5 Franchising and Privatization  Antony W. Denis
9 Tradable Property Rights to Water  Mateen Thobani
13 Privatization through Broad-Based Ownership Strategies  Stuart Bell
17 Bettering Banking: Privatize Flows and Let Sleeping Stocks Lie  S. Ramachandran

21 International Power Interconnections: Moving from electricity exchange to competitive trade  Jean-Pierre Charpentier and K. Schenk

25 Cash Constraints and Credit Corsets: The Chimera of Interenterprise Credit  Timothy Condon and S. Ramachandran
29 Bankruptcy’s Role in Enterprise Restructuring: A Hammer to Turn a Screw?  S. Ramachandran

33 The Power of Collateral  Heywood Fleisig
37 The Right to Borrow  Heywood Fleisig
41 Project Design for Payment Systems  Fernando Montes-Negret and Robert Keppler
45 Long-term Finance in Inflationary Economies  Dan Mozes
49 Regulation and Supervision of Financial Conglomerates  David H. Scott

The World Bank Group • Vice Presidency for Finance and Private Sector Development
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.
In this issue

Franchising and Privatization

Franchise bidding schemes are attracting new interest as a solution to the natural monopoly problem, a solution that avoids some of the pitfalls of traditional regulation or nationalization. But if a franchise system is to be successful, a great deal rides on contract design, procurement, and monitoring. Antony Dnes looks at some of the problems.

 Tradable Property Rights to Water

Tradable property rights to water create a built-in incentive for people to conserve water and use it productively. Moreover, a rights-based system is fairer than a publicly administered scheme, and it allows the government to hand over the role of building, operating, and maintaining infrastructure to the private sector so that it can concentrate on regulatory and public good functions. Mateen Thobani explains the issues involved.

Privatization through Broad-Based Ownership Strategies

In some countries, privatization has stalled because of a popular perception that it benefits only the rich and powerful or only foreigners. Stuart Bell looks at how governments can achieve more widespread public ownership and therefore boost political support for privatization. He focuses on voucher schemes, collective investment programs, and public offerings.

Bettering Banking: Privatize Flows and Let Sleeping Stocks Lie

S. Ramachandran argues that in the transforming economies of Eastern and Central Europe—where adequate prudential supervision is years away, deposit insurance is too risky, and state-owned banks are allocating credit inefficiently—it may be better to concentrate on privatizing the intermediation of savings flows rather than on privatizing banking stocks.

International Power Interconnections:

Moving from electricity exchange to competitive trade

International electricity trade in its fullest sense does not yet occur. But with the recent power sector reforms around the world, trade is attracting new interest. Jean-Pierre Charpentier and K. Schenk look at the technical, institutional, pricing, and contracting requirements for making competitive international trade in electricity a reality.

Cash Constraints and Credit Corsets:

The Chimera of Interenterprise Credit

The buildup of interenterprise credit in many Central and Eastern European countries is often seen as a problem that requires a government bailout.
Timothy Condon and S. Ramachandran show that arrears rise only temporarily, as the hard budget constraint bites, and then plateau. Therefore, they argue that while governments should monitor the stock of debt to see how quickly enterprises are adjusting, they shouldn't be panicked into bailing them out.

29 Bankruptcy's Role in Enterprise Restructuring:
A Hammer to Turn a Screw?
The slow pace of restructuring state-owned enterprises in Eastern Europe is sometimes blamed on poor or missing bankruptcy laws to resolve outstanding claims. S. Ramachandran argues that the real reason is that the parties involved, often government officials, lack the incentive to act. The best solution is privatization.

33 The Power of Collateral
In many developing countries, faulty laws and regulations make it hard to use livestock, machines, equipment, standing crops, and other movable property as collateral. The resulting constraints on access to credit hurt economies. In Bolivia, for example, a faulty legal and regulatory framework for the use of movable property as collateral has led to a loss in GDP estimated at between 5 and 10 percent. Heywood Fleisig explains the problem.

37 The Right to Borrow
Many laws and regulations in developing countries drive small businesspeople out of the formal banking sector and into the hands of high-cost and sometimes unscrupulous moneylenders in the informal sector. Heywood Fleisig looks at these barriers to credit for small farmers and firms and suggests solutions.

41 Project Design for Payment Systems
Rickety payment systems in transition and developing countries mean that finalizing a payment through the banking system can take a month or more. This delay creates uncertainty about whether the payment will occur, leads to loss of value in highly inflationary economies, and limits the beneficiaries' ability to invest the funds. Fernando Montes-Negret and Robert Keppler provide a strategy for modernizing payment systems.

45 Long-term Finance in Inflationary Economies
High inflation creates major problems for long-term investment because it leads to punishing repayment schedules on long-term loans—effectively transforming all long-term nominal interest loans into short-term loans. Dan Mozes does the calculations.

49 Regulation and Supervision of Financial Conglomerates
Competitive pressures and new technology are blurring the distinctions between different kinds of finance institutions. This blurring of lines can mean different regulatory treatment for similar activities. That opens the door to regulatory arbitrage. David Scott explains how regulators and supervisors are responding.
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.

THREE WAYS TO ORDER THIS PUBLICATION

1 Fill out and mail or fax this card to Suzanne Smith, Editor, G8105, The World Bank, 1818 H Street, NW, Washington, D.C. 20433, USA, fax: 202 676 9245

<table>
<thead>
<tr>
<th>FIRST NAME</th>
<th>MI</th>
<th>LAST NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOB TITLE</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STREET ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>POSTAL CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WORK PHONE</th>
<th>FAX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
Franchising and Privatization

Antony W. Dnes

Increasing private sector participation to improve the efficiency of infrastructure services is a growing trend around the world. This trend reflects dissatisfaction with state solutions, ever-tightening government budgets, technical change, and policy innovation. One approach to increasing private participation that is attracting much interest is franchise bidding schemes. Improved understanding of franchise contracting techniques could foster the successful revival and development of Sir Edwin Chadwick’s idea of competition for the field.

Competition for the field

Some elements of most infrastructure activities exhibit “natural monopoly” characteristics, meaning that one or more services or products can be produced most cheaply by a single firm. Examples include electricity transmission and distribution and gas and water pipelines. This raises the issue of organizing an infrastructure industry so as to gain the advantages of production by a single firm, without encouraging monopolistic conduct. Happily, not all elements of infrastructure exhibit natural monopoly characteristics. Market competition is both possible and highly desirable in many activities, such as electricity generation and long-distance and cellular telephony.

Sir Edwin Chadwick, a Victorian social reformer, proposed a franchise solution to problems of natural monopoly, an approach later promoted by Harold Demsetz in the United States. Chadwick distinguished between “competition within the field” and “competition for the field.” Where competition is not possible within an industry, Chadwick surmised, competition for the right to be the natural monopolist may be an adequate substitute. The essential idea is that monopoly franchises could be auctioned off to the bidder offering the most attractive terms—for example, the lowest price to consumers. Competition through bidding ensures minimum selling prices because the winning franchisee will lower prices until revenues just cover costs. Franchising schemes also may avoid pitfalls associated with traditional regulation of such industries or with their nationalization.

Letting monopoly franchises has a long history: France and Spain, for example, have been letting water concessions for over one hundred years. With the recently increasing interest in private participation in infrastructure, franchising has taken root in power, solid waste, telecommunications, and water enterprises in developing countries as diverse as China, Guinea, Hungary, and Mexico. In a recent case closely resembling the Chadwick/Demsetz proposal, Buenos Aires awarded a water concession to the company offering the lowest evaluated price, which was notably 20 percent or more below the price previously charged by the state-owned water company.

Natural monopoly

To examine natural monopoly at its most unadorned, consider an industry in which decreasing cost
Franchising and Privatization

gives rise to natural monopoly. In this case, larger output means lower average costs per unit, and only one firm can survive. If there were two firms, one could expand to reduce costs and thereby eliminate the other. Traditionally, this kind of situation precipitates a pricing problem because the surviving producer may be able to set prices well above the prices that would rule under competitive conditions. This is often the argument for regulating or nationalizing a natural monopoly.

Chadwick distinguished between “competition within the field” and “competition for the field.” Where competition is not possible within an industry, Chadwick surmised, competition for the right to be the natural monopolist may be an adequate substitute.

Demsetz recognized that the threat of entry into an industry gives rise to potential competition that can stop a firm from adopting monopoly pricing. If inputs such as labor could be bought in competitive markets and if the costs to firms of colluding were prohibitively high, there would be many rivals ready to enter into sales contracts with buyers—with the firm offering the best terms winning the contracts. In a natural monopoly, this would lead to production by a single firm; but to beat off rivals, the natural monopolist would be driven to price at average cost, enabling the firm to just cover costs. This is a much better result than the higher monopoly prices that traditional theory predicts.

Franchising schemes

Demsetz also argued that a deliberately designed franchising scheme is useful where potential competition cannot be relied on to exert discipline on a natural monopolist’s pricing. This situation is likely to arise when there are large barriers that impede new firms from entering an industry, such as a need for large, irrecoverable investments that could be lost if the incumbent firm responds by lowering prices. National grids for distributing electricity are a good illustration of this problem.

In franchising schemes, competition for the market can occur “on paper” without the need for anyone to incur irrecoverable (specific) investments. A franchise authority simply awards a franchise to the producer offering the lowest price for a given quality and quantity of product. The auction may be systematically repeated to ensure that consumers continue to obtain the best price.

But to test whether franchising is useful, it must be compared with other approaches to natural monopoly. One traditional solution is for the state to nationalize the natural monopoly, which is how gas, water, electricity, and telecommunications were supplied in the United Kingdom before the 1980s. But disenchantment with nationalization has become widespread. In many countries, nationalized industries developed a reputation for inefficiency and control problems that offset any possible pricing advantage of a public enterprise operating under conditions of decreasing cost.

Another traditional solution to natural monopoly leaves such industries in private hands but regulates against monopoly abuses. In the United States, rate-of-return regulation has been applied to utilities to discourage monopolists from reducing output to increase profits. But rate-of-return regulation can reduce the incentives for cost efficiency. To boost profits, some firms may try to increase the capital base on which a rate of return is calculated. To provide better incentives for cost control, regulation of recently privatized utilities, such as telecoms and gas, has imposed caps on prices.²

Contract design

In theory, franchising avoids problems associated with nationalization or regulation. It also
avoids the need to calculate and revise price caps or to incur many of the costs of more active regulatory schemes. These benefits must be weighed against the costs of organizing bidding for franchises and of controlling cheating within franchise contracts.

If a franchise system is to be successful, a great deal rides on contract design, capable procurement, and monitoring agencies. Some of the major problems concern adapting to changing circumstances, transferring long-lived assets between franchisees, and "underbidding." Changes in conditions require that contracts have adjustment rules. This much is clear from early-twentieth-century municipal franchising of such services as transportation and gas distribution. To generate sufficient interest at the bidding stage, a franchise authority needs to devise a means for sharing the risks attached to changes in demand or to increases in the costs of inputs.

An even greater problem arises when specific assets are longer-lived than the franchise contract. An incumbent franchisee would tend to view the current cost of these locked-in investments as effectively zero and could easily outbid any rival building a plant from scratch. How can a franchise authority ensure the continuing interest of would-be bidders and create a competitive bidding environment for the renewal of the contract?

The problem can be overcome by stipulating in the contract the terms under which assets must be transferred to a successor company. But further problems may arise in asset transfer: an incumbent could manipulate the original cost of assets to a would-be entrant's disadvantage by, for example, arranging false costs with suppliers. Nonetheless, there are examples of smooth asset transfers, such as in the replacement of independent television broadcasting franchisees in the United Kingdom in 1967, 1980, and 1991.

"Underbidding" arises from the incentive for would-be franchisees to make adventurous bids. The temptation is to bid a high service quality at a low price and then, once a contract is written, to try to renegotiate—or to chisel on quality. Such post-contract opportunism relies on the disruption costs faced by the franchise agency. To avoid these costs, the agency might renegotiate to improve the returns to the franchisee. It is not enough to argue that the contract is enforceable in courts of law. The commercial world is full of cases in which a bidder claims that costs have changed and, on that basis, tries to win price renegotiations, with the implied threat that otherwise it will fail. But there is evidence that underbidding is held in check by the desire of franchisees to maintain reputation, as in the case of U.S. cable television—the only case comprehensively studied.

Fully developed franchising schemes are probably best seen as an alternative form of regulation for natural monopoly. They do not remove the need for a great deal of careful work in designing and administering contracts. Nonetheless, franchising has advantages where it would be difficult to privatize an industry outright, where limited private sector involvement is required, or where a government wishes to avoid the costs of traditional methods of regulation.

Franchise schemes have been applied by governments around the world in a number of situations. An interesting example is the scheme proposed in the United Kingdom for passenger rail. The U.K. government is convinced that private enterprise can reduce costs. The catch is that many rail services run at a loss, and therefore it is unlikely that private investors would be interested in buying British Rail outright. The proposed franchising scheme would award rail routes to companies bidding for the lowest subsidy to operate the service for a specified period, and subject the winning companies to a requirement to not increase fares in order to
maintain the existing level and quality of service. This scheme, which uses competitive bidding to minimize subsidies rather than prices, is a variant of the original Chadwick scheme.


Antony W. Dnes is Professor in Economics, The Nottingham Trent University, England.
Tradable Property Rights to Water

How to improve water use and resolve water conflicts

Mateen Thobani

In most countries, water is still regarded as public property. Public officials decide who gets it, at what price, and how it is used. The government also takes responsibility for building and operating the necessary hydraulic infrastructure for water delivery. The track record of such administered systems of water allocation has not been impressive. Despite growing water scarcity and the high costs of hydraulic infrastructure, water is typically underpriced and used wastefully, the infrastructure is frequently poorly conceived, built, and operated, and delivery is often unreliable. Water quality has not been well maintained, and waterlogging and salinity have not been properly controlled. These systems also have tended to favor the relatively wealthy. Wealthier farmers manage to get easier access to water rights, which are usually obtained without charge and for whose use farmers pay only a small fraction of the cost of building and operating the associated irrigation infrastructure. Similarly, while the better-off residents in many cities in developing countries enjoy access to cheap, municipally supplied water, many of the poor in the same cities must resort to very expensive private water truckers to meet their daily needs.

Recent government efforts to improve the management of water resources have moved away from building hydraulic infrastructure to strengthening institutions, improving pricing policies, and handing management down to water associations and communities. This approach has worked well when public funds have been available, when institutions have been strong and effective, and when there has been close cooperation among water users. But as public finances become more strained and conflicts among users grow, the chances of this approach being successful grow slimmer.

Instead, governments should establish mechanisms that provide better incentives for people to use water efficiently. One way to do so is to charge a price for water that reflects its true scarcity. But this is difficult to do in practice, especially for irrigation water, which accounts for the bulk of water use. Irrigation water charges are typically well below the cost of obtaining additional water (its long-run marginal cost) and often below the cost of operating and maintaining the irrigation infrastructure. Raising water charges to the long-run marginal cost would result in prices that would bankrupt many farmers—an option that is usually politically and socially unacceptable. A more realistic way to bring about efficient use is to allow water trading. Some water-scarce countries have adopted this alternative, permitting informal sales of water for a season or permanent sales of property rights to water (see box).

**Advantages of tradable property rights to water**

**Improved productivity of water**

Tradable water property rights endow water with an implicit value or “opportunity cost.” That creates a built-in incentive to conserve water and to put it to the most productive use.
WATER MARKETS AT WORK

Poor public sector allocation of water has led some water users in developing countries to buy and sell water commercially, which helps resolve water shortages and improve the productivity of water. Most of the water trading has taken place between farmers. A 1990 survey of surface water systems in Pakistan found active trading for irrigation water in 70 percent of the watercourses studied. In India, an estimated one-half of the area irrigated by tubewells belongs to farmers who buy water. In the Maghreb countries, private arrangements for trading water exist among farmers, even though it is illegal. But such transactions have been limited to spot sales of water or to the sale (lease) of water for a single year rather than to permanent sales of water rights. The difficulty in enforcing contracts in such a market has tended to confine the transactions to users in the same sector, often neighboring farmers. The lack of secure, long-term access to water under such a system discourages investment in activities that require access to large quantities of water. Thus, such water markets realize only a small part of the potential gains from trade.

