponsored survey of private farmers in Eastern and Central Europe found a generally low level of sales and a high level of short-term land transactions compared with more mature markets such as the United Kingdom (figures 1 and 2). In Hungary and Poland, which have allowed private ownership of farmland since 1987 and 1981, leasing is widespread. In Bulgaria and Romania, where landownership has been allowed only since 1991, little or no farmland has been sold yet because sales are still legally restricted. Informal lease transactions predominate in both these countries, though the numbers are still very low.

Given the desperate need to restructure farms in Hungary and Poland, the volume of land sales is surprisingly low. Evidence from other transition economies suggests that leasing is preferred there too even when selling land is allowed. An Estonian survey on attitudes toward land privatization revealed that only 2.4 percent of those who own land plan to sell it, and that 11.6 percent were willing to lease their land. A preference for renting rather than selling land has also been observed in eastern Germany.

FIGURE 1 SALES OF FARMLAND, 1991–92
(annual average percentage of survey area)

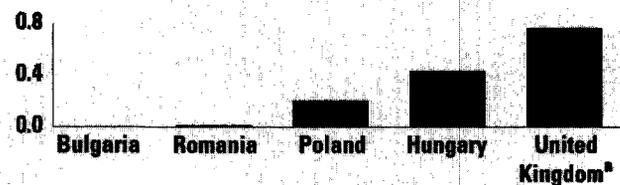
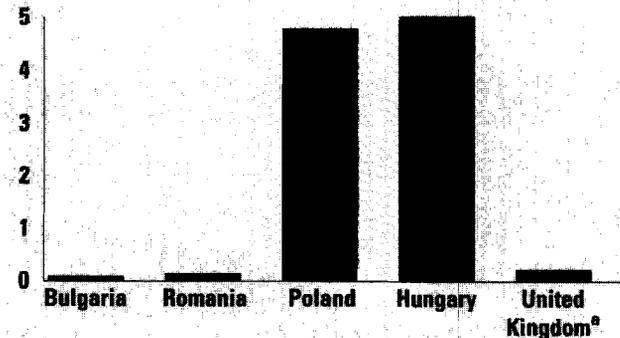


FIGURE 2 LEASING OF FARMLAND, 1991–92
(annual average percentage of survey area)



Note: The United Kingdom is included as a benchmark for land transactions in industrial countries.
a. Data are for 1992.

Source: World Bank 1994.

TABLE 1 FARMERS WILLING TO USE OWN LAND AS COLLATERAL FOR A LOAN (percent)

	Albania	Bulgaria	Hungary	Poland	Romania
Yes	19.6	40.5	16.0	14.4	26.0
No	61.7	42.5	70.0	66.4	66.2
Undecided	18.3	13.6	12.2	17.3	7.8
No answer	0.4	3.3	1.7	1.9	0

Source: World Bank 1994.

The Bank-sponsored survey also shows that land is rarely used as collateral. When private farmers in Albania, Bulgaria, Hungary, Poland, and Romania were asked whether they would be will-

Informal agreements dominate at the early stages of transition, leasing dominates at later stages, and an expanded set of options, including sale and purchase, becomes available in developed markets.

ing to use their land as collateral, most said no (table 1). Moreover, banks are reluctant to accept farmland as collateral—although some will accept centrally located urban land.¹ The survey indicates that the more market-oriented the banks, the more reluctant they are to enter into the high risks currently associated with farming. When banks do lend to farmers, they tend to make only short-term loans (not for land) and they prefer movable property such as crops, animals, and personal assets as collateral. Only in Poland were banks willing to lend to farmers to buy land, probably as a result of the greater experience with private landownership in that country.

The uncertainty effect

Most transition economies have yet to fully establish the “rules of the game” and the “institutional infrastructure” for land markets. Many countries, especially those of the former Soviet Union, even have yet to make a clear and credible policy commitment to private property rights to land (including the right to transfer). While other countries, such as Estonia, have recognized and protected such rights, they are still wrestling with conflicting land claims—between original owners and current users. And although some countries, such as Albania, Armenia, and Romania, have moved quickly to distribute public land to individual owners, they have yet to develop the substantive and procedural legal mechanisms to facilitate buying and selling.