To allow water users to secure water on a permanent basis, and to facilitate water leasing, some countries have begun to pass legislation to permit tradable property rights to water:
- Under Chile’s 1981 water law, the state grants existing water users (farmers, industrial firms, water and power utilities) property rights to water without charge. It auctions new water rights. Subject to certain regulations, these rights can then be sold to anyone for any purpose at freely negotiated prices. They may also be used as loan collateral.
- In recent years, Mexico and several states in Australia have established property rights to water, though they have initially placed substantial restrictions on intersectoral trading.
- In the Northern Colorado Water Conservancy District in the United States, water brokers assist in millions of dollars of water trades annually and commercial bankers routinely accept water rights as loan collateral.
- Peru’s 1993 constitution treats land and water resources equivalently, and thus permits tradable property rights to water. A draft water law proposes that these rights can be traded, leased, or used as collateral. Property titles would be given free of charge to those who already hold water rights either implicitly by custom or explicitly through licenses and permits. Rights for presently unused water would be auctioned subject to protections that ensure that the availability of water to others is not reduced, that there is enough water to maintain a minimum ecological flow, and that people in neighboring towns retain their accustomed access.

Creates a built-in incentive to conserve water and to put it to the most productive use. For example, if farmers were able to sell their water rights at freely negotiated prices, some might choose to generate extra income by selling any surplus rights to a neighboring city where the water has a higher value. Often they can generate a surplus by using more efficient irrigation techniques or by switching to less water-intensive crops. Thus, a tradable water property rights system can lead to voluntary conservation and increases in the productivity of water without having to increase water charges. In fact, in Chile, water charges fell following the introduction of the tradable water rights regime. The fall occurred because this regime facilitated the transfer to user groups of the responsibility for carrying out operations and maintenance (O&M) activities and for setting water charges and because users were able to carry out O&M activities at a much lower cost than the government. Despite the lower water charges, the opportunity to sell water ensures that scarce water is not used wastefully.

Sound investment

 Tradable water rights can help shift water to higher-value uses in a way that is cheaper and fairer than some of the present alternatives. These alternatives include building expensive new hydraulic infrastructure, confiscating water from farmers, or substantially raising water charges to force farmers to conserve water and to free up water for higher-value uses, such as for “raw” city water. Although the conveyance infrastructure to transfer traded water must already exist or be built, the cost of building it is often less than that of developing new sources of water. Thus, the city of La Serena in Chile was able to meet its rapidly growing demand for water by
purchasing excess water rights from farmers at a
lower cost than the alternative of contributing to
the construction of the proposed Puclara dam.
(The construction of the dam has now been post-
poned indefinitely.) Farmers got a good price
for their water and faced incentives to use more
efficient irrigation techniques. Better incentives
to conserve water also help control soil salinity,
which is caused primarily by overwatering.
Therefore, by creating tradable water rights, Chile
was able to avoid the conflicts that often arise when governments confiscate
water from farmers and divert it to urban dom-
estic consumption, but also to avoid the envi-
ronmental costs associated with new dam
construction and soil salinity.

Farmers also benefit from having more secure
water rights and an asset that can be used as
collateral for lower-interest loans. Secure water
rights are particularly beneficial for small farm-
ers, who have been most vulnerable to reduc-
tions in their water allocation over time and who
have few other sources of collateral. And be-
cause of their divisibility, water rights give large
farmers the possibility of mortgaging only part
of their water rights for small loans, rather than
their entire land and water holdings.

Increased investment and growth

In addition to stimulating growth directly by im-
proving the productivity of water, tradable prop-
erty rights to water will encourage investment
and growth in activities that require assured sup-
plies of large quantities of water. The existence
of such rights assures investors that their water
rights will not be subordinated to those of other
users during times of shortage and that, in fact,
they will be able to buy water from those with a
less valuable use for it. Thus, Chile's 1981 water
code allowed investment in fruit production to
proceed rapidly, and helped make Chile a ma-
jor fruit exporter.

 Tradable rights should also stimulate private in-
vestment in new hydraulic projects. The secure
rights will give potential investors the confidence
that, once they obtain the rights to the water
generated by their investment (for example, stor-
age reservoirs and conveyance infrastructure), it
will be theirs to keep or to sell to others (farm-
ers, industry, hydropower and water companies).
Secure rights to water could also attract private
investment to large public hydraulic projects un-
der construction, enabling them to be completed
faster and more cheaply. Public projects tend to
run into enormous delays and cost overruns be-
cause governments run out of money and be-
cause there is less incentive than in private
projects to control costs. If a government wanted
to privatize an ongoing project, it could do so
by selling the hydraulic infrastructure and unallocated water and land rights associated with
the project, but with the condition that the buyer
respect existing land and water rights.

Creating tradable rights

Water has several unique characteristics that
present special challenges for policymakers de-
signing a framework for a well-functioning mar-
ket in water rights. The issues relate to defining
water rights when water flows are variable, mea-
suring water, enforcing contracts, building the
necessary infrastructure to transport water, mini-
mizing damage to third parties, protecting against
environmental degradation, and avoiding mo-
opolistic pricing practices. Finally, a market for
water rights will not lead to adequate invest-
ment in some potentially high-return activities
(flood control, drainage, prevention of soil ero-
sion, siltation reduction) that by their nature are
not profitable for a private investor.

Most of these market imperfections and the policy
issues they raise are not peculiar to a water sys-
tem based on tradable rights. All water systems
must deal with them. Water rights need to be
assigned and enforced even under an adminis-
tered system, and the conveyance infrastructure
still must be built. But a market system increases
the value of water, so there is more incentive to
clearly define water rights, to improve measure-
ment and enforcement, and to establish an effi-
cient mechanism to resolve disputes. Similarly,
the same environmental laws and institutions
needed to enforce environmental quality under
an administered regime can operate under a trad-
able water rights regime. Moreover, water user
associations, which can play a useful role under either an administered allocation system or a water market regime, are more likely to be established or strengthened if water rights are well defined and transferable.

Market imperfections can best be addressed by appropriately formulated laws, regulations, and taxes. For example, difficulties in defining water rights in the face of variable water supply can be handled by defining water rights as a percentage of stream flow (as in Chile) or by specifying different classes of rights (as in Colorado). Similarly, defining water rights suitably or implementing appropriate legislation can help reduce negative hydrological effects on third parties that could occur when water is transferred to other activities.

For the most part, there is little danger of widespread monopolies in consumptive water rights. Monopolies could occur, however, following privatization of hydraulic projects with large amounts of unallocated water rights or in nonconsumptive water rights for hydropower. To avoid this risk, countries should develop an appropriate regulatory framework before privatizing any large hydraulic infrastructure, introduce a tax on water rights holdings while simultaneously removing any land tax surcharges on irrigated land, and establish regulations determining power tariffs.

How the initial property rights to water are allocated is crucial to the acceptance and success of a water market. The approach will vary according to country. Where there is already a well-functioning registry of water rights, it is sufficient to simply reregister the rights in a newly created property rights register. Where the existing registry contains many overlapping property rights (the sum of water rights exceeds the water available), however, it would be better to base the initial allocation on past usage. Where there are gross abuses of water rights, it is probably best to assign rights on the basis of need or with a reasonable upper limit on irrigation water per hectare. In all cases, it is important to ensure that the rights of the poor are respected.

Conclusion

Under a tradable water rights system, the public sector's role in the construction, operation, and maintenance of hydraulic infrastructure can be reduced to financing selected high-return activities with strong positive externalities or public good characteristics. The market—not the government—will determine the allocation and pattern of water use and the prices charged for water rights. Water user associations will determine water charges for operations and maintenance. But there is an important role for government in formulating laws and regulations to establish tradable property rights to water. The design and implementation of this legislation should pay particular attention to the initial allocation of water rights, dispute resolution mechanisms, creation and maintenance of a water rights registry, and the minimizing of negative hydrological third-party effects. Public authorities also will need to design and enforce environmental laws.

This approach has the potential to increase the productivity of water use, improve operations and maintenance, stimulate private investment and economic growth, reduce water conflicts, rationalize ongoing and future irrigation development, and free up government resources for activities that have a public good content or positive externalities. And it is likely to especially benefit the poor and to help conserve natural resources.

Note in greater detail.

Malieen Thobani, Senior Economist, Technical Department, Latin America and the Caribbean Region
Privatization through Broad-Based Ownership Strategies

A more popular option?

Stuart Bell

The urgent need to privatize a large number of state-owned enterprises (SOEs) in an equitable manner led to the development of voucher-based mass privatization programs in Central Asia, Eastern Europe, and the former Soviet Union. Nonvoucher variations of these privatization programs that pool equity distributed to citizens have emerged in countries as diverse as Bolivia and Zambia. Many other countries have used discounted public offerings to elicit worker participation in privatization or to achieve wide ownership of privatized firms. These three basic techniques for achieving broad-based ownership—voucher-based programs, collective investment programs, and public offerings—offer political and social advantages over more traditional privatization methods. They also should contribute to the development of capital markets. Variations of these strategies are now being applied in some of the least developed countries and may help to “jump start” their stalled privatization programs. This Note sets out the options.

The case for broad-based privatization strategies

Politically popular

Broad-based ownership strategies aim at spreading share ownership to the population at large or to specific subgroups (such as the poor or an ethnic minority). Where privatization is stalled because of a general perception that it benefits only the powerful few or foreigners, popularizing share ownership provides policymakers and legislators with the “political cover” necessary to push contentious reforms through resistant legislative bodies. And because broad-based ownership leads to greater public participation in the privatization process, it reinforces support for and sustainability of the reform agenda.

More redistributive

Unlike traditional privatization methods (such as trade sales), broad-based ownership schemes allow governments to address concerns about the distribution of wealth. Redistribution can be accomplished by issuing vouchers (the number or value of which may vary with the recipient’s age or years of work), by offering discounts on shares, or by limiting participation in collective investment schemes to low-income groups. For example, Malaysia used a collective investment scheme to redistribute wealth to members of an ethnic group that was economically “underrepresented.” In the Republic of Korea, where public offerings were used, low-income groups were eligible for deep discounts on share purchases. The effect of vouchers on incomes has been substantial. In the Czech Republic and
Mongolia, for example, the market value of vouchers received by each participant was about half the annual per capita income.

**Helps capital market development**

Many of the least developed countries cannot use public offerings because of weak or non-existent capital markets. However, broad-based ownership strategies can play an important role in developing and deepening capital markets and associated institutions. These strategies introduce the average citizen to share ownership and help to encourage a trading, savings, and investment culture. Voucher-based programs typically involve the establishment of mutual funds, which offer risk-averse citizens the opportunity to invest in diversified portfolios. Share sales and trading between these funds start the process of secondary trading in equity markets. Later, initial public offerings of state-owned equity can be an effective means of deepening capital markets.

**These three basic techniques for achieving broad-based ownership—voucher-based programs, collective investment programs, and public offerings—offer political and social advantages over more traditional privatization methods.**

Voucher-based programs involve the distribution of certificates, or coupons, to participants, who then exchange these vouchers for shares in individual SOEs or for shares in financial intermediaries (voucher funds). These intermediaries, in turn, bid their accumulated vouchers for shares of SOEs. In most cases, vouchers can be freely traded for cash.

Voucher-based programs may involve different types of financial intermediaries. Typically these intermediaries are unit trusts, although several voucher programs employ investment trusts for start-up purposes and plan to transform them into unit trusts once they complete the initial stage of implementation. It is hoped that financial intermediaries will play an important role in the restructuring and governance of newly privatized enterprises.

Vouchers will work best where voucher distribution and trading centers are easily accessible and where there is a competent administrative system capable of carrying out the distribution and registration. Weak institutional capacity makes implementation of a voucher-based program difficult—although massive amounts of technical assistance have enabled Russia and Mongolia to implement successful programs despite weak institutions.

A stock exchange is not a prerequisite for a voucher-based scheme. In fact, the development and deepening of capital markets often is an important by-product, if not explicit objective, of such programs. However, once vouchers are converted to shares in either a financial intermediary or an SOE, market liquidity is essential.
if investors are to be able to buy and sell freely. Liquidity is best provided by a well-functioning stock exchange through which brokers may sell shares held by individuals and fund managers may shift and develop their portfolios. Even where a stock exchange exists, however, market shallowness may limit the trading opportunities available to a fund manager and, as a consequence, constrain shareholder exit from the fund.

Collective investment programs

Collective investment programs include investment trusts and privatization trust funds endowed with government-owned equity (Zambia), pension schemes funded from the earnings of SOE shares (Bolivia), and non-voucher-based unit trusts (Malaysia). These collective programs differ from voucher-based programs in two respects. First, they do not necessarily involve distribution of paper vouchers and, as a consequence, are simpler to administer and typically require fewer resources to implement. Second, participants usually are not allowed to freely enter and exit the schemes. In a privatization trust fund, citizens do not individually own shares in that fund or any of the underlying assets. Instead, the assets are collectively owned and held for the benefit of current and future citizens. There is thus no immediate direct financial gain for participants. In cases where privatized equity capitalizes pension schemes, participants can gain access to their share of the fund only through retirement or illness. Policymakers usually will choose collective investment programs when capital markets are particularly weak and constrained, there is little or no understanding of share ownership, there are cultural barriers to individual accumulation of wealth, there is a low level of literacy, and there are logistical constraints, such as a highly dispersed population that is difficult to reach. These conditions mean high transaction costs for secondary share trading. Therefore, a collective scheme that limits entry and exit (an investment trust, for example) may be preferable—or preliminary—to a voucher-based approach.

As in Malaysia, collective investment programs can take the form of special unit trusts aimed at increasing the representation of low-income or disadvantaged ethnic groups in an economy. Zambia, with World Bank support, also is taking this approach. It is using a privatization trust fund as a “warehouse” for enterprise shares pending their sale through public offerings or other means. Trustees of these institutions sometimes actively oversee enterprise management and undertake restructuring activities. Though all elig-

Ownership can become so widely diffused that there will be no dominant owner to compel good management.

Public offerings

Public offerings of SOE shares have been used by many developing countries as a way to achieve widespread share ownership. Jamaica, Korea, Morocco, Nigeria, Sri Lanka, and Tunisia, for example, have all chosen this strategy.

To be successful, public offerings require a well-functioning and absorptive domestic capital market. SOEs best suited for public offerings need to pass a few basic tests:

- They should be legally formed as joint stock companies.
- There should be no major financial weaknesses, planned restructurings, or imminent calls for more equity through rights issues.
- The enterprise and the percentage of shares offered should not be so small that a flotation is uneconomic or not possible under local market conditions and stock exchange regulations.
- The size of the issue must be within the absorptive capacity of the local market.

**Avoiding “orphans”**

One of the most frequent criticisms of broad-based ownership schemes (particularly voucher programs) is that enterprises risk being “orphaned.” That is, ownership can become so widely diffused that there will be no dominant owner to compel good management. The best way to ensure effective corporate governance is to reserve a majority of shares for a core investor. The remainder can be broadly distributed. When a majority of shares are exchanged for vouchers, the political and social benefits associated with broad ownership may come at the cost of some of the economic benefits associated with more concentrated ownership.

Concern about corporate governance has led many governments to build better governance-promoting measures into their voucher programs. They have offered incentives to financial intermediaries to assume this task—at least until secondary trading of shares can secure the needed core investor. Both the Czech Republic and Russia allowed private financial intermediaries to exchange vouchers for fund shares in the expectation that these funds would accumulate large blocks of enterprise shares and pressure enterprise managers to adopt more efficient practices. This process has been more successful in the Czech Republic than in Russia. In Russia, managers had more political influence over the program design and succeeded in securing large equity stakes in their enterprises. These stakes shield them from outside influence. In contrast, the government in Poland will itself create ten “national investment funds,” hire experienced staff to manage them, and administratively allocate enterprise shares to the funds. Every enterprise will have a “lead fund” that holds 33 percent of its equity, and the nine other funds will each receive 3 percent of that enterprise. Although this strategy has been touted as a more proactive way to address the problem of corporate governance (pending secondary trading of shares), there is a risk that these state-owned funds will fall prey to political interference and prove incapable of imposing restructuring programs on the enterprises. In the end, the most efficient way to achieve effective governance is through the market—by selling shares in response to declining earnings and takeover threats. Secondary trading of enterprise shares is therefore crucial to the success of privatization in general, and broad-based ownership strategies in particular.

This Note is drawn from the author’s paper of the same title, soon to be published as a World Bank Discussion Paper.

*Stuart Bell, Private Sector Development Department*
In transforming economies...

This Note proposes that the immediate focus of financial reform in Central and Eastern Europe should be on privatizing the flows of savings, which affect resource allocation, not on privatizing stocks, which represent sunk costs. It is easier for both technical and political reasons and more important for economic reasons to redirect the flow of savings through private intermediaries, with better incentives to allocate credit efficiently, than to privatize the stock of accumulated savings in state-owned banks.

The case for this approach to banking reform is based on the following assessment: (1) prudential supervision will be inadequate for several years despite attempts to improve it, (2) private intermediation would improve resource allocation only if the government does not (implicitly or explicitly) insure deposits, and if it does, the familiar moral hazard problem appears, and (3) the political pressures to protect deposits, whether implicitly or explicitly, are likely to be much lower if the bulk of household deposits lie unthreatened in state-owned banks.

In these circumstances, even if state-owned banks could be sold (and the reasons for pessimism on this score are set out in the box on page 18), it may be better to defer their sale. That allows governments to credibly deny deposit insurance to private banks that cannot be adequately supervised. And, if state-owned banks were precluded from intermediating flows, their privatization could be deferred without further misallocating resources.

An alternative approach

Resource allocation depends on how flows of savings are invested—it matters little whether the stock of earlier loans is in private or state-owned banks as this reflects past decisions. The alternative to privatizing state-owned banks immediately, therefore, is to force the intermediation of savings flows through private entities that operate with the right incentives, and to circumscribe the activities of state-owned banks collectively while at the same time giving each state-owned bank the incentive to improve its performance. Circumscribing the activities of the state-owned banks would be sufficient to largely privatize the flows of savings. Even if all savings flows were immediately privatized in this way, the stock of household savings would migrate only gradually (as deposits matured) to other banks, allowing all banks a fair chance to respond to the new, more credible rules of the game.

Private intermediaries, but under different rules

Banks generally have little equity (even the 8 percent required under the BIS guidelines is far less than in most nonbank firms), and because they are in the business of accepting cash from the public, their owners have both the incentive and the ability to hide losses while attempting to recoup them through overly risky ventures. When losses mount and the pyramid-type scheme can no longer be covered up, depositors lose spectacularly, and political pressures to bail out depositors become inexorable. So governments must either supervise banks closely...
Prompted by concerns about bank incentives to allocate credit, a few bold reformers advocate immediate privatization, though they know that adequate banking supervision is years away. Even if privatization of banks were desirable, it would be difficult for two reasons. First, banks are service institutions, and potential buyers may prefer to start a bank from scratch. Although a few state-owned banks have been transforming themselves with remarkable alacrity, old habits die hard, and the staff of state-owned banks are not easily transformed into polite and helpful service industry staff. (Restricting new entry to ensure privatization of existing state-owned banks is obviously shortsighted.) Second, potential buyers would be wary of being forced to continue lending to inviable state-owned enterprises with which the bank has had a long, cozy, incestuous relationship. These ties are more likely to be severed if both the bank and the borrowing enterprises are privatized, but that takes time. Even after three years, less than 30 percent of enterprise assets have been effectively privatized in transforming economies.

And even if these two problems are solved, privatization still may not last. The bank’s portfolio could worsen without further lending to inviable enterprises because real interest rates fluctuate under a stabilization program and many well-run debtor enterprises become financially strapped. This happened in Mexico, where ex post real interest rates hovered between 20 and 45 percent a year for two years after the successful stabilization program introduced in 1988. After finally falling, they have shot up again following the recent peso crisis. Experience shows that when creditor banks are dragged down with debtor enterprises, the political pressure on the government to protect households’ savings—even if deposits were not explicitly insured—becomes irresistible. Thus, implicit (or explicit) deposit insurance makes the government the economic risk-bearer and hence owner of a bankrupt, though ostensibly private, bank. So, even if a bank were privatized now, subsequent losses—very likely in turbulent times—would cause the bank to boomerang back into government hands.

Setting up adequate prudential regulations and supervision is proving difficult for both technical and political reasons. The technical difficulties stem from the dearth of sufficiently skilled people and the migration of those trained in the requisite accounting techniques to better-paying positions elsewhere in the economy. Raising pay scales or contracting out banking supervision is easier said than done. Political difficulties stem from the tremendous clout of debtor enterprises, often state-owned, in pressing for additional bank loans and averting defaults that threaten employment. Improvements in prudential regulations and supervision are therefore painfully slow and erratic, and while the attempt should not stop, one should not count on results for several years—too long for intermediation by state-owned banks to continue unchecked.

The alternative to supervision is for the government to credibly deny deposit insurance to private intermediaries. This is only possible if the government provides a safe alternative, such as insuring the bulk of household deposits in state-owned banks. Rather than limit deposit insurance by amount, the proposed approach limits it by type of institution. Private banks would not be covered by government deposit insurance simply because the government cannot oversee them sufficiently well. However, private banks should be free to make alternative arrangements—for example, devising private insurance or mutual insurance schemes to reassure depositors. At the same time, raising shareholder equity ratios to the far higher levels that prevailed in the early part of this century would both reassure depositors and reduce the incentive for fraud. Entry may still require some screening to prevent obviously inappropriate operators from defrauding depositors. Entry by foreign banks concerned with maintaining high international reputations would be an excellent approach, although many countries succumb to xenophobia and foolishly preclude it.
Constrain state-owned banks collectively

There are many ways to restrict the intermediation of flows by state-owned banks. The best choice depends on the circumstances. One way is to set collective credit limits on state-owned banks, something akin to what is often done under stabilization programs. Imposing such a nominal limit would shrink state-owned banks in real terms, and even if the limit were indexed to the price level, the share would fall as the economy grows. Alternatively, state-owned banks could be limited to buying only government paper, thereby automatically restricting their growth to less than the budget deficit (generally a smaller percentage of GDP than the GDP growth rate). Such a restriction would also make the banks’ portfolios less risky while simultaneously allowing private banks to assess borrower creditworthiness—a discretionary task particularly responsive to market incentives. Despite such limits, state-owned banks would still intermediate funds to the extent that their old loans were repaid rather than merely rolled over, but only those state-owned banks that made sound loans could do this.

Restricting intermediation by state-owned banks would automatically redirect intermediation through private entities, whether formal or informal. The basic accounting identity—savings equals investment—always holds, and what is not channeled through state-owned banks gets intermediated elsewhere. Although some may worry that nonbank intermediaries, especially informal lenders, do not allocate credit efficiently, the comparison must be with the poorly functioning state-owned banks, not with some ideal banking system.

Punish the worst offender

State-owned banks are a heterogeneous group, and while most are overstaffed and inefficient, some are worse than others. Constraining state-owned banks collectively but not individually provides each with an incentive to improve and grow at the expense of others. Having a credible plan for later bank privatization dangles a reward for the better bank managers, who may be retained by the private buyers on more attractive terms. In addition to this somewhat distant carrot, a more immediate stick of additional strictures may be useful. Punishing the worst bank both sets an example (dramatic acts attract attention) and hastens its improvement. Setting a 100 percent marginal reserve requirement or a cap on nongovernment lending (while simultaneously reducing state borrowings from, and reserve requirements on, other banks) would do this effectively. Preventing a bank from intermediating flows does not shut it down, but the resulting “liquidity crisis” requires immediate central bank action.

The salubrious effects

The central bank not wishing to immediately close a particular bank would have to fund it in one of three ways: (1) increase the monetary base—or print money—which is inflationary, (2) direct other (better, state-owned) banks to provide the funds, or (3) demand bits of the bank’s physical assets (such as branches) as a quid pro quo and sell them immediately to other banks. The first is ruled out for obvious reasons; the second merely freezes the proportion of flows controlled by each state-owned bank and eliminates any incentive to improve; so the third alternative is the best. The message to all banks would be clear (“if you can’t cut costs and operate more efficiently, you won’t survive intact”) and, equally important, credible because the bulk of the existing stock of household deposits would remain secure.

Although all state-owned banks would not be privatized immediately (especially if other state-owned banks buy the pieces offered for sale), they would face market pressures right away. With deposit and lending rates free, private banks would try to attract depositors by offering a higher interest rate (and to attract borrowers by offering cheaper rates for loans). State-owned banks would have to respond with better service and lower spreads or see their depositors and borrowers migrate to private banks.
This approach essentially prescribes to banks the same medicine that has proved effective with other state-owned enterprises—a cash (“hard budget”) constraint. It works by confiscating incremental deposits through the proposed restrictions (100 percent marginal reserve requirements, credit limits, limits on holdings of nongovernment paper). State-owned banks are thereby forced to service their deposits from lending operations, and those that cannot are broken up gradually and sold.

Central banks already have the necessary power to impose such penalties and restrict the activities of insolvent banks. Such raw power has politically unacceptable ramifications and so is rarely used. But a subtle application by privatizing flows and letting sleeping stocks lie is just as effective as outright privatization in improving resource allocation.

Risks and benefits

The main risks of this approach are (1) the possibility that politicians will backtrack on reforms and (2) bank fraud. It is easier for governments to quietly undo flow privatization because there is no explicit “public act,” such as selling a bank. To help combat fraud, promoters and managers of new banks must be effectively screened. In addition, the personal liability of managers and owners should be increased. This could be done by lifting the minimum required ownership stake to the 15–30 percent that prevailed early in this century, before the arrival of deposit insurance.

On the benefit side, besides the economic merits outlined above, the proposed approach has political advantages that may make it more likely to succeed than earlier efforts to reform the banking sector. Each bank has the opportunity to survive by improving its own operations. Threatened bank managers who might otherwise combine to oppose or sabotage reform, especially when they (understandably) resent being punished for obeying the government’s earlier wishes, are less likely to collude when each is given the chance to improve. No new laws are needed, so populist parliamentarians may be kept at bay. State-owned banks are not replaced by laissez-faire banking overnight: rather, the two exist simultaneously but separately, allowing time for prudential supervision to improve. The public is likely to support this approach because it widens choice: they may have insured deposits in state banks or uninsured (though higher-yield) deposits elsewhere. Any subsequent private bank failure only penalizes those who chose a bank unwisely. Last but not least, the government does not risk public “failure” as with an unsuccessful attempt to sell a state-owned bank.

Illustration by Rush Sofair Kelter.

1 It is in this sense that “bad stocks could contaminate flows,” but this applies only to private banks with negative net worth whose owners or managers are gambling with other peoples’ money without their knowledge or permission.

2 There are two main reasons for treating banks differently than other enterprises in market economies. First, banks not only intermediate between lenders and borrowers but also are often responsible for the payments system (efficient check clearing and wire transfers) on which commerce often depends. And second, the perverse incentives created by deposit insurance require the government (or the central bank as its agent) to safeguard its own interests by supervising banks (often restricting banks’ activities to make such oversight easier), a role related to but conceptually distinct from the lender of last resort. However, the payments system in many countries is based on transferring suitcases of currency notes without banks’ involvement, so a banking failure in these circumstances would not bring commerce to a halt.

3 A bank’s negative net worth is not an impediment to privatization because it is easily remedied. The government could either sell the bank to whoever bids the least negative price (as the Resolution Trust Corporation in the United States does) or recapitalize the bank just before selling it. Prematurely recapitalizing a state-owned bank, even if only to bring it up to the minimum required, would likely have to be repeated (the well-known time inconsistency problem) and would relax the hard budget constraint that lies at the heart of the proposed approach.

4 Indeed, new (private) banks could even be free from reserve requirements if they were outside the payments system and not eligible for central bank rediscounts or refinancing. The central bank could allow two different types of new private intermediaries: banks, which would have some privileges and concomitant obligations, and nonbanks, which would be free from all requirements of the banking laws (but subject, of course, to civil law of torts and criminal law in cases of fraud).

5 If depositors strongly favor the safe and familiar state-owned banks, the restrictions would lower deposit interest rates in state banks (being forced to buy only treasury bills, they could only offer less) or raise them elsewhere until the public was indifferent between the two—or both—but flows would be privately intermediated.

S. Ramachandran, Senior Economist, Private Sector Development Department
International Power Interconnections
Moving from electricity exchange to competitive trade

Jean-Pierre Charpentier and K. Schenk

International electricity markets are complex, and experience with them is limited. Purely physical exchange between countries already occurs where interconnection lines are in place. But trade requires more sophisticated organizational structures and coordination. Harmonizing national organizational structures is a first step toward the freer flow of power across borders. Unbundling national power sectors could help further in breaking bottlenecks, particularly in transmission. But coordination needs much attention. Here, the key issue for policymakers is this: What terms and conditions are needed to establish competitive regional electricity trade in which buyers and sellers can, at any time and regardless of their locations, negotiate power and energy contracts covering a wide spectrum of commercial products? This Note suggests some answers.

Rationale and typology of international interconnections

Countries, companies, and even complete systems all seek to interconnect for three basic reasons: (1) emergency support, (2) savings on operating costs as a result of the structural differences of load profiles, and (3) savings in investment (and operating) costs from complementary means of production. Utilities often expect and achieve considerable operational savings through their interconnections with neighboring countries. For example, UCPTE, an association of Western European companies, saves between 3 and 10 percent overall thanks to regional interconnection. Similar savings are achieved in the United States through interconnection. But the potential for savings on investment should not be exaggerated. Most generation companies still aim for self-sufficiency in their territories and so are committed to a certain level of investment in any case. Thus, when utilities assess the need for expanding their generating facilities and transmission networks, they seldom take systematic account of the

A SHORT HISTORY OF POWER TRADE

Historically, it was the search for more reliability that led small independent systems to group or pool together. Later, this pooling was extended to regional, interregional, and international systems. The first recorded international interconnection was a tie-line between Canada and the United States in 1901. Europe's first was in 1929, between Austria and Germany. Now, many regional interconnected systems are in operation—in Western Europe (UCPTE), Scandinavia (NORDEL), the United Kingdom, Central Europe (CENTREL, formerly IPS), Eastern Europe (UPS), North America (three U.S. networks—East, West, and Texas—and four Canadian networks), Central and South America, southern Africa (SADC), and Asia. More systems are under construction or consideration. And recent sector reform efforts around the world are prompting a new look at trade issues. The European Union, for example, has looked at open access and free transit in electricity networks. It has in mind not just time-honored "gentleman's agreements" among utilities to supply emergency power, but the systematic trade of electricity on a competitive basis across national borders.
Acronyms and abbreviations

UCPTE is an association of 22 Western European companies.

NORDEL, formed in 1963, is an association of companies from Denmark, Finland, Iceland, Norway, and Sweden.

CENTREL is an association of companies from Hungary, Poland, and the Czech and Slovak Republics. Before the collapse of the Soviet Union, the association was known as IPS.

SADC, the Southern African Development Community, comprises 12 countries in southern Africa. A Southern African Power Pool (SAPP) has recently been formed.

possibilities of importing and exporting—although, increasingly, they should.

At present, five main types of exchange take place between interconnected partners:

- Firm energy sales—a continuous exchange of base load energy, which may include slight variations provided for in the contract, as well as interruptible power.
- Backup exchanges for emergency support.
- Marginal exchanges of spinning reserves.
- Occasional or à bien plaide (economy energy) exchanges, in which no guarantee of capacity is given. These arrangements are designed to take advantage of excess availability at advantageous marginal costs.
- Compensation exchanges made in kind. In the case of UCPTE, the exchange also is designed to compensate for financial losses caused by lags between the supply and the payment for the electricity delivered.