In the present economic environment buyer demand for land is weak. Farmers and investors are uncertain about the future viability of agriculture. They lack access to long-term finance. Owners are reluctant to sell. High unemployment, the collapse of social programs, and the lack of savings mechanisms mean that private owners want to hold land as a fallback, subsistence option. Moreover, members of collectives are constrained by a farm restructuring process that makes it difficult, if not illegal, to sell land to outsiders.²

The reluctance to buy and sell is understandable given the prevailing legal ambiguities and economic uncertainties. But the need to revive the farming sector is urgent and important. Agriculture currently accounts for about 27 percent of employment and 15–20 percent of GDP in much of the region.

Leases are efficient

On both equity and efficiency grounds, short-term leases are frequently perceived as “second-best” tenure options compared with owner-operated arrangements. Yet, although long-term leases and ownership are crucial for creating the right incentives for long-term investment, short-term leases seem to be preferred during periods of

economic instability. Recent theoretical and empirical work has shown that these leasing arrangements may be more efficient under conditions of high risk aversion, imperfect information, high enforcement costs, lumpy inputs, imperfect credit markets, or missing insurance markets—conditions that are common in transition economies.³ Leases work well in these circumstances because agreements frequently take place between neighbors and within communities, substantially lowering the cost of information and of formal contract enforcement. The leases make it easier to adjust the size of farming units in a way that reflects changes in the relative cost of land, labor, and finance. Short-term leases are also likely to ease common anxieties about corruption, speculation, and mass dispossession of farmland by absentee landlords. And finally, because leasing allows short-term and repeated transactions, uncertainty about the market value of future production is less of a problem.

Leasing arrangements are important not only as mechanisms for farm restructuring, but also as catalysts in developing mature land markets. Price signals obtained through short-term contracts provide the information on land value and risk assessment that potential buyers and banks need, and thus help to strengthen land markets. However, policymakers often prescribe land titling as the necessary catalyst for “jump starting” markets. But national titling programs can take decades to complete. As important as titling is for the long-term development of land markets, it is neither necessary nor sufficient to permit farmland transactions in the short to medium term.

Typically, policymakers can expect to see an evolving pattern of land transactions. Informal agreements dominate at the early stages of transition (Bulgaria, Romania), leasing contracts dominate at later stages (Hungary, Poland), and an expanded set of contracting options, including purchase and sale, becomes available in developed markets (United Kingdom). This pattern is consistent with the gestation period required for stabilizing the macroeconomic environment and developing institutions to reduce enforce-

ment and information costs. These institutions become increasingly important as parties move from short-term informal agreements to agreements entailing up-front commitments and longer investment horizons.

What to do?

Although these short-term leasing arrangements are frequently informal, they need not be. Simple measures to reduce information and enforcement costs can go a long way toward widening the



BOX 1 TITLES AND LEASES IN THE BALANCE

There are two main differences between property rights transferred through title and those transferred through a lease agreement: property rights transferred through title are perpetual while those transferred through lease are time-bound, and property rights transferred through title usually encompass all ownership rights (mainly the rights to possess, use, transfer, and derive income from property) while those transferred through lease agreements encompass only a subset of such rights. Short-term leases typically include use rights only. The longer the term of the lease and the more rights the lease agreement transfers (including transfer and mortgage rights), the more leaseholders' rights come to resemble those of titleholders.

scope of transactions beyond the immediate community and increasing security of tenure. At a minimum, contracting parties need to know who owns what.

A proper set of policy measures to promote short-term land transfers should include:

- **Field adjudication and registration of land rights.** Adjudication and registration are necessary prerequisites of formal land transactions. (Even collective farms should be encouraged to delineate plots for each member. Members of the collective do not have to work independent of one another, but should have the option of doing so or of engaging in tenancy

arrangements with one another.) Officers trained in simple surveying techniques and legal principles could provide adjudication in the field, settling disputes and demarcating boundaries in the presence of all concerned. The adjudication process results in a preliminary register of land rights.⁴ Titling is, of course, more secure than simple registration of rights. But experience in developing countries shows that at this stage the accurate surveying and precise coordinates associated with titling do little to increase security of tenure and reduce disputes, but add substantially to the time and cost of registration.