No standard model of electricity export contract has yet been developed—though contracts include certain common features, such as the technical characteristics of the power and energy to be delivered, the financial rates and charges, the effective dates and duration, and the cases of force majeure. The great majority of exchanges take place under bilateral agreements, often on the basis of long-term contracts (more than 90 percent of UCPTE exchanges take place under these conditions, and about 50 percent of NORDEL exchanges). The most active exchanges occur between companies or countries with a history of cooperation and mutual trust.

Strictly speaking, however, there still is no electricity “trade” in the full sense of that term—an immediate and competitive transaction between the buyer and the lowest-cost supplier, irrespective of geographic location.

Improved terms and conditions for trade

There are several prerequisites to achieving true electricity trade.

Need and willingness

Many governments have long viewed electricity as a specific strategic asset—one that, because it cannot be stockpiled, had to remain under state control. Therefore, governments have favored electricity self-sufficiency, often through vertically integrated, state-controlled companies. This concern goes a long way toward explaining the still quite limited volume of international electricity exchanges.

In many countries, however, recent restructuring in power sectors has introduced more flexibility into the operations of the entire electricity sector. For example, unbundling of power sector activities, along with increased competition in distribution, could well lead private distribution companies to look for the cheapest supplies—whatever their national origin. That could be a real stimulus to regional and international trade in electricity.

In addition, increased global competition is forcing electric utilities to operate their systems as economically as possible to maintain their country's or region's competitive edge. Under conditions of rigorous cost-cutting, self-sufficiency may be a strategic luxury that few utilities can afford.

Technical means

Whether transmitted by alternating current (AC) or by direct current (DC), electricity has two specific characteristics: it cannot be stored, and it does not flow according to the simple laws that apply to fluids and gases. Instead, electricity flows according to Kirchhoff’s law, in the path of least resistance—a path that cannot necessarily be determined by contract. The same holds true during the accidental loss of a means of production. Therefore, correcting the disturbance requires close cooperation and good exchange of information between partners.

Synchronous AC network links are well adapted to short and medium distances and for heavily
interconnected networks, but these systems are vulnerable. A major disturbance can lead to a system’s complete collapse. Maintaining the stability of such a system requires great technical rigor and close cooperation between partners based on instant exchange of information.

DC interconnection and transmission do not require such rigorous operation and cooperation. But the use of DC is reserved for exchanges over large distances and large transit capacities or for linking systems with different operational frequency or technical standards. Apart from the technical necessity of isolating networks with different technical characteristics, the decision about whether to use synchronous (AC) or asynchronous (DC) links is often purely economic. In general, a direct current line can be economically justified only beyond a certain distance (about 600 kilometers for aerial lines and 50 kilometers for underwater cables) and for high transit capacities. A DC line requires converter stations, which are expensive (about US$250 per kilowatt).

National institutions and regional operations

The accumulated experience of national structures for electricity exchange is very uneven. Although it is therefore not possible to prescribe a universally applicable framework and industry structure to stimulate electricity trade, three factors seem to be critical.

First, it is essential to harmonize the national power sector structures of each partner country. This harmonization is even more important for the development of trade than is the type of structural organization. In NORDEL, for example, exchanges decreased rapidly in 1991–92 following the unilateral restructuring of Norway’s power sector. Norway’s net exports to Sweden dropped from about 12,000 gigawatt-hours (GWh) in 1990 to about 2,000 GWh in 1991 and 6,000 GWh in 1992. The deregulation and restructuring of the Swedish and Finnish electricity sectors along the lines of the Norwegian model, scheduled for 1995 and 1996, are seen as key to reviving and expanding electricity trading in the region.

Harmonized structures are particularly important for pricing systems. In a competitive market, only a pricing system based on bidding is viable because it does not require the publication and verification of detailed economic information. Traditional approaches based on marginal costs, profit-sharing, and “avoided” costs cannot work in a competitive environment because economic information will no longer be shared or easily verified.

Second, a cooperative structure—or pooling arrangement—between partners is necessary to provide a trading center and to oversee the physical stability of the entire system. International experience here is still limited. But the national experience accumulated in the tight and loose pools operating in the United States could be used as a model for international pooling arrangements. A tight pool is a group of production and transmission companies with a common dispatch center to ensure technical and economic management and coordination of the network. A loose pool arrangement, by contrast, has no common technical dispatch center. Instead, each company in the group has its own dispatch center. But a common information center supplies each member with information in real time on supply and demand and transmission constraints.

Whatever pooling arrangement is selected in a region, the most important technical objective is to ensure the physical stability of the entire system. At the international level, a common technical dispatch center seems utopian. A system of coordination similar to the American “loose pools” is more appropriate.

Third, transit rights—open access and free transit—are essential in both national and international systems. At the national level, ensuring transit rights requires separating production from transmission. Electricity transmission should be considered a transport service, not an energy activity. At the international level, to benefit from a regional competitive market, any buyer must be able to obtain supplies within the interconnected system from any location.
Regardless of the production and distribution structures in place, the transport sector enjoys a national monopoly because of the need for technical integrity and reliability. The transmission system must therefore be regulated to ensure that the pricing system provides correct signals to both the user and the transporter.

Wheeling rights, particularly their legal basis, need to be clearly defined. Trade will grow only if (1) transport is supplied by companies that specialize in this activity and therefore do not design their networks solely on the basis of local supply and demand conditions, as integrated companies do; and if (2) international or at least regional regulations are implemented to eliminate any possibility that transit will be refused by a third party.

Environmental issues are a potential constraint on transit. Electricity transporters have increasing difficulty getting permission for new lines. In the case of existing corridors, the transit capacity could be increased by using sophisticated electronic control, or the line could be transformed to direct current. DC lines have the dual advantage of allowing the transport of higher quantities of energy with less loss and reducing the need for right of way.

Pricing and contractual issues

In a framework that is more competitive than cooperative, prices based on marginal costs, profit-sharing, or avoided costs are difficult to use because competitors will no longer be willing to declare all their pricing information as they do in exchange-based systems. Therefore, in an internationally competitive system, electricity pricing must be based on market bids, as in the British and Norwegian systems and in certain U.S. pools.

Setting tariffs for high-voltage transmission is a complex pricing issue. Several approaches to this issue are in use. In Norway, the pricing is based on transmission capacity. In the United Kingdom, prices are set on a lump-sum basis by geographic zone, similar to the principle used for setting taxi cab fares in some cities. In Argentina, the price of transmission is based on the average marginal cost plus losses. Many formulas, most of them complex, are being studied.

Other issues still need to be resolved. Contracts must be carefully written, and probably standardized to accelerate their use. As in the gas sector, “take or pay” contracts for buyers that include penalties for the sellers may become the norm. One difficult problem will be monitoring the exchange of electricity and designing a system to resolve disputes. Proper metering will be essential, and it may be necessary to set up an international arbitration or court system to handle conflicts that arise. Experience in other energy sectors, such as gas, coal, and petroleum, and in the telecommunications and international banking sectors could help provide solutions.


1 The conclusions that follow are based mainly on the issues faced by such international interconnected networks as UCPTE, NORDEL, the U.S.-Canada links, and the England-Scotland links; the operating methods of a few large national networks, such as the NEPOOL (a tight pool in the eastern U.S. interconnected system) and MAPP (Mid-Continent Area Power Pool, a loose pool in the northwestern United States), the England-Wales interconnector, and some regional networks in India; and the results of a recent study commissioned by the World Bank.

2 If prices do not converge to marginal costs under bidding arrangements, this will be a signal that competition is not taking place.

Jean-Pierre Charpentier, Senior Energy Specialist, and K. Schenk, Power Engineer, Industry and Energy Department
Cash Constraints and Credit Corsets: The Chimera of Interenterprise Credit

Timothy Condon and S. Ramachandran

The rapid buildup of interenterprise credit in many Central and Eastern European countries is often seen as a major problem that governments must fix. We argue that these arrears rise only temporarily, as the hard budget constraint on enterprises tightens, and that they will soon automatically plateau. Thus, although unpaid arrears are a problem for the creditor, they do not cause major macroeconomic disruptions unless panicky governments react inappropriately. Indeed, crafty enterprises may exaggerate the size and danger of arrears so that they will be bailed out.

Why interenterprise credits grow

Consider (with apologies to Adam Smith) an efficient pin producer selling half her production in the convertible currency market (where buyers are picky) and the rest in the domestic market to inefficient, financially shaky (state-owned) enterprises. The pins are similar but not identical, with only good pins sold in the convertible currency market and both good and bad pins in the domestic market. The firm can switch from producing one to the other with some retooling, but gearing up to sell more in the convertible currency market requires time and effort. The pin producer buys the necessary labor and steel each morning, ships the goods each afternoon, receives payment, and in turn pays suppliers and labor. The pin producer therefore has neither a cash surplus nor a deficit. To keep things simple, there is no banking system.

One afternoon an inefficient pin buyer tells the producer that he cannot pay that day but promises to pay the next day for both days’ shipments—that is, he asks the pin producer to raise the interenterprise credit outstanding from zero to one day’s production overnight. Now the pin producer is in a quandary: to keep her production lines open, she must either produce fewer

### STOCK OF INTERENTERPRISE CREDIT

<table>
<thead>
<tr>
<th>Country</th>
<th>Nominal Credit</th>
<th>Real Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungary</td>
<td>200 forints</td>
<td>100 forints</td>
</tr>
<tr>
<td>Romania</td>
<td>2,000 lei</td>
<td>1,000 lei</td>
</tr>
<tr>
<td>Poland</td>
<td>300 zlotys</td>
<td>200 zlotys</td>
</tr>
<tr>
<td>Russia</td>
<td>50 rubles</td>
<td>40 rubles</td>
</tr>
</tbody>
</table>

In each case, the nominal stock of credit rises, but when deflated by either the price level or exchange rates, it plateaus. The Romanian buildup worried legislators, who felt compelled to “solve” the “problem” by passing a law to clear the stock of interenterprise credit; but such arrears have subsequently risen again, and plateaued.

*Some distinguish between arrears and credit, arguing that only a small part of the stock of interenterprise credit is in arrears. Such distinctions are meaningless if creditors commonly roll over unpaid claims, recapitalizing the accrued interest (thereby postponing the recognition of losses), and the figures show total arrears. Even so, interenterprise credit plateaus.*
pens (producing only for the convertible currency sales) or find additional credit, perhaps from the steel supplier.

Producing fewer pins would leave some workers idle. Firing workers destroys firm-specific human capital. So even though the pin producer may doubt the buyer's ability to pay as promised, she maintains production and ships pins as before, raising interenterprise credit from its earlier level of zero. Suppose the pin buyer does not pay. As the pin producer finds alternative markets, shipments to the defaulting domestic buyer stop and the accumulation of arrears ceases. If these arrears accrue (unpaid) interest, their stock still rises, but that is just an accounting measure and does not imply that resources are misallocated. So why all the fuss? The "problems" are examined in turn.

**Charge 1: Interenterprise credit misallocates resources**

The example makes plain that the increase of interenterprise credit enabled the pin producer to keep skilled staff while she finds new markets. She weighed the costs of closing production lines and laying off workers against the likelihood of the domestic buyer's not paying as promised. Even if she did not know the extent of the pin buyer's troubles, the interenterprise credit gave the pin producer breathing space to decide what to do. But she could not continue to dither unless she in turn obtained more credit (or the pin buyer paid up). Undiminished production therefore requires a continual, real increase in the stock of interenterprise credit. Rolling over an unchanged stock of interenterprise debt, even at revalued prices, would not suffice: new credit is required each period to maintain undiminished production. With inflation, nominal credit may seem to grow precipitously, but it is real growth that matters.

The pin producer might later regret her decision, but mistakes occur in business, and those who make too many lose their business. The point is that in the example, resources are not misallocated in an ex ante sense. When banks are unresponsive, collateral laws are weak, and credit markets function poorly, these supplier credits perform a vital function. The fault is not with the credit, but with lenders who do not care to collect.

**Charge 2: Interenterprise credit frustrates monetary or credit policy**

It is sometimes claimed that a large stock of interenterprise credit frustrates "monetary policy"—that it makes it impossible for the central bank to enforce credit ceilings effectively. This claim is fallacious because governments (or central banks) have always been able to directly constrain bank credit, but never nonbank credit (whether from other enterprises or households).

As an illustration, consider a modified version of the earlier example. The pin producer has a working capital loan from a bank that is rolled over each day to pay for wages and steel. Thus, she borrows from a commercial bank each morning to pay for labor and materials and repays the loan from sales proceeds at the end of the day. If monetary authorities see the collapse of the traditional market as permanent, they may decide to halve credit growth. If commercial banks reduce credit to borrowers, the pin producer's two choices are the same as before. If the pin producer uses interenterprise credit to "get around" the tightening of bank credit ceilings, the stock of interenterprise credit may show an "alarming rise." But that could happen only if enterprises with cash surpluses continually lend (continually increase the real stock of credits) to enterprises with cash deficits.

**Charge 3: Interenterprise credit is inflationary**

A variant of the "frustrating monetary policy" charge is that interenterprise credit growth is inflationary. Underlying this claim is the assumption that the credits—especially if extended through the banking system—are a form of "money" whose growth would raise the price level.

To paraphrase Tobin, this confuses the fountain pen of enterprise managers (and their ability to persuade banks to grant credit) with the printing press of government. The proximate cause of inflation must be the government printing press—the monetary base or currency. An increase in
inside money—commercial bank loans or interenterprise credits, for example—cannot be inflationary. This is most easily seen by analogy: when General Motors issues commercial paper that other enterprises hold (interenterprise debt), inflationary worries do not arise, so why would they if the GM paper were held through banks?¹

**Charge 4: Interenterprise credit hurts good enterprises**

When bad enterprises can use interenterprise credit to avoid restructuring (closing down loss-making activities and firing workers), it is alleged that good enterprises (creditors) get hurt. But good enterprises would not extend credit unless they perceive a likely benefit or, as the earlier example showed, would extend credit only as a sensible temporary measure while they search for new markets.

A possible exception would occur if enterprises with cash surpluses were forced to lend to bad enterprises. But private owners of enterprises with cash surpluses are unlikely to be coerced by governments, and few state-owned enterprises would have such surpluses. As a group, state-owned enterprises have a cash deficit. The few cash surpluses are more likely to occur in well-run private enterprises (or in the household sector, which usually lends only through banks).

**Charge 5: Interenterprise credit is bad because it causes a domino effect**

Interenterprise credit and the resulting losses when the debts go unpaid are alleged to have a domino effect on the economy.² Applying the metaphor of falling dominoes is misleading for two reasons. First, enterprises are linked because the output of one is used by another, and any disruption in production would affect all the links in the chain irrespective of any arrears buildup. In other words, dominoes would fall even if there were no arrears. Second, the economic losses are incurred when credits are extended to maintain unnecessary production, not when (or because) accounting losses are realized. Reverting to our example, the pin producer incurred losses when producing pins for the defaulting domestic buyer, not when the unsold inventory (or the receivables from the insolvent buyer) had to be written off. That the pin producer chose to continue shipping pins to the defaulting buyer suggests that the likely losses of shutting down production lines (violation of implicit labor contracts, etc.) were greater. The government should not be second-guessing such business decisions.

There is a sense in which the domino effect could be fatal. The more sound enterprises that an unsound one can get enmeshed in its problems, the larger its political constituency and the more calls to the government for a bailout. A determined government should heed Ulysses' example when passing the sirens, but far too many believe that a large stock of debt not being serviced is a problem they must fix.

**Fatal medicine**

Although the losses from unpaid arrears are sunk, how are they to be allocated? In a market economy, the creditor, the bank, or the taxpayer (deposit insurer) bears the loss. But in transforming economies, taxpayers bear the losses regardless of which state-owned enterprise in the chain realizes them. The suggested solutions to the "problem" of interenterprise arrears are of two kinds: blanket solutions to clear the entire stock of interenterprise credit, and the case-by-case approach to provide relief selectively. Blanket solutions—a government-initiated cancellation or socialization of debt (replacing enterprise debt with government debt, as in Romania)—are dangerous because they relax the cash constraints on state-owned enterprises. Cash-rich enterprises would lend again to defaulting enterprises, expecting the government to bail them out again. The government would eventually have to service its own debt by printing money, which would lead to inflation. The case-by-case approach may seem less risky, but it too invites rent-seeking from the politically powerful enterprises. That is not a risk worth taking when government intervention is unnecessary.

**In conclusion: A chimera**

A "hard budget constraint" on enterprises is universally acknowledged to be vital, but enforcing this discipline is easier said than done. Trying to
solve the interenterprise arrears "problem" inadvertently loosens the constraint. There are generally two major sources of interenterprise credit (besides the budgeted subsidies or transfers): suppliers and banks. This Note has argued that supplier credits are a self-correcting leak and that the government should limit bank credit, which is more likely to eventually be monetized.

The self-correcting nature of supplier credits is not well recognized, and reformers worry when interenterprise credit mushrooms. Two points are worth noting here. First, if interest accrues on interenterprise credits, the balance sheets of both debtor and creditor would show interenterprise credit continually rising (even in real terms if nominal interest rates exceed inflation), but this accrual accounting would not violate the cash constraint. That the creditor's asset (or the debtor's liabilities) is likely worth far less than stated should worry accountants, not reformers. Second, only enterprises with cash surpluses could extend credit to others, and if there were state-owned surplus enterprises, they would be eminently privatizable. Large arrears to or from an enterprise do not thwart privatization. Indeed, many buyers make a deal with creditors before they bid, and a privatized creditor often shows great ingenuity in collecting seemingly uncollectible debts.

Surplus enterprises may not actually show a surplus even if they have one. Enterprise managers, having learned long ago that they lose control over surplus funds, have developed ways of squirreling away reserves in excessive inventories or worker benefits. Surpluses are best sucked away by imposing an alternative minimum tax on corporate assets and subjecting each enterprise to a binding cash constraint. Enterprises cannot, of course, pay what they do not have, and tax arrears could rapidly build up. But the problem is enterprises that could pay but do not. So, better tax administration is required. Meanwhile, even if the government did not collect what it is owed, egregiously value-subtracting industries (those whose revenues are less than input and net-of-taxes wage costs) are still bound by the constraint. In conclusion, interenterprise credit is a phenomenon that needs watching (to see how rapidly enterprises are adjusting), not a problem demanding a solution. The stock of such credit will rise, but asymptotically level off in real terms. How long such credit grows depends on how rapidly enterprises transform their operations. And how long it takes for the elevated stock to decline depends on the restructuring of enterprise claims, which may require privatization of enterprises. Even if privatization takes time, there may be no resulting harm because resource allocation is unaffected by the stock of interenterprise credit.6

References


1 The assumption here is that the payments system functions well. Otherwise, the selling enterprise may not be paid even when the buying enterprise has paid, and the central bank would allow credit to be extended to compensate for the delay. This makes the central bank's task impossibly difficult because it would have to distinguish delayed payment from nonpayment.

2 Tobin (1963) discusses why commercial-bank-created money (and, by implication, all inside money is not a source of inflation.

3 Greater commercial paper issuance could lead to a change in the price level only if associated with a change in bank intermediation, thereby altering the demand for base money through required reserves (a component of base money). Ramachandran (1986) examines the links between alternative measures of money and inflation.

4 Calvo and Frenkel (1991) emphasize this channel.

5 Transformation to a market economy requires the government to raise revenues through taxes rather than requisitioning resources as owner. Initially, excise taxes, trade tariffs, and wage taxes (for administrative ease) yield most of the revenues, but as incomes become more unequal, taxes on personal and corporate incomes are quickly introduced.

Corporate income taxes generally yield little revenue both because of evasion and because few corporations show a profit. An alternative minimum asset tax on corporations (a resounding success in Mexico, where inflation eroded the corporate tax base and evasion was a serious problem) is both easy to administer and has the merit of not increasing the tax burden on profitable and honest firms. In transforming economies, such a tax has the added merit of tightening the cash constraint on genuinely unprofitable firms and thus prompting them to restructure more quickly.


Timothy Condon, Senior Economist, Resident Mission, Jakarta, Indonesia, and S. Ramachandran, Senior Economist, Private Sector Development Department. Bita Hadjimichael analyzed the data.
Bankruptcy’s Role in Enterprise Restructuring: A Hammer to Turn a Screw?

S. Ramachandran

State-owned enterprise restructuring in the transforming economies of Eastern Europe and the former Soviet Union has been slower than many had hoped. Some have blamed the slow pace on the absence or inadequacy of bankruptcy laws and procedures—and have advocated introducing bankruptcy law modeled on the best laws in Europe and the United States. And when that fails to accelerate enterprise restructuring, they call for more judges and training or for mandatory out-of-court settlements. These prescriptions are contradictory and may be based on faulty diagnosis.

Bankruptcy laws and procedures are not needed for the immediate problems in transforming economies: separating good firms from bad (for which cash or “hard budget” constraints suffice), liquidating value-subtracting firms, and financing potential value-adding investments. Indeed, the problem for which bankruptcy law is most needed—preserving going concern values when there are multiple claimants—may be several years away for most transforming economies. Furthermore, resource allocation is not materially affected by the choice of bankruptcy laws and procedures as long as the free-rider problem associated with multiple claimants in the same class is handled effectively (for example, through cram-down rules). While courts must approve agreements in bankruptcy cases if the agreements are to be binding, such “rubber stamping,” done correctly, should not delay enterprise restructuring. A large backlog of bankruptcy cases is less likely to mean that bankruptcy courts or procedures are ineffective than that disputing parties have filed petitions to preserve their claims (or their position in the claimant queue) or as a negotiating tactic—or that claimants (usually the state as creditor or tax collector) lack the incentive to conclude them. In this last case, privatization of the claims may speed the process more effectively than training or short-cutting legal procedures.

Bankruptcy law

The term bankruptcy includes financial reorganization and liquidation. Financial reorganization simply rearranges the claims on the cash flow (usually converting part of the debt into equity and thereby reducing interest payments) without altering the firm’s operations. Financial reorganization recognizes that the firm’s operations are sound even though its financial structure is not. Liquidation, however, ends the firm’s operation, dissolves the nexus of implicit contracts, and honors the explicit ones to the extent possible. The tangible assets are sold to pay the claimants, and, although the assets are redeployed, the going concern value is lost.

Neither liquidation nor financial reorganization necessarily requires bankruptcy laws. When debts or other obligations cannot be honored, there is a breach of contract, and claimants can take their disputes to court. But generally they prefer instead to negotiate. When creditors perceive the problem as one of cash flow, not solvency (that is, when tangible plus intangible assets exceed claims), they often agree to reschedule debts and stretch out payments—usually without involving courts. It is in the creditors’ collective interest to avoid publicity. A functioning firm is usually worth more than its tangible assets—and the difference is the going concern value. But this value could erode if customers flee from a troubled firm, suppliers refuse to give normal trade credit, and workers migrate. So, claimants are unlikely to want to publicize the firm’s problems, even through court filings, while negotiations to reschedule unpaid debts are under way.
Creditor-debtor negotiations and the redrawing of contracts usually do not require special (bankruptcy) laws or even court involvement. The exception occurs when there are multiple claimants, which can give rise to two types of problems. First, the pecking order of claimants may not be specified in the contracts, or by custom, company law, or tax laws. Bankruptcy law can order the claims. Second, and perhaps more important, a claimant could withhold consent to an agreement that is in the collective interest in an effort to garner a disproportionate benefit. Such holdouts are within claimants’ contractual rights and, if permitted, would prevent a negotiated agreement. Eliminating such free-riding requires a law that supersedes contract law under specified circumstances—bankruptcy law. Because applying bankruptcy law means denying some legal claims, courts must scrutinize the terms of an agreement (for compliance with other laws and perhaps basic fairness) before it is “crammed down” the throats of free-riders. (So a “mandatory out-of-court settlement” is an oxymoron.)

Bankruptcy laws are thus necessary only if a firm has (1) going concern value (when the firm must not be liquidated) and (2) multiple claimants within the relevant class (those who would be partially paid under liquidation), creating a free-rider problem. Therefore, early in an economy’s transformation (before enterprises and claimants are partially or fully privatized), bankruptcy laws are not important. Some argue that such laws help resolve conflicting claims of different arms of the same government (ministries as owners versus state-owned banks as creditors versus the claims of tax collectors), citing the example of Poland. But Poland’s experience shows the importance of bankruptcy law but of setting credible deadlines for bureaucrats.

**Bankruptcy law affects tactics—not outcomes**

If savvy negotiators see where their interests lie, the choice among bankruptcy laws matters less than the mushrooming literature comparing their features suggests. In each system, the courts usually get involved only when petitioned, but once involved, the judge plays a role that varies from one country to another. Even when courts are not actually petitioned before an agreement, their presence is important, and the perceived predictability (not fairness) of rulings determines the pattern and pace of negotiations. Depending on the likely ruling, each side would petition a court if, when, and where it believes that it has a negotiating advantage. Thus, the differences among bankruptcy laws matter mainly for negotiating tactics, not outcomes (see box for further discussion). Sometimes court filings are obligatory (in Hungary, for example, a 1992 law made managers criminally liable if defaulting firms did not file for bankruptcy). Thus, a large backlog of bankruptcy cases may not mean that the relevant law is faulty or that the courts are slow. So, mandatory out-of-court settlement procedures (known by a variety of names, from “workout units” to “accelerated bankruptcy”) may be dangerously illegal and ultimately no faster because losers will appeal to courts under other laws.

“Don’t fix what ain’t broke!”

Whether a bankruptcy system needs fixing depends on the answers to three important questions: Are actual or potential value-adding firms
getting the funds they need for sound investments? Are confirmed value-subtracting firms being liquidated? And are the costs of delays in financially reorganizing sound but overly indebted firms fairly low? If the answer to all these questions is yes, there is no major problem needing to be fixed.

Even defaulting firms can get additional finance (beyond rollovers) for sound projects if creditors see their interests clearly. A self-interested creditor would distinguish between sunk costs and marginal decisions and extend further credit if it would be sensibly spent because it would increase the likelihood of the creditor's being repaid. Free-riding could prevent this when there are multiple claimants, but mechanistic rules (internal rules and banking supervisors commonly prescribe “no lending to defaulters”) could also prevent this sensible behavior even when there is only a single creditor. Bankruptcy law generally allows new creditors to step to the head of the claimant queue, but most firms in transforming economies still borrow from a single bank. If new credits are not forthcoming, the reason could be that aggregate savings are insufficient to finance the budget deficits and new investments or simply that the investments are not deemed worthwhile.

Bankruptcy laws are not needed to close value-subtracting firms—a decision by the owner suffices (although in the United States, many firms are liquidated under chapter 7 of the bankruptcy code). And the government could be guided by a cash deficit or the accumulation of arrears (both tax arrears and arrears to the creditor bank, which is generally also state-owned) to judge which state-owned firms must be closed.

Delays in financial reorganization of sound firms may not be overly costly. Although firms’ going concern value normally erodes during bankruptcy, if all firms in the economy are in the same boat, customers and suppliers have little to gain from switching firms. So, the going concern value may not erode, thus reducing the incentives to resolve cases quickly but, at the same time, lowering the economic costs of backlog.

This situation would change as new, sound firms are set up and old ones reorganized.

Although a firm may continue to operate “normally” during bankruptcy, the indirect costs could be significant because managers are distracted from the serious task of running the firm by the

WHO HAS THE BEST LAW OF ALL?

Critics unfairly characterize the U.S. bankruptcy law as too pro-debtor because it allows managers (appointed by equity holders and so thought to be beholden to them) to continue to run the firm while negotiations are under way (unlike in the United Kingdom, where someone else is immediately put in charge) and gives them exclusive right to propose a reorganization plan. Although owners (the board of directors or their managers) commonly file for “protection from their creditors” (under chapter 11 of the U.S. bankruptcy code), semantics aside, this is not evidence of a pro-debtor bias because preserving the going concern value also benefits other claimants. Chapter 11 allows new creditors to step to the head of the claimant queue, thereby permitting suppliers (also creditors until they are paid) to ship goods and allowing the firm to operate. This preserves the going concern value over which the old creditors have a claim. Whether it is better to entrust the operation of the firm to the existing managers—who may know the firm best—or to appoint a new overseer matters little if only the timing of the bankruptcy filing and the pattern of negotiations are affected. Other purported evidence that the U.S. system is more prone to liquidations is also misleading: while some 80 percent of U.S. firms filing for bankruptcy are liquidated, the characteristics of firms filing differ systematically across countries (reflecting diverse negotiating tactics) and such comparisons are meaningless. The U.S. system is faulted for other reasons, too, but all such flaws, whether real or perceived, are mitigated if the bankruptcy process is swift—and the U.S. system is swift except in complex cases in which the informed consent of numerous claimants must be obtained. If European bankruptcy is faster, it may be because the primary claimants are often a few sophisticated banks rather than atomistic bondholders—not because of better bankruptcy laws or procedures. It is well to bear such features in mind when recommending laws to other countries.
The real problem is not necessarily through bankruptcy law to restore the process. For example, when there are multiple claimants (or both) are state-owned, nothing may subsequently challenged. So, if either debtors or creditors, those last in line may receive nothing if the proceeds are insufficient ("under the water," in the parlance). So, even if they knew the firm was insolvent, these claimants would do nothing to force the issue—not would those who are sure to be paid. The trick in an effective bankruptcy system is to have those facing the greatest risk of being "out of the money" (such as that class of claimants who may get paid, albeit partially if they are "partially under the water") keep a finger on the bankruptcy trigger. These parties should know the firm’s business, be adept at negotiations, and not be plagued by the free-rider problem. Such an ideal combination is rare, but laws often reorder the pecking order of claims to ensure that it is possible. Any change in the trigger finger must be tailored to the circumstances of a country. This Note can only convey the flavor of what could be done.

Cutting the Gordian knot

Negotiations lie at the heart of bankruptcy, and for these to get under way, the parties must have both expertise and the incentive to act. It is all too easy to exaggerate the lack of expertise (especially when the parties have never done a bankruptcy) and advocate training programs. But offering assistance—besides giving the comforting illusion of action and being costly—could further delay resolution as parties stop negotiating and await the arrival of the miracle arbitrator or procedures.

The real problem may lie with incentives. Negotiations require judgments, but bureaucrats prefer mechanical rules, which are less likely to be subsequently challenged. So, if either debtors or claimants (or both) are state-owned, nothing may happen until the firms and state-owned creditor banks are privatized. Even if privatized banks cannot drive the negotiations because large tax arrears are ahead in the queue of claims, the hierarchy of claims could be amended (not necessarily through bankruptcy law) to restore the incentives of claimants who could hasten the process. For example, when there are multiple classes of claimants (tax collectors, unpaid workers, unpaid suppliers, secured creditors, bondholders, bank creditors), those last in line may receive nothing if the proceeds are insufficient ("under the water," in the parlance). So, even if they knew the firm was insolvent, these claimants would do nothing to force the issue—not would those who are sure to be paid. The trick in an effective bankruptcy system is to have those facing the greatest risk of being “out of the money” (such as that class of claimants who may get paid, albeit partially if they are “partially under the water”) keep a finger on the bankruptcy trigger. These parties should know the firm’s business, be adept at negotiations, and not be plagued by the free-rider problem. Such an ideal combination is rare, but laws often reorder the pecking order of claims to ensure that it is possible. Any change in the trigger finger must be tailored to the circumstances of a country. This Note can only convey the flavor of what could be done.

Illustration by Ruth Sofair Keder.

1 The terms are not standard even within a country, adding to the confusion. Liquidation is sometimes used (instead of dissolution) to describe the demise of the legal entity rather than the operations. Thus, the sale of a firm’s operations, possibly to creditors, and the dissolution of the old corporate shell left behind (which does not destroy the going concern value) is sometimes called liquidation.

2 The French term faillite is analogous to the umbrella term bankruptcy, but if fraud is involved, the term is банкротство (from банкrotство, the medieval practice of publicly breaking a defaulting moneylender’s bench in the Банк, the Venetian credit market). The French liquidation describes the same process as the English equivalent, but if the process is court-supervised, it is liquidation judiciaire. Court-supervised financial reorganization is рефоррm in France and сoncordat in Belgium.