- **Removing the legal restrictions on leasing land.** These restrictions, put in place to stop “speculation” and “profiteering,” have received less attention from reformers than restrictions on land sales even though they are potentially more distortionary during transition.
- **Removing rent controls and formula-based lease prices.** Several countries allow the leasing of privatized land, but still regulate rents through price ceilings or formula-based estimates. Such restrictions, typically applied for tax purposes, defeat the crucial function of tenancy-based contracts as market signals.
- **Developing decentralized mechanisms for monitoring lease-based contracts and providing public information on opportunities, going rates, and model contracts.** These could range from bulletin boards for announcements by prospective lessors and lessees to more sophisticated mechanisms for collecting and providing information.

Implications for World Bank work

World Bank projects with credit line components targeting individual legal owners of farmland or requiring their active participation in project design and implementation are likely to experience delayed disbursement because it takes so long to create secure, transferable, and mortgageable titles. A better option is to design projects that:

- Facilitate short-term land transactions through simple registration, enforcement of rights, and provision of market information.

- Provide the legal and institutional means through which individuals and communities could opt for more formal rights and secured transactions in the long run.
- Introduce titling programs as a long-term strategy, beginning in localities that demonstrate better potential for land markets (such as urban areas and village centers).

¹ Some banks have designed creative instruments that allow the use of centrally located urban land as collateral. In Estonia, for example, despite the lack of a properly functioning mortgage registration system, several commercial banks created a shared computer database for mortgaged real estate. This reduced the chances of fraud through multiple mortgage loans using the same collateral.

² Here, *collective* refers both to privatized *sovkhoz*es and to *kolkhoz*es. The distinctions are not important for the purposes of this Note. Unlike the owners and operators of industrial and commercial corporations, who tend to be separate parties, collective farm members tend to be both the operators and the would-be owners (Brooks and Lerman 1994). Farm restructuring would require devolving decisionmaking power to individual members and delineating individual rights to specific plots of land (even if production is collective).

³ Research shows leasing contracts to be generally more efficient than sharecropping or wage contracts in reducing incentive problems. See Binswanger, Deininger, and Feder (1993) for an excellent review of the literature.

⁴ Entries in such a register can be challenged in court during a specified period.

References

- Binswanger, Hans P., Klaus Deininger, and Gershon Feder. 1993. “Power, Distortions, Revolt, and Reform in Agricultural Land Relations.” Policy Research Working Paper 1164. World Bank, Washington, D.C.
- Brooks, Karen, and Zvi Lerman. 1994. “Farm Reform in the Transition Economies.” *Finance and Development* 31(4).
- World Bank. 1994. “Regional Study: Farm Restructuring and Land Tenure in Reforming Socialist Economies: A Comparative Analysis of Eastern and Central Europe.” Prepared by Euroconsult/Centre for World Food Studies. Washington, D.C.

Omar Razzaz, Private Sector Development Specialist, Private Sector Development Department, email: orazzaz@worldbank.org

Money Laundering and International Efforts to Fight It

David Scott

Although money laundering is impossible to measure with precision, it is estimated that US\$300 billion to US\$500 billion in proceeds from serious crime (not tax evasion) is laundered each year. Measures in major financial markets to detect and prosecute laundering are driving it toward less developed markets linked to the global financial system. If left unchecked, money laundering could criminalize the financial system and undermine development efforts in emerging markets. This Note surveys efforts by international bodies to combat money laundering. It looks in particular at the Financial Action Task Force based at the OECD, which has made the most continuous effort.

How money is laundered

In money laundering, the proceeds of crime are run through the financial system to disguise their illegal origins and make them appear to be legitimate funds. Most often associated with organized crime, money laundering can be linked to any crime that generates significant proceeds, such as extortion, drug trafficking, arms smuggling, and white-collar crime. Although money laundering often involves a complex series of transactions, it generally includes three basic steps.

The first step is the physical disposal of cash. This *placement* might be accomplished by depositing the cash in domestic banks or, increasingly, in other types of formal or informal financial institutions. Or the cash might be shipped across borders for deposit in foreign financial institutions, or used to buy high-value goods, such as artwork, airplanes, and precious metals and stones, that can then be resold for payment by check or bank transfer.