3 Going concern value stems from the nexus of implicit contracts with suppliers, customers, workers, and the like. It is analogous to, but not synonymous with, goodwill (an accounting asset when a buyer pays more than book value for a firm) and the “Tobin” (an economist’s construct for a firm’s equity selling for more than the market value of the underlying assets). While there is a presumption that value-subtracting firms with persistent cash deficits or operating losses lack going concern value, that is not always the case because some parts of the operations may have such value.

4 Countries differ greatly in how they package various legal provisions. Asset disposition is governed by bankruptcy laws in one country, and by the civil code in another. This Note does not address the merits of alternative clusters.

5 Poland already had a bankruptcy law when the law on the Financial Restructuring of Enterprises and Banks became effective in March 1994. This law forced state-owned creditor banks to either recontract the bad loans or force the debtor enterprises into liquidation by March 1994. The law imposed a credible penalty: banks that did not have the bad loans in the market (and the likely price became the creditors’ reservation price during negotiations). The law was meant mainly to prod bank bureaucrats, but might not have worked if bank privatization had not already begun.

S. Ramachandran, Senior Economist, Private Sector Development Department
The Power of Collateral

How problems in securing transactions limit private credit for movable property

Heywood Fleistig

The first question any private loan officer is taught to ask is, “How do I get my money back?” Borrowers have offered two broad answers to that question: giving an unsecured promise to pay, and offering collateral that can be seized and sold by the lender if the borrower fails to pay. This Note discusses the second type of borrowing. Drawing on several World Bank–supported projects, it sets out how legal and regulatory constraints on using movable property as collateral limit access to credit in many client countries. The problem is potentially severe. In industrial countries, movable property—livestock, machines, inventory, equipment, standing crops—can represent as much as a third of the capital stock and half of investment. Where borrowers cannot use this property as collateral for loans, they must pay higher unsecured interest rates. Consequently, they hold less capital per worker and produce less output per person. In Bolivia, the loss in GDP from an inadequate framework for secured transactions is estimated at between 5 percent and 10 percent.

Collateral and Lending

Why does a lender believe a borrower will pay? One way for the borrower to prove sincerity is to offer collateral: to place property at risk of being seized if the borrower fails to pay. The power of collateral to increase the amount that a creditor is willing to offer is apparent in most lending institutions. For example, the Bank–Fund Federal Credit Union offers loans of 6 months’ salary with only a signature, 12 months’ salary against a car or other movable property, and 4 years’ salary against a house or other real estate. In these examples, the borrower, loan officer, loan committee, and lending institution are the same; only the collateral differs. In addition, the power of collateral to reduce risk overrides the increase in the term of the loan—the 6-month unsecured loan will have a higher rate than the 4-year car loan; the car loan will have a higher interest rate than the 15- or 30-year mortgage interest rate. These practices are not peculiar to the Credit Union. Private lenders in Bolivia, Bulgaria, or Boston behave the same way.

Barriers to using movable property as collateral

Despite the importance of collateral in enabling private lenders to offer larger loans with less risk and therefore at lower interest rates, legal and regulatory barriers make movable property nearly useless as collateral in many Bank client countries. The barriers arise in the following way. When a lender offers a loan against collateral offered by the borrower, the lender is said to take a security interest in the collateral. Three legal and regulatory issues are of key economic importance in limiting security interests in movable property:
The creation of security interests
The perfection of security interests
The enforcement of security interests.

These are abstract notions that are easiest to understand with an example. Consider cattle in Uruguay and Kansas. These places have similar topographies, well-educated populations, and advanced agricultural systems that place them among the world's most competitive agricultural exporters. In Uruguay, no private bank would accept cattle as collateral for a loan. By contrast, in Kansas, cattle are considered the best collateral for a loan. This is the practice not only of private banks, but also of bank examiners. In Kansas, good banks have "cattle paper," and risky banks have "exposure to real estate." But in Uruguay, where banks also are closely regulated, the bank examiners prefer that banks take real estate as collateral for secured loans. How can such a difference exist?

Creating security interests

First, it is difficult to create a security interest in cattle in Uruguay. Suppose a bank lends against 100 cattle worth $200,000. Uruguayan law calls for enumeration of the property—an easy "pledge" against cattle might name the cattle: Bessie, Elmer, . . . —or identify them by tattoo. But this specific identification makes monitoring the loan expensive for the bank because the loan officer must ensure that his bank's specified 100 cattle are in the farmer's field—a different herd of 100 cattle would not secure the loan. The bank might try to get around this by writing a general pledge contract against, say, 100 calves—but in a year the calves would become cows, and the legal security of the contract would be questionable. By contrast, in the United States or Canada a binding agreement can be written secured by a floating security interest in "$200,000 in cattle."

Moreover, in Uruguay, the bank would have to worry that the farmer would sell the cattle without notifying the bank. The U.S. or Canadian bank, however, would automatically get a continuing security interest in the proceeds of the sale and could automatically attach them—whether they had been put into a bank account or a tractor.

Perfecting security interests

Second, it is difficult to perfect a security interest in Uruguay. To have confidence that collateral has value, the lender must be sure that no prior superior claims to the collateral exist. But how can the lender even be sure that the collateral belongs to the person possessing it? Suppose the cattle had already secured a loan or had been purchased on credit? In Uruguay, it is extremely difficult to search the records for prior claims against collateral. The lender must know the date of a prior agreement and cannot search by the name of the borrower or the description of the pledged asset. It is even more difficult in Bolivia, where the pledges are filed chronologically and the entire registry must be searched to discover a prior pledge. In Bulgaria, no separate registry for such security interests exists, and a search for prior claims would have to extend to each notarial registry in the country. In the United States and Canada, however, registries are public and easily searched, and it is not uncommon for all commercial agents in an area to know the size and sequence of the security interests in a farmer's livestock.

Enforcing security interests

Finally, it is difficult to repossess and sell the pledged collateral in Uruguay. Repossessing and selling collateral requires six months to two years. Unlike in other systems, private parties cannot contract to repossess and sell collateral without
a lengthy legal process. Neither can nonjudicial government officials. Nor are parties permitted to attach other property of the borrower, such as the proceeds of the sale of collateral. In Kansas, by contrast, cattle offered as collateral may be repossessed and sold in as little as one to five days. Loans represent a high percentage of the collateral’s market value, so interest rates charged range between the prime rate and the home mortgage rates.

What to do?

First, consider some attempts to deal with the problem that have major shortcomings:

Make the loans anyway. Since no private bank will do this on its own, some kind of loan guarantee system will be required. Alternatively, a state-owned institution could make these loans. However, two problems arise with these options. First, the guarantee fund or the institution that makes these loans is going to have the same trouble collecting the loans as the private bank. Second, because borrowers will know that these loans are hard to collect, there is a greater chance the loans will not be put to good use. The result is a money-losing government program without much effect on productivity and therefore a program that is subject to increasing political attack as the credit line goes into default and potential borrowers wait longer and longer for a chance to get ever-dwindling numbers of cheap loans.

Ignore the law. Some lenders simply seize and sell the collateral for a loan despite the absence of any legal sanction for these actions. Some leasing operations disguise the transaction, pretending that a seizure is not a repossession. Some nongovernmental organization lenders take the debtor’s property with the passive consent or active participation of the police. In several countries, men with guns are dispatched to repossess and sell large and valuable pieces of machinery sold on credit.

Abuse the law. In some countries, lenders use a postdated check to convert nonpayment into a criminal offense. In Bolivia, for example, a lender will demand a postdated check in the amount of the loan and the interest. On the date that the loan is due, the lender requests payment. If the borrower cannot pay, the lender deposits the check and gets it back from the bank marked “check without funds.” The lender brings the marked check to the police, who arrest the borrower for writing a check without funds, a criminal act in Bolivia. The borrower spends about a week in the downtown jail, trying to raise the money through friends and relatives. If the borrower fails, conviction is virtually certain. The sentence for writing bad checks now is about four years. But before a legal reform in 1994, the judge also would set a civil penalty equal to the value of the bad check—and borrowers would stay in prison until they paid their debts. In La Paz, half the prison inmates are serving sentences for nondrug offenses; of that half, half are there for postdated checks. All of those interviewed in the course of the World Bank study were businesspeople. Many of them are single women without family connections to raise funds to cover the bad check. And many have their children living in the jail with them.

What’s wrong with these solutions? To paraphrase, they are not only wrong, they are inadvisable. Formal sector lenders cannot afford to use illegal collection techniques because the risk of civil and criminal damages is too great. Consequently, the vast resources of the formal sector are not tapped for credit. Movable property remains the domain of expensive informal
sector methods. Why expensive? Expensive to individuals, because the subjective cost to a businessman of going to jail for a business miscalculation will tend to reserve these loans for only the highest-return operations. And expensive to society, because incarcerating risk-taking business people is a dubious development strategy.

**Better solutions**

In the Bank’s operations in Argentina, Bolivia, Bulgaria, and Uruguay, the following possible solutions have emerged for government consideration:

**Creation of security interests:** change the law to permit the creation of a wide variety of security interests in a wide variety of property.

**Perfection of security interests:** make public the records of the registries, restructure the public registries, change their incentives by introducing competition among public registries or permitting private registries to compete with public registries.

**Enforcement of security interests:** change the law to permit private parties to contract for non-judicial enforcement of debt contracts.

This Note draws on World Bank economic and sector work and lending operations in Argentina, Bolivia, Bulgaria, and Uruguay, undertaken under the broad supervision of Zeljko Bogetic, Manuel Cortes, Vicente Pires-Cibils, Jonathan Parker, Lt. Kyle Peters, Stephen Schorberger, and William Shaw. The work was carried out by a team that included Willem Buiter, Ronald C.C. Cuming, Nuria de la Peña, Ulrich Drohne, Alejandro Guerro, Lance Girton, Boris Kozlochyk, Graciela Rodriguez-Ferrand, Stephen Salant, Harry Sigman, and J.A. Spanogle, as well as many lawyers, economists, and financial specialists in the borrowing member countries. The underlying papers are available from the author.

*Heywood Fleisig, Economic Adviser, Private Sector Development Department*
The Right to Borrow

Legal and regulatory barriers that limit access to credit by small farms and businesses

Heywood Fleists

When World Bank staff design credit programs in developing countries, they often find that lenders in the formal banking sector show little interest in small farms and businesses. Although their reluctance to lend is especially great for very small operators, such as artisans, street vendors, and subsistence farmers, surprisingly, it extends even to more substantial operations with several employees. Many explanations for this behavior have been posited, including banks' innate conservatism, the high unit costs of small loans, class differences between bank officers and small borrowers, excessively conservative bank regulation, and excessively loose bank regulation that permits bank lending to related parties, crowding out the smaller, presumably unrelated, borrowers. But another important explanation for this lending behavior lies in the laws, regulations, and institutions of these countries. Though these may often spring from efforts to protect unwary borrowers or the poor, they can instead force borrowers out of the formal banking system and into the hands of the very lenders from whom they were supposed to be protected. This Note, based on the results of Bank analysis, shows how such legal, regulatory, and institutional barriers limit access to credit.

Barriers arising from protecting borrowers

Many countries have specific laws and regulations that are intended to protect borrowers:

Homestead and exempt property provisions

All countries limit the ability of creditors to take property from debtors unable to service their debts. So, for example, no country whose lending laws were analyzed permits a creditor to seize a debtor's shoes or bed. Some countries also set a minimum amount of real estate that is exempt from seizure—the "homestead." This protection has a cost: if the land cannot be taken from the debtor, banks will not accept it as collateral. In a well-supervised banking system, examiners will regard borrowers offering such collateral as unsecured. For such unsecured loans, bank regulations require more capital or provisioning by the bank. That raises the cost of making these loans, and, because they usually are also riskier and smaller, banks find them unprofitable.

Other legal provisions limit the amount or type of movable property that a creditor can take from a debtor—exempt property. For example, the law may contain provisions limiting the creditor's ability to take tools of trade from the debtor. Unless carefully drafted, such legal provisions can make lenders unwilling to make productive loans to small borrowers. Because the lender knows that the equipment to be purchased—a
new sewing machine or wood lathe, for example—will be pooled with the borrower’s exempt property, the lender is aware that it cannot be repossessed and sold and will not accept it as collateral for a loan.

**Usury laws**

Many countries limit the interest rate charged on loans to protect unwary borrowers from unscrupulous lenders. In practice, however, high interest rates are often justifiable. Many of the costs associated with a loan are fixed, and these fixed costs represent a higher percentage of a small loan than of a larger loan. Since operators of small farms and businesses are more likely to want a small loan than are operators of large farms and businesses, private lenders charge higher interest rates to small operators than to larger ones. The lender would ordinarily hope to recover these larger costs with some combination of higher interest rates and an up-front loan processing charge. In addition, the costs of monitoring small, unsecured loans are higher than those of monitoring larger, secured loans. A lender with a small, unsecured loan must regularly inspect the borrower’s business premises to be confident that the business is still solid, while secured lenders know that they have the right to take property with some value even if the business is not solid. Finally, the risk associated with small loans that are unsecured can be higher than the risk associated with large loans that are secured. To compensate for the higher costs and risks of small, unsecured loans, private lenders could be expected to charge higher interest rates.

Private lenders do in fact charge high rates on unsecured loans. In Bolivia, for example, where the rate of inflation is less than 10 percent, interest rates amount to as much as 48 percent a year on small, unsecured loans made by nonprofit lenders with access to funds at zero interest. Rates run 70 percent a year on loans by unsubsidized public interest lenders attempting to cover their costs of operation. These rates may seem high and perhaps prompted the 3 percent per month usury limit in Bolivian law. But private borrowers operating small farms and businesses can face even higher implicit interest rates in the course of doing business. A street vendor in La Paz reported being charged 300 bolivianos in cash for a case of crackers or 310 bolivianos if she paid three days in the future—an implicit interest rate of more than 5,000 percent a year on the cost of carrying this part of her inventory.

For such a borrower, obtaining a loan at 4 percent interest per month from a nonprofit lender would result in annual interest savings equivalent to a substantial share of her income. Clearly, a usury law that limits loans to low interest rates just forces poor borrowers into other markets where usury laws are not enforced—thereby increasing the interest charges and making the poor worse off.

**Solutions**

Change the law to limit the homestead provision to a size of holding that balances protection against seizure with the economic cost of loss of access to loans and the landowner’s freedom to contract; limit exempt property protection to clearly defined sets of goods and amounts of money and clearly distinguish between the existing stock of goods and goods newly purchased on credit; replace usury laws with laws requiring the disclosure of true annual interest rates and requiring that loan contracts set out their general implications in clear language.

**Barriers that effectively discriminate against the poor**

Many laws and regulations not specifically directed at the poor nevertheless have an important impact on them—and can sometimes be discriminatory in effect.

**Limits on using equipment and inventory as collateral**

Barriers to using movable property as collateral limit access to credit. This especially penalizes
operators of the smallest businesses, who have only human capital—their heads, their hands. Typically, they also need to acquire movable capital—tools, transport equipment, merchandise inventories—to perform their work. To purchase this equipment on credit, small operators must be able to make a down payment and have the equipment itself serve as collateral, especially if they have no real estate to offer as collateral. Loans secured only by a personal guarantee often are too small and too expensive to finance productive equipment such as farm machinery, a taxi or microbus, or the inventory of a small store.1

Limits on using accounts receivable and loans as collateral

Operators of small farms and businesses get credit from many sources without offering collateral. Equipment dealers may sell them parts and small machines on credit. Dealers in fertilizer, herbicide, and seed may extend credit over the growing season. And wholesalers often extend short-term credit to retailers. These dealers can become essential sources of credit for unsecured borrowers because they get to know their customers well in the course of ordinary, noncredit transactions. Because getting good information about the behavior of these small borrowers is one of the largest expenses in determining their creditworthiness, nonbank creditors often have a large cost advantage over banks in supplying credit to them.

But nonbank businesses face the same difficulties as their customers do in getting access to credit. They typically are unable to use their holdings of movable property—their inventory, their stocks of new and used machines—to secure loans from banks. Limits on the dealer’s ability to get credit put limits on the dealer’s ability to give credit, breaking the chain of credit that could link the small borrower to the banks.

As important in breaking the chain of credit is the difficulty nonbank lenders often have in using the credit they extend to their customers as collateral for loans from banks, through either accounts receivable or chattel paper financing. While formal sector banks may not be interested in making loans of less than $100 to operators of small businesses and farms, they could fund the refinancing of the businesses that make these loans quite lucrative. In the United States and Canada, for example, far smaller loans represented by credit card receipts are bundled together to secure commercial paper flotations that can amount to hundreds of thousands of dollars. When dealers and nonbank lenders can refinance the credit they offer, the supply of such credit expands and its cost falls. But expanding such financing requires a secured transactions law that permits easy, inexpensive public registration of security interests in accounts receivable or in chattel paper, and inexpensive transfer of these accounts if the borrower (the dealer or nonbank lender) defaults. Otherwise, these dealers and nonbank lenders will find it impossible to raise enough money to fund the loans they otherwise could profitably make.

Other legal and regulatory requirements

Other legal and regulatory requirements can discriminate against the poor by limiting their access to credit. Laws intended to protect minors by limiting their ability to sign binding contracts will force the heads of households of many poor families to turn to informal sector lenders. And creditors willing to make such contracts will be hampered in using them to get credit from the legal sector.

A requirement that loan contracts must be in writing and signed by the borrower can create a hardship for poor citizens who are illiterate, who cannot read and write in the language used by the banks, or who are blind.

Solutions

Reform the framework for secured transactions, especially with respect to the cost of transferring the accounts of the account debtor, the registration of security interests in those accounts,
and the collection of the accounts of the account debtor if the borrower cannot pay the loan secured by those accounts; carefully assess the costs and benefits and the public policy implications of the age of majority; change the law to conform to that cost and benefit calculation; consider alternative forms of contracting, including using fingerprints as signatures and witnesses to cosign as evidence of assent.

Institutional issues

Institutions give force to the law. Sometimes those institutions operate in ways that frustrate the law's intent.

Registries

Many of the lending instruments discussed here require public registration. Public registration is crucial because each lender needs to know whether any prior security interest in the collateral exists—for example, another loan that must be paid first from the proceeds of the sale of the collateral. A $100,000 house might appear to be adequate collateral for a $50,000 loan. But if the house already had a mortgage of $80,000 against it, which would have to be paid before the $50,000 loan, it would not be adequate collateral. A registry system that is open to the public and inexpensive to search makes it easier to determine the priority of security interests and thus the riskiness of a loan. Yet in many countries, registries can be searched only with official permission that is difficult to obtain, and sometimes registries are organized in ways that make a search technically difficult.

Credit information

Operators of small farms or businesses may not own land or movable equipment, but they could still establish a reputation for honesty and timely payment of debts. Their access to credit will expand if they can make their reputations known beyond the small circle of dealers and merchants with whom they deal. A credit reporting system that pools information about borrowers permits the poor to "capitalize" on their reputations by persuading other lenders to lend to them without security. It also reduces the risk in unsecured lending by making credible the threat that a creditor could spoil the reputation of an unsecured borrower who did not pay a debt.

Solutions

Improve state-run registries by restructuring them, by decentralizing them and introducing competition, or by privatizing them; regulate public access to credit bureaus so that information collected can be distributed to interested parties; design a legal framework to allow people to challenge inaccuracies in information held by the credit bureau.

Conclusion

Many problems in access to credit arise from defects in the legal, regulatory, and institutional framework for extending credit. World Bank projects aimed at building institutions and extending credit lines to enhance access to credit for operators of small farms and businesses will have greater impact when these larger issues are also addressed.

This Note draws on World Bank projects in Bolivia and Bangladesh undertaken under the broad supervision of Vicente Fretes-Cihils, Jonathan Parker, Susannah Knaudt, and Madhur Gauram. The findings represent the work of a team that included Ronald C C. Cuming, Nuria de la Peña, Ulrich Drohne, Alejandro Garro, Graciela Rodriguez-Ferrand, Stephen Salant, Harry Sigman, and John A. Spanogle. Papers describing the projects in greater detail are available from the author. 1

1 In "The Power of Collateral" (pages 33-56), the author details the legal and regulatory roots of the inability to use movable property as collateral.

Heywood Fleisig, Economic Adviser, Private Sector Development Department
Time is money

As economies develop and economic activity becomes increasingly specialized and decentralized, they require an acceptable medium of exchange for discharging obligations efficiently and securely. There are costs if a payment system is deficient in some way. Weaknesses in a payment system can result in inefficient use of the available money stock, inequitable risk sharing between trading parties, lack of confidence in the banking system, and inadequate support for the development of other essential financial services. Moreover, because of the opportunity cost of money, lags between the sale of goods and services and the receipt of funds are costly. In a very real sense, time is money. To minimize these lags, different instruments and systems have been developed to facilitate the movement of money between the participants in a transaction, whenever and wherever required, both within a country and internationally.

Payment instruments and services

Cash is convenient and easy to use for small, point-of-sale transactions in which buyer and seller meet face to face. But most large transactions require some form of payment instrument, such as a paper check or an electronic payment order, to move funds. These noncash payments also require the use of one or more banks, as they are accomplished by transferring deposit money between the payer’s bank and the payee’s bank.

Paper-based payments, such as checks or payment orders, are processed manually or, if they contain machine-readable characters, by high-speed computer processing. Electronic payments are instructions passed between banks without paper processing or shipment. Electronic payments are not always cost-effective for low-value payments that are not time-sensitive, particularly in emerging market economies with limited access to technology. Card-based payments, relying on automated teller machine (ATM), credit, and debit cards, for example, are widely used for consumer payments at the point of sale.

Many different payment instruments can be created to serve different user needs. Each payment instrument will have a unique set of standards and processing rules. These rules are determined by several factors, including the payment media (paper, plastic card, or electronic), the processing method (on-line or batched), and the settlement requirements (immediate or provisional, net or gross). For example, payments requiring immediate transfer of funds are made using electronic credit instruments that are processed on a transaction-by-transaction (gross settlement) basis by specially designed, secure on-line computer systems to provide immediate finality of payment. Less time-critical needs may be satisfied by debit or credit instruments that are processed in batches in paper or electronic form to minimize costs.

To meet market demands, four payment services may be justified: local clearinghouse arrangements to process local interbank debit and credit payments, a capability to process non-local inter- and intrabank debit and credit payments, a separate capability to process high-value and other time-sensitive debit and credit payments, and a capability to process international payments in a variety of currencies.
Payment systems

Payment systems comprise the rules, standards, instruments, institutions, and technical means for exchanging financial value between two parties. While payment systems must always be designed to satisfy the unique requirements of a particular country, experience has shown that there are a number of common factors that significantly influence the success of these systems, including speed of payment, certainty and finality of payment, system reliability, safety and security, convenience, and costs. The challenge is to strike the right balance across these factors, depending on user needs.

Speed. Each payment need not be transferred instantaneously between payer and payee. Although modern technology would permit such rapid transfer, the cost of moving all payments in this way would be prohibitive. Even in industrial countries, only large, critical payments are made in real time. But in many developing countries, the problem is that payments may take as long as 30 days. These delays create uncertainty about the eventual completion of the transfer, introduce significant risk of loss of value in highly inflationary economies, and limit the beneficiaries' ability to reinvest the funds. Users must be confident that a payment that has been initiated will be completed to the right party for the correct amount and within a prescribed time. If users are not confident about the certainty of final payment, they will continue to use and demand cash for payments.

Certainty. A critical requirement in any payment system concerns certainty of payment—that is, the point at which funds are irrevocably available for use, or settlement finality. Payments can carry immediate finality, so that the funds are immediately and irrevocably available for use. Or the funds can be available on a provisional basis until some later time or date. Provisional settlement generally is used with batch processing or debit payments to allow time to confirm funding. Immediate finality is most often used with credit payments, which allow the funding to be validated before the transaction is processed. Immediate finality presents less credit
risk to the payer and payee, but more risk to banks. Settlement finality is guaranteed by the system operator and system participants in accordance with previously agreed rules. But despite these rules, the speed at which transactions take place can result in significant potential risk. Notwithstanding the risk, immediate finality is essential for high-value payment systems that must be able to transfer (and retransfer) funds rapidly.

Reliability. A payment system must be reliable if it is to maintain user confidence. Although no system will always operate faultlessly, all systems must have adequate contingency provisions and controls, and adequate backup capabilities in case one or more major processing stations fail. These elements are critical in emerging market economies where the reliability of basic infrastructure (electricity, telecommunications, vendor support, technical maintenance staff, transport for workers and physical documents) is not guaranteed.

Safety and security. The safety and security of payments also are important. Attention must be given to fraud control, credit risk control, laws and rules to resolve disputes promptly and fairly, adequate arrangements to protect against unauthorized access or tampering with payment system data, and mechanisms to minimize the exposure between participants and to ensure confidentiality.

Framework for a modernization project

Although a country can learn valuable lessons from the experience of other countries, each must devise its own payment system. Simply importing another country's system without adjusting for the target country's geography, infrastructure, banking and legal structures, business practices, culture, and needs could lead to a suboptimal system. The first step in developing a payment system is an initial stocktaking to assess the strengths and weaknesses of the starting position (table 1). This stocktaking should help clarify and quantify the sought-after improvements. And it should identify the needs of consumers, businesses, and the financial sector for improved payment services and the way in which these needs are being met or could be met in the short and longer term. Typical objectives for well-defined payment system projects might include the following:

- Strengthening the central bank's macroeconomic management capacity.
- Reducing banks' float, speeding up the circulation of funds, and increasing the efficiency of funds transmission.
- Improving convenience and service for users.
- Achieving high levels of reliability, particularly with regard to the integrity and security of data, to meet the needs of a growing economy.
- Ensuring an ability to expand in a flexible and modular way to accommodate future changes in volume.
### TABLE 2 | VISION: CONCEPTUAL DESIGN

<table>
<thead>
<tr>
<th>Payment system user needs</th>
<th>Payment instruments design</th>
<th>Ownership/control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>Paper</td>
<td>(better owned by the</td>
</tr>
<tr>
<td>Consumers</td>
<td>Electronic</td>
<td>private sector)</td>
</tr>
<tr>
<td>Banks</td>
<td>Card-based</td>
<td>Equity/ownership</td>
</tr>
<tr>
<td>Central bank</td>
<td>Hybrid (truncated)</td>
<td>Operational ownership</td>
</tr>
<tr>
<td>Government</td>
<td>Credit transfer/debit</td>
<td>Access</td>
</tr>
<tr>
<td>Other financial institutions</td>
<td>transfer</td>
<td>Standard setting</td>
</tr>
<tr>
<td>System requirements</td>
<td>Guaranteed/</td>
<td>Cost recovery</td>
</tr>
<tr>
<td>Capacity (volume forecasts)</td>
<td>provisional funds</td>
<td>Fees</td>
</tr>
<tr>
<td>Speed/timing</td>
<td>(high-value/low-value)</td>
<td>Full/partial (sub-</td>
</tr>
<tr>
<td>Costs</td>
<td>Batched/on-line</td>
<td>sidized) recovery</td>
</tr>
<tr>
<td>Reliability</td>
<td>Risk control design</td>
<td>Other issues</td>
</tr>
<tr>
<td>Controls</td>
<td>Settlement risk</td>
<td>State of the art</td>
</tr>
<tr>
<td>Accounting/settlement</td>
<td>Fraud risk</td>
<td>Off-the-shelf</td>
</tr>
<tr>
<td>Functionality</td>
<td>Security risk</td>
<td>(turnkey)</td>
</tr>
<tr>
<td>Interfaces</td>
<td>Legal/regulatory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>requirements</td>
<td></td>
</tr>
</tbody>
</table>

- Allowing for universal access for all financial institutions.
- Minimizing costs in system design and operational arrangements.

If the stocktaking phase identifies worthwhile benefits, a structured approach should be adopted for the subsequent project preparation stages. Modernization initiatives involve a range of complex issues that affect all sectors of an economy, so coordination is essential. For the best results, even the smallest of countries should adopt a formal project management structure, and the central bank should play a key role in coordinating reform (see figure 1 for a possible organizational structure). There should also be a project manager able to command action and respect. The International Monetary Fund, consultants, and cooperating central banks can play important supporting roles through an international advisory panel or by providing direct technical assistance. Any initiative to modernize a payment system must involve users. Payment system projects have shown a clear relation between active user involvement and project success. Users can best be involved at two levels: at the policy level—on the steering committee or national payments council, to provide overall direction to the project—and at the working level—on committees staffed with competent personnel capable of making decisions on behalf of their institutions. These committees will control the pace of the project and the quality of the outcomes. The complexity and scope of the necessary work may mean that a number of distinct phases are required. A vision development phase would document the results sought over a five-year planning horizon. The resulting vision should bring to life the characteristics of the new environment and describe phased implementation plans that reflect relative priorities. Table 2 gives a checklist for developing an appropriate payment system vision.

On the basis of an agreed vision, the project can proceed into the conceptual and final design phases. The purpose of a conceptual design is to describe a preliminary cost-effective architecture and operational infrastructure for the envisaged systems. Some fine-tuning of the conceptual design normally takes place before the final design document is produced; this document contains technical specifications at a level of detail sufficient for preparing comprehensive bidding documents. As with other types of project, the next step is procurement.

**A caveat**

Many emerging market economies lack the infrastructure and banking sophistication required to leapfrog from basic payment systems to state-of-the-art systems. A two-track approach to project design often is the best way to go. The first task is to fix the most serious problems and then gradually upgrade the current system to meet basic minimum standards of timeliness, security, and reliability. As these improvements are made, emerging market economies can turn their attention to long-term, advanced solutions. This two-track approach must be carefully controlled to prevent the short-term improvements from derailing the long-term solution.


Fernando Montes-Negret, Principal Financial Economist, and Robert Kugler, Senior Payment Systems Specialist, Financial Sector Development Department
Long-term Finance in Inflationary Economies

High inflation creates punishing repayment schedules

Dan Mozesc

There is a common misconception that, in a high-inflation environment, long-term investment can be funded by long-term loans as long as a high nominal interest rate is charged. In reality, inflation-adjusted interest rates are not a viable solution for long-term financing because they do not provide investors with a realistic repayment schedule—one that can be supported by the cash flow from investments financed with the loan. While high nominal interest rates in high-inflation economies do provide adequate real compensation to lenders and reasonable real total costs to borrowers, they create unacceptable cash flows. In fact, high rates of inflation transform all long-term nominal interest loans into short-term loans, making them unsuitable for financing long-term investments. Thus, high inflation creates major problems for long-term finance.

The impact of inflation on interest rates

Under inflationary conditions, nominal interest rates change to reflect the rate of inflation. Savers demand a positive real return for their deposits as compensation for delaying their spending. Unless the rate of interest paid to them is higher than the rate of inflation, they will lose (rather than gain) purchasing power by saving their money and delaying their spending. Borrowers therefore are required to pay interest rates that are higher than the rate of inflation. If interest rates are lower than the rate of inflation, real rates are negative and borrowers are paying back amounts smaller in real value than the amounts borrowed. Such loans will not be supported by voluntary savings. Besides discouraging savings, negative real rates provide a subsidy to the borrowers and therefore distort the allocation of resources.

Real and nominal rates

Assume that interest rates are 7 percent a year when prices are stable. If the annual rate of inflation rises to 40 percent, nominal interest rates would have to rise to 50 percent a year to give lenders and borrowers the same real interest rate. This can be calculated in the following way. The real interest rate \( R \), defined as the interest rate in real terms (that is, accounting for inflation), comes from dividing (not subtracting, as people commonly do) the nominal interest rate \( i \) by the inflation rate \( f \).

\[
(1+R) = \frac{1+i}{1+f}
\]

In other words, with a nominal interest rate of 50 percent, the lender receives a 7 percent real return when the inflation rate is 40 percent. To achieve a real return of 7 percent under other inflation scenarios, the nominal interest rate would naturally have to be adjusted appropriately (table 1).