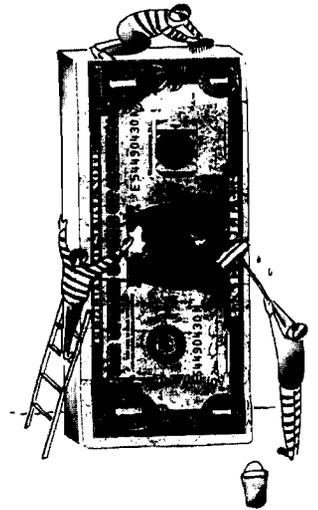
The second step in money laundering is known as *layering*, carrying out complex layers of financial transactions to separate the illicit proceeds from their source and disguise the audit trail. This phase can involve such transactions as the wire

transfer of deposited cash, the conversion of deposited cash into monetary instruments (bonds, stocks, traveler's checks), the resale of high-value goods and monetary instruments, and investment in real estate and legitimate businesses, particularly in the leisure and tourism industries. Shell companies, typically registered in offshore havens, are a common tool in the layering phase. These companies, whose directors often are local attorneys acting as nominees, obscure the beneficial owners through restrictive bank secrecy laws and attorney-client privilege.

The last step is to make the wealth derived from the illicit proceeds appear legitimate. This *integration* might involve any number of techniques, such as using front companies to "lend" the proceeds back to the owner or using funds on deposit in foreign financial institutions as security for domestic loans. Another common technique is overinvoicing or producing false invoices for goods sold—or supposedly sold—across borders.

Exposed emerging markets

Money laundering is a problem not only in the world's major financial markets and offshore



centers. Any country integrated into the international financial system is at risk. As emerging markets open their economies and financial sectors, they become increasingly viable targets for money laundering activity. Increased efforts by authorities in the major financial markets and in many offshore financial centers to combat this activity provide further incentive for launderers to shift activities to emerging markets. There is evidence, for example, of increasing cross-border cash shipments to markets with loose arrangements for detecting and recording the placement of cash in the financial system and of growing investment by organized crime groups in real estate and businesses in emerging markets.

International accords

Concerted efforts by governments to fight money laundering have been going on for the past fifteen years. The main international agreements addressing money laundering are the United Nations Vienna Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (the Vienna Convention) and the 1990 Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds of Crime. And the role of financial institutions in preventing and detecting money laundering has been the subject of pronouncements by the Basle Committee on Banking Supervision, the European Union, and the International Organization of Securities Commissions.

The Vienna Convention

The Vienna Convention, adopted in December 1988, lays the groundwork for efforts to combat money laundering by creating an obligation for signatory states to criminalize the laundering of money from drug trafficking. It promotes international cooperation in investigations and makes extradition between signatory states applicable to money laundering. And it establishes the principle that domestic bank secrecy provisions should not interfere with international criminal investigations.

The 1990 Council of Europe Convention

Adopted in November 1990, the Council of Europe Convention establishes a common criminal policy on money laundering. It sets out a common definition of money laundering and common measures for dealing with it. The convention lays down the principles for international cooperation among the contracting parties, which may include states outside the Council of Europe. Its scope is not limited to money from drug trafficking.

Basle Committee statement of principles

In December 1988, the G-10's Basle Committee on Banking Supervision issued a "statement of principles" with which the international banks of member states are expected to comply. These principles cover identifying customers, avoiding suspicious transactions, and cooperating with law enforcement agencies. In issuing these principles, the committee noted the risk to public confidence in banks, and thus to their stability, that can arise if they inadvertently become associated with money laundering.

European Union directive

In June 1991, the Council of the European Communities adopted a directive on the "Prevention of the Use of the Financial System for the Purpose of Money Laundering." This directive was issued in response to the new opportunities for money laundering opened up by the liberalization of capital movements and cross-border financial services in the European Union. The directive obligates member states to outlaw money laundering. They must require financial institutions to establish and maintain internal systems to prevent laundering, to obtain the identification of customers with whom they enter into transactions of more than ECU 15,000, and to keep proper records for at least five years. Member states must also require financial institutions to report suspicious transactions and must ensure that such reporting does not result in liability for the institution or its employees.

Resolution of the International Organization of Securities Commissions

The International Organization of Securities Commissions (IOSCO) adopted, in October 1992, a report and resolution encouraging its members to take necessary steps to combat money laundering in securities and futures markets. A working group of IOSCO's Consultative Committee has been set up to collect information from IOSCO members' self-regulatory organizations and exchanges on their efforts to encourage their own members to fight money laundering.

The Financial Action Task Force

The main international body engaged in continuous, comprehensive efforts both to define policy and to promote the adoption of countermeasures against money laundering is the Financial Action Task Force (FATF). The FATF, set up by the governments of the G-7 countries at their 1989 Economic Summit, has representatives from twenty-four OECD countries, Hong Kong, Singapore, the Gulf Cooperation Council, and the European Commission. Participants include representatives from members' financial regulatory authorities, law enforcement agencies, and ministries of finance, justice, and external affairs. Representatives of international and regional organizations concerned with combating money laundering also attend FATF meetings as observers.

The FATF has pursued three main tasks:

- Monitoring members' progress in applying measures to counter money laundering.
- Reviewing money laundering techniques and countermeasures.
- Promoting the adoption and implementation of appropriate measures by nonmember countries.

A cornerstone of the FATF's efforts is its detailed definition of appropriate countermeasures for countries to use. These measures are set out in the "Forty Recommendations" formulated and adopted by the group in 1990.

The Forty Recommendations

The Forty Recommendations address four general themes:

- The *overall context*, in which the recommendations urge member countries to ratify the Vienna Convention, to ensure that financial institution secrecy laws do not inhibit implementation of the recommendations, and to promote multilateral cooperation and mutual assistance in investigations, prosecutions, and extraditions.
- The *legal framework*, in which the recommendations require the criminalization of laundering the proceeds of drug-related crimes, encourage the coverage of all serious crimes or all crimes that generate large proceeds, and promote provisions allowing the freezing, seizing, and confiscation of property related to laundered funds.
- The *role of the financial system*, in which the recommendations define roles for banks, life insurance companies, and other nonbank financial institutions, as well as financial regulatory authorities. The role envisioned for financial institutions is identifying their customers, maintaining records sufficient to allow the reconstruction of transactions, and making these records available to the right authorities for criminal investigations and prosecutions. The recommendations thus imply that financial institutions should not keep anonymous accounts. The recommendations encourage institutions to make a serious effort to identify and report suspicious activities and to adopt good internal policies, procedures, and controls. And they encourage states to adopt legal provisions protecting institutions and their employees from legal liability for reporting suspicious activity in good faith. The authorities are supposed to ensure that financial institutions have put in place adequate internal safeguards against money laundering. And states are to take legal or regulatory measures to prevent criminals from getting control of financial institutions.
- The *strengthening of international cooperation*, in which the recommendations encourage authorities to exchange information on

currency flows and money laundering techniques and on suspicious transactions or operations. International cooperation should be supported by bilateral and multilateral agreements based on generally shared legal concepts. Cooperation and mutual assistance should include the production of records by financial institutions, the identification, freezing, seizure, and confiscation of criminal proceeds, and extraditions and prosecutions.

The discipline of self-assessment and peer review

The FATF has two mechanisms for promoting effective action by member states. The first is a self-assessment by authorities in each state to evaluate the state's progress in implementing the Forty Recommendations. The second is a peer review. Both have proved highly effective in highlighting weaknesses in states' legal frameworks and procedures and in generating support for needed improvements.

Self-assessment. The self-assessment is based on a detailed questionnaire developed by the FATF in 1991 and periodically revised to take account of developments in laundering techniques. The questionnaire is designed to elicit objective indicators of whether recommendations have been implemented and how they have been implemented. Each member completes the questionnaire once a year.

Peer evaluation. In the peer evaluation, a team of representatives from at least three member governments reviews the performance of another member government. The evaluation team reviews information submitted by the government and verifies and supplements that information through on-site visits and interviews. Under the guidance of the evaluation team, the FATF secretariat writes a draft confidential report, which is discussed with the member in meetings with other FATF members. The final report gives a confidential assessment of how well the member is adhering to the recommendations and identifies areas needing further work.

Training and support network

The goals of the FATF are, first, to persuade all countries with important financial centers to endorse and implement its recommendations and, second, to support those countries' efforts. The FATF runs international seminars on combating money laundering and sends missions to countries to encourage the adoption of its recommendations. The FATF also acts as a clearinghouse for requests from nonmember countries for training and technical assistance. With the help of the FATF, a separate task force has been established for governments of the Caribbean and the Caribbean rim. The FATF has also recently set up an Asian secretariat to work with governments in that region.

World Bank operations

Emerging markets are increasingly becoming the venue for large-scale money laundering operations. If left unchecked, this activity eventually will undermine the credibility of the formal financial sector. In its financial sector operations, the World Bank can promote measures to counter the flow of illicit funds into the financial systems of countries and arrange for external assistance. In doing so, the Bank needs to recognize that measures to prevent and detect money laundering activities cannot focus only on banks. Effective measures must also address the formal securities, insurance, and money changing sectors.

Illustration by Ruth Sofair Ketler.

The following documentation is available from the Financial Sector Development Department:

- Annual reports of the FATF providing detailed information on steps by member states to combat money laundering, trends in money laundering techniques, and the activities of the FATF in emerging markets.
- A synopsis of the Forty Recommendations.
- The United Nations Vienna Convention.
- The Council of Europe Convention.
- The Basle Committee statement of principles.
- The European Union directive on money laundering.

Please contact Ms. Susana Coca at 202-473-7474 for copies.

*David Scott, Senior Financial Sector Specialist,
Financial Sector Development Department,
email: dscott@worldbank.org*

Protecting Bank Depositors

Samuel Talley

Depositor protection is now part of most banking systems. In industrial countries, a common approach is deposit insurance. Most developing countries still rely on implicit protection—in which the government rescues banks that would otherwise fail—but there has been a gradual shift to deposit insurance, and this trend is likely to continue. This Note compares insurance with implicit protection and suggests good design characteristics for insurance-based systems.



The case for protection

Depositor protection can have three positive effects. First, it offers a country at least some protection against contagious bank runs that can undermine the stability of the banking and payments systems. When depositors believe that they have some protection against bank failure, they are less likely to lose confidence in the banking system, and widespread bank runs are much less likely to happen. Second, it protects the interests of small depositors, who are not in a good position to protect their own interests because they lack the information to evaluate the financial condition of banks. And because a bank failure could wipe out the savings of small depositors, protecting these depositors can also contribute to social welfare. Third, protecting depositors can increase the national savings rate and promote financial intermediation by providing a safe financial asset for the public to hold.

Protecting depositors can also have undesirable results. It may reduce market discipline. When depositors are protected, they are likely to be less careful in evaluating the riskiness of banks and more likely to be guided primarily by promises of high returns. As a result, bank managers are less prudent about taking risks. A second problem with protecting depositors is that some-

one else will always have to absorb the losses. Depending on the depositor protection mechanism, that “someone else” is likely to be either the government or the banking system.

In balancing the pros and cons, the vast majority of developing countries have decided to protect depositors at least some of the time. About a dozen have done so by setting up deposit insurance systems. The rest have usually re-

Very few countries have announced that they intend to “let the market work” and allow depositors to suffer losses in all bank failures, irrespective of the circumstances.

sorted to bailouts of failing banks, particularly when the banks are government owned or when there is a general loss of public confidence in the banking system. Very few countries have announced that they intend to “let the market work” and allow depositors to suffer losses in all bank failures, irrespective of the circumstances.

Insurance versus implicit systems

Insurance-based and implicit protection systems have several key design differences. The first relates to the obligation of the insurer. Deposit insurance represents a legal obligation on the part of the insurer to pay off depositors of failed banks up to the maximum amount stipulated in the program. By contrast, in an implicit system, the government has no legal obligation to protect depositors. Instead, it has total discretion in deciding whether to protect, whom to protect, how much to protect, and the form of the protection. The second has to do with the formality of the systems. Deposit insurance systems operate under rules and procedures that are typi-

The shift to deposit insurance may reflect in part the movement of some banking systems away from publicly owned banks, and in part a move toward more “contractually based” economies.

cally set forth in a deposit insurance law. With implicit systems, there are no rules or procedures—the government’s actions are ad hoc and discretionary. The third difference is in the funding of the two systems. A deposit insurance system is typically funded by an initial government capital contribution to a deposit insurance fund, which is then built up over time through periodic premium payments by insured banks. By contrast, the government funds implicit protection systems, typically by recapitalizing failing banks. In most cases, this government funding comes from the national government budget, but it can also come from the resources of the central bank.

Deposit insurance has several advantages:

- Deposit insurance tends to provide somewhat greater protection against contagious bank runs because the protection takes the form of a le-

gal obligation, rather than being a matter of government discretion.

- Deposit insurance gives small depositors greater protection because the insurance typically covers a small depositor’s entire outstanding balance. By contrast, an implicit system may or may not protect small depositors, depending on how the government chooses to act in specific cases.
- Deposit insurance shifts some of the costs of depositor protection to the banking system by requiring insured banks to make periodic premium payments into an insurance fund. This shifting of some of the costs is reasonable because deposit insurance lowers the risk of deposits and tends to lower banks’ cost of funds. In an implicit system, however, the government absorbs all the costs of protecting depositors, even though banks derive the benefit of lower-cost funds. Consequently, an implicit system tends to confer a government subsidy on the banking system.
- From an administrative perspective, a deposit insurance system tends to be a faster, smoother, and more consistent mechanism for resolving the problem of a failing bank. The reason is that these systems operate according to rules and procedures usually set out in law, while an implicit system is not based on any preexisting rules and procedures.
- Deposit insurance would tend to provide a more level playing field in countries with both state-owned and private banks. While deposit insurance would protect depositors of both types of banks, with an implicit system, the government may be more willing to protect depositors of state-owned banks, providing these banks with a competitive advantage in obtaining funding.

Implicit protection also has advantages:

- Implicit protection is less likely to erode market discipline. Because depositors can never be sure whether they will be protected under implicit systems, they always have at least some incentive to evaluate the financial condition of banks and avoid those that are relatively risky. By contrast, depositors who are fully protected by deposit insurance have little incentive to monitor the financial condition of banks.

- Implicit protection is a more flexible device for resolving the problem of a failing bank because the government has total discretion in fashioning remedies—whether to protect, how much to protect, and what form and timing of protection to use. Deposit insurance systems, which operate according to preexisting rules, lack such flexibility.

Whether developing countries would be better off protecting depositors through a deposit insurance system or relying on implicit protection depends on the specific conditions in each country—the susceptibility of the country to instability, the level of social concern over the fate of small depositors, the need to foster market discipline, the fiscal implications of government bailouts of failing banks, and the structure and ownership of the banking system. The direction of the effects of insurance or implicit protection is generally clear. What is not so clear is the magnitude of these effects in each country, given the unique characteristics of each country's banking system and the way conflicting policy objectives—such as the prevention of contagious bank runs and the promotion of market discipline—should be traded off. Much would also depend on the form of deposit insurance or on how frequently and in what manner implicit protection is used.

While most developing countries now rely on implicit protection, there has been a gradual shift to deposit insurance systems—a shift that seems likely to continue, if the current interest in creating such systems is any indicator. The shift to deposit insurance may reflect in part the movement of some banking systems away from publicly owned banks, and in part a move toward more “contractually based” economies.

Good design for deposit insurance systems

While deposit insurance is a relatively simple concept, implementing deposit insurance systems is complex. Countries that elect to create these systems will have to wrestle with many policy issues, some of which will prove difficult to re-

solve. The following paragraphs give several recommendations for the design of these systems.

1. Amount of protection

Probably the most important variable in a deposit insurance system is the amount of protection extended to depositors. There are three basic types of deposit insurance systems:

- A limited (or small depositor) protection system that protects depositors only up to a certain, relatively small, amount and does not authorize the insurer to extend protection to uninsured deposits under any circumstances.
- A 100 percent deposit insurance system that fully protects all depositors.

The direction of the effects of insurance or implicit protection is generally clear. What is not so clear is the magnitude of these effects in each country . . .

- A discretionary deposit insurance system that normally protects depositors only up to a relatively small amount but authorizes the insurer to extend full protection to uninsured depositors if the banking system is threatened by a likely loss of public confidence.

There is nearly universal agreement that 100 percent deposit insurance systems should be avoided because they result in an almost total loss of market discipline—a particularly undesirable result in developing countries, which typically lack adequate managerial and supervisory discipline. The real choice, therefore, is between a limited system and a discretionary system, both of which have certain advantages. A limited system does not tend to erode market discipline much, but it also does not give the banking system much protection against contagious bank runs. A discretionary system gives the banking system considerable protection against runs, but it erodes market discipline more.

2. Proper funding

It is difficult to predict the losses that a deposit insurer will have to absorb over the years. Nevertheless, the insurer must be equipped to handle whatever losses occur. From a public policy perspective, it is extremely dangerous for an insurer to become illiquid. If the insurer cannot meet its legal obligation to protect depositors of failed banks, the bank supervisory agency will be reluctant to close insolvent banks. When insolvent banks are allowed to continue to operate, their managers are likely to take high risks in a desperate attempt to return to solvency. These gambles often turn out badly, and the banks become even more insolvent, increasing the losses that the insurer ultimately will have to

ligations either by paying out cash to insured depositors or by arranging for the transfer of all insured deposits of the failed bank to another bank. But the insurer should not be authorized to arrange for the transfer of all deposits of the failed bank to another bank. This action would extend protection beyond small depositors to the deliberately uninsured large depositors and would thus be contrary to the stated objective of the system.

Samuel H. Talley, Financial Sector Development Department, email: stalley@worldbank.org

. . . the most important variable in a deposit insurance system is the amount of protection extended to depositors.

absorb. It is therefore critical that the insurer be properly funded. This can best be done by providing the insurer with adequate initial capital to give the insurer credibility in the eyes of the market and the capacity to handle any known losses, having insured banks make reasonable periodic premium payments into the deposit insurance fund, and giving the insurer legal authority to borrow or to receive an equity injection from the government so that it can honor its obligation to protect depositors.

3. Flexibility

The deposit insurer should be given maximum flexibility in resolving the problem of failing banks, so long as the method it uses is consistent with the stated objectives of the deposit insurance system. For example, if a nation sets up a limited deposit insurance system for the sole purpose of protecting small depositors, the insurer should have the flexibility to honor its ob-

THREE WAYS TO ORDER

PUBLIC POLICY FOR THE Private sector

1
Fill out and mail or fax this card

To Suzanne Smith, Editor, The World Bank, G8105, 1818 H Street, NW, Washington, D.C. 20433, USA, fax: 202 676 9245

FIRST NAME MI LAST NAME

JOB TITLE

COMPANY OR ORGANIZATION

STREET

CITY STATE POSTAL CODE

COUNTRY

WORK PHONE FAX NUMBER

EMAIL

Topics of interest:

- Finance
- Privatization
- Law & regulation
- Telecommunications & informatics
- Energy
- All

2
Call 202 458 1111 to record this information

3
Email this information to ssmith7@worldbank.org

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The text suggests that a systematic approach to record-keeping is essential for identifying trends and making informed decisions.

Next, the document addresses the issue of budgeting. It explains that a well-defined budget is a critical tool for managing resources and avoiding overspending. The author provides a step-by-step guide to creating a budget, starting with identifying fixed and variable costs. It also discusses the importance of regularly reviewing and adjusting the budget to reflect changes in circumstances.

The third section focuses on the role of technology in modern accounting. It highlights how software solutions can streamline processes, reduce errors, and provide real-time insights into financial performance. The text mentions various types of accounting software and offers advice on how to choose the right one for a business's needs.

Finally, the document touches upon the importance of staying up-to-date with changes in tax laws and regulations. It notes that compliance is a key responsibility of any business owner and that professional advice may be necessary to navigate complex tax situations. The author concludes by encouraging a proactive and disciplined approach to financial management.