Short-term rates

These computations are relevant for determining short-term interest rates. In most cases of
TABLE 1  NOMINAL INTEREST RATES NEEDED TO ACHIEVE
7 PERCENT REAL RETURN AT VARIOUS INFLATION RATES

<table>
<thead>
<tr>
<th>Annual inflation rate</th>
<th>Nominal interest rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>60.5</td>
</tr>
<tr>
<td>75</td>
<td>87.3</td>
</tr>
<tr>
<td>100</td>
<td>114.0*</td>
</tr>
<tr>
<td>200</td>
<td>221.0</td>
</tr>
</tbody>
</table>

* A rate of inflation of 100 percent means that prices double, so that each unit of currency can buy only half of what it could buy a year earlier. The lender of $100 therefore needs to receive $200 just to retain the purchasing power of the principal. At the beginning of the year, 7 percent interest amounted to $7, but to buy goods worth $7 a year later, the lender would have to have $14. Thus, at 100 percent inflation, the lender of $100 requiring 7 percent real interest would demand $214 at the end of one year, or 100 percent of principal plus 114 percent nominal interest.

short-term financing, however, the interest rate is fixed when the loan is provided—before the actual rate of inflation is known. Most economies that suffer high inflation also witness large month-to-month fluctuations in the inflation rate. Seasonality, periodic adjustments in government-controlled prices, tariffs, and foreign exchange rates, and the relative success and failure of monetary and fiscal policies all have an impact on the monthly rate of inflation. For some periods, the interest rates fixed at the beginning of the period may prove to be too low ex post, creating negative real interest rates; for other periods, the real interest rates may be very high. Because of the uncertainty, lenders will attempt to secure their real return by charging higher nominal rates. This uncertainty effect will be especially costly for borrowers when the inflation rate is decreasing.

Some economists suggest that long-term lending with periodically adjusted short-term rates is a workable solution to the problem of long-term lending in unstable economies. In stable economies, adjustable-interest-rate loans (or floating-rate loans, as they are sometimes called), which allow for periodic (monthly, quarterly, or semi-annual) rate adjustments, are a useful tool; they enable financial institutions to lend for longer terms than their sources of funds without having to carry the risk of a change of interest rates. As demonstrated below, however, in unstable economies, such arrangements can become a trap for borrowers, compelling them to pay interest rates far above their cash flow repayment capacity.

Long-term finance under high inflation

The high effective nominal interest rates that result from high inflation rates cause long-term loans to become short-term from the borrower’s cash flow point of view. To illustrate this phenomenon, the following numerical example compares the nominal and real flows of two five-year loans with the same real interest rate—one under stable and one under inflationary conditions. For the sake of simplicity, the example assumes that interest payments are made once a year at the end of the year, so that the nominal and effective (compounded) interest rates are the same (see box on page 48 for an explanation of the compounding effect).

Case 1 (base case)

In case 1, there is no inflation. The five-year loan is in the amount of $5,000, at 10 percent interest.

TABLE 2  REPAYMENT SCHEDULE FOR CASE 1

<table>
<thead>
<tr>
<th>End of year</th>
<th>Payment of principal (dollars)</th>
<th>Payment of interest (dollars)</th>
<th>Total payment (dollars)</th>
<th>Distribution of payments (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000</td>
<td>500</td>
<td>1,500</td>
<td>23.0</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>400</td>
<td>1,400</td>
<td>21.5</td>
</tr>
<tr>
<td>3</td>
<td>1,000</td>
<td>300</td>
<td>1,300</td>
<td>20.0</td>
</tr>
<tr>
<td>4</td>
<td>1,000</td>
<td>200</td>
<td>1,200</td>
<td>18.5</td>
</tr>
<tr>
<td>5</td>
<td>1,000</td>
<td>100</td>
<td>1,100</td>
<td>17.0</td>
</tr>
<tr>
<td>Total</td>
<td>5,000</td>
<td>1,500</td>
<td>6,500</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Principal is to be repaid in five equal payments, and interest is to be paid once annually, at the end of each year, on the amount outstanding during that year (table 2).

**Case 2 (inflation-adjusted interest rate)**

In case 2, the loan terms are the same, but because of 100 percent inflation (prices double every year) the interest rate required to achieve a 10 percent real rate of return is 120 percent. This rate is calculated using the formula

\[(1+i) = (1+f)(1+R),\]

or

\[(1+1.2) = (1+1.0)(1+0.1).\]

Columns 3, 4, 5, and 7 in table 3 are equivalent to columns 2, 3, 4, and 5 in table 2. In case 2, however, the high interest rate means that the amounts paid are much larger: $23,000, compared with $6,500 in case 1. In table 3, column 6 shows the value at the time the loan was made \(t_0\) of the nominal payments in column 5. These real amounts are calculated by dividing the nominal amounts in column 5 by the inflation multiplier (cost-of-living index in \(t_0\) divided by the cost-of-living index in \(t_i\)). This gives the value of each payment in constant value dollars. Total payments over the five years amount to $5,806 in constant dollars. Column 8 shows the distribution of the payments in constant value dollars. The differences between column 8 in table 3 and column 5 in table 2 show how inflation affects the distribution of payments in real terms over the life of a loan.

Comparing the time distribution of the payments in the two cases highlights the effect of inflation on a borrower's cash flow. In case 1, under stable conditions, the payments of principal and interest during the first year amount to 23 percent of the total payments. In case 2, under 100 percent inflation, the payments during the first year amount to more than 60 percent of the total payments in constant dollars. The first year's payment in real terms for the five-year loan in case 2 is equal to the first year's payment for a two-year loan under stable conditions.

**Cash flow effect**

The distribution of payments for a loan such as that in case 2 is incompatible with the kind of cash flow profile typical of long-term investment. Major capital investments involve large initial cash outlays for the investing firm that must be recovered over a long period. To repay debt, the firm must generate net positive cash flows—as reflected in its profits and the depreciation charges in its accounts—through sales of new products or increased production of existing ones. And adding new products or increasing production of existing ones requires additional permanent working capital to finance raw materials, work in process, inventories, and receivables. The same problem arises with capital investments aimed at cost reduction; such cost reductions will increase a firm's net cash inflow only over a long period.

These problems are exacerbated in developing economies, which have a smaller base of finan-
BOX 1  THE EFFECT OF COMPOUNDING ON INTEREST PAYMENTS

In discussions of finance and interest rates, the periodicity of actual interest payments is often neglected. The interest rate on a loan is generally quoted as an annual rate, and people commonly disregard how often interest is actually charged. It is usual to charge interest at the end of each month or each quarter, with the actual monthly charge 1/12 of the annual rate and the quarterly charge 1/4 of the annual rate. With a 12 percent annual interest rate, the monthly charge would be 1 percent and the quarterly charge 3 percent.

When nominal interest rates are low, the compounding effect is insignificant. If the annual nominal rate is 12 percent, the effective annual rate with monthly payments of interest is 12.7 percent (with quarterly payments, 12.5 percent). The compounded interest rate, or effective annual interest rate, is higher when interest is charged more frequently.

Let's use the first example in the text (table 1), in which prices are stable and the interest rate is 7 percent. If interest is charged monthly, the effective (compounded) rate would be 7.23 percent. With 40 percent inflation, the equivalent rate of interest would be 50 percent. This nominal rate, if charged monthly, would become an effective rate of 63.2 percent, and the compounding effect would increase from 3 percent of the nominal rate to 26 percent. At this level, the effects of compounding can no longer be ignored.

If the borrower must borrow additional funds to pay the interest and needs to know what the total debt will be at the end of the year, it becomes clear why the compounding effect cannot be ignored. When inflation is high and nominal interest rates rise to allow a positive real interest rate, the nominal rates can become very high indeed. Under such circumstances, the frequency of interest payments becomes as significant as the rate itself. (This is shown dramatically in the table below, which calculates interest rates actually charged in economies with high inflation.) Any analysis of interest rates in high-inflation countries therefore should use the effective (compounded) rate of interest, not the nominal rate. This compounded rate should be compared with the inflation rate (itself a compound function) to compute the real rate.

EFFECTIVE ANNUAL INTEREST RATES

<table>
<thead>
<tr>
<th>Annual nominal interest rate</th>
<th>Monthly interest rate</th>
<th>Effective annual interest rate with Semiannual interest payments</th>
<th>Quarterly interest payments</th>
<th>Monthly interest payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1</td>
<td>12.4</td>
<td>12.5</td>
<td>12.7</td>
</tr>
<tr>
<td>36</td>
<td>3</td>
<td>39.2</td>
<td>41.2</td>
<td>42.6</td>
</tr>
<tr>
<td>60</td>
<td>5</td>
<td>69.0</td>
<td>74.9</td>
<td>79.6</td>
</tr>
<tr>
<td>94</td>
<td>7</td>
<td>101.6</td>
<td>114.4</td>
<td>125.2</td>
</tr>
<tr>
<td>108</td>
<td>9</td>
<td>137.2</td>
<td>160.1</td>
<td>181.3</td>
</tr>
<tr>
<td>180</td>
<td>15</td>
<td>261.0</td>
<td>342.0</td>
<td>435.0</td>
</tr>
<tr>
<td>300</td>
<td>25</td>
<td>525.0</td>
<td>837.9</td>
<td>1,355.2</td>
</tr>
<tr>
<td>420</td>
<td>35</td>
<td>861.0</td>
<td>1,766.1</td>
<td>3,564.4</td>
</tr>
<tr>
<td>540</td>
<td>45</td>
<td>1,269.0</td>
<td>2,949.8</td>
<td>8,539.1</td>
</tr>
</tbody>
</table>

Illustration by Ruth Sola Keister

1 Loans with final maturities of three to seven years are considered medium-term loans, and loans with final maturities of more than seven years are considered long-term loans.
2 In all such computations, the interest rates must be expressed as decimals rather than as percentages (in this example 7 percent = 0.07).
3 The total payments in constant value dollars are less than the total payments under zero inflation. That is because the quick repayment of principal in real terms shortens the average period of the loan in real terms, resulting in smaller total real interest payments.

Dan Mozes, Senior Financial Specialist, Financial Sector Development Department
Deregulation and new technology are blurring the lines between different types of financial institutions. Banks, securities firms, fund managers, and insurance companies increasingly compete with each other by offering similar products and services. This competitive pressure is giving rise to conglomerates able to deliver a full range of financial services.

The trend toward conglomeration poses challenges to the regulatory and supervisory authorities that watch over financial institutions. The blurring of lines between institutions with different primary regulators and supervisors can mean that similar activities are treated inconsistently. That creates incentives for regulatory arbitrage and can thwart the intent of regulation. The new corporate groups can lead to overlapping and conflicting supervisory responsibilities or to supervisory gaps. They also can obscure the limits of depositor protection and result in a de facto extension of the government safety net across broad classes of financial sector liabilities.

Conglomeration in many cases is a valid business strategy that simply highlights anomalies in regulatory and supervisory practice. The authorities need to respond to these issues while continuing to pursue their prime objective of promoting financial stability, but now in an environment dominated by more complex and diverse organizations.

Getting the authorities to agree on a common solution has not been easy, however, in individual countries or in international forums. The authorities responsible for the different branches of the financial sector often have quite different objectives and use different methodologies. They may be accountable to different national bodies, such as central banks and finance ministries, or to provincial or state governments. As a result, they often have different opinions on the best means to regulate and supervise conglomerates. Some countries, such as Canada, have responded by completely overhauling their regulatory framework and merging existing supervisory agencies. A few, including Denmark and Sweden, have gone so far as to form a single financial sector supervisory authority. But in virtually all countries further work is required to achieve an adequate infrastructure for effective regulation and supervision.

This Note describes the responses being developed in different countries and international forums. The World Bank must take account of these responses in its operations. It can no longer view regulation and supervision of individual financial sectors in isolation.

Three main supervisory concerns

Supervisors worry most about contagion, transparency, and autonomy. Contagion is the transmission of liquidity or solvency difficulties throughout a group as a consequence of the links between the entities in the group. The transparency
WHAT ARE FINANCIAL CONGLomerATES?

Financial conglomerates are firms that include multiple financial institutions often regulated by different agencies. Their structures vary. In countries with universal banks, financial conglomerates can be composed of banks and insurance companies (see below). Banks may own insurance companies, and insurance companies may own banks. In countries where the scope of permissible bank activities is more limited, the groups also can include securities firms, investment management companies, and perhaps other specialized institutions, such as leasing companies. Financial conglomerates doing business across national borders will involve even more regulated entities. And many conglomerates will include companies engaged in commercial or industrial activities that may be either upstream or downstream from the regulated financial institutions.

BANK-INSURANCE CONGLOMERATION IN EUROPE

In France, the banking and insurance industries have become highly integrated, with banks owning insurance companies and, to a lesser extent, insurance companies owning banks. A noteworthy transaction was Credit Agricole's establishment of Predica, a wholly owned insurance company, in 1986. Within 18 months, Predica grew to become the second largest life insurance company in France.

The large banks in Germany each initially took a different route in conglomerations. In 1989, Deutsche Bank established a wholly owned life insurance company, Deutsche Bank Life. Also in that year Allianz, the country's largest insurer, formed a marketing alliance with Dresdner Bank and took a minority stake in the bank in 1991. And Commerzbank entered into a joint venture with the insurer DBV.

In the Netherlands, Nationale Nederlanden, the country's largest insurance company, and NMB Postbank, its third largest bank, agreed to merge in 1990, creating International Netherlands Group as a holding company. ING was the first pan-European "bancassurance" group, with a market capitalization of more than US$1 billion at the end of 1993. Meanwhile, Aegon, the country's second largest insurer, took a stake in ABN AMRO, the largest bank. The third largest insurer, AMEV, merged with the largest savings bank, VSB, and then with Belgian Group AG, to form Fortis Group.

In 1988, Britain's Lloyds Bank acquired Abbey Life, which contributed around 30 percent of consolidated revenues in 1993. All four of the large British clearing banks now either own insurers or have formed joint ventures with insurers.

Concern relates not only to the financial condition of the individual entities and the overall group, but also to the group's corporate and managerial structure. The complexity inherent in financial conglomerates often diminishes transparency. It may be hard to get adequate information from certain entities or to know who is making the key decisions. The autonomy concern relates to the legal and moral duty of the directors and managers of each entity. They must act in the interests of that institution and its stakeholders. They must act fairly in situations involving conflicts of interest (of which there are potentially more in conglomerate structures) and maintain sufficient authority within the group management structure to be able to respond independently to supervisory directives.

In the light of these concerns, the main objectives of conglomerate regulation and supervision are to minimize potential contagion within the group, promote transparency of group structure and finances, and promote the accountability of the directors and managers of individual regulated entities. Achieving these objectives will require modifications to existing legal and supervisory arrangements.

Two approaches

Historical differences in approach to the regulation and supervision of different financial institutions have produced two different views on the best way to deal with conglomerates. The relative merits of these two views underlie much of the current debate in individual countries and at the international level. One approach is to regulate and supervise all financial institutions in a group in a consolidated manner, even if some of them would not be subject to regulation or supervision if they were not associated with the group. This consolidated approach has been used by bank supervisors for banking groups since the early 1980s.
A second approach is to separately regulate and supervise the entities in the group that require it but not regulate or supervise the others. This approach often involves the use of “firewalls” or “ring-fences,” restrictions designed to insulate regulated entities from problems arising in their unregulated or separately regulated affiliates. This is an approach often taken by insurance supervisors and by some securities supervisors, such as the U.S. Securities and Exchange Commission.

One emerging international standard

In most countries, bank supervisors seem to have the upper hand in policy development because of the commonly accepted view that banks are special and because many financial conglomerates involve a significant banking entity. Bank supervisors are persuading governments to adopt the consolidated approach to group regulation and to group supervision especially. They insist on this approach mainly because of their concerns about contagion. They wish to ensure that problems in another group entity will not so harm the banking entity as to cause a systemic crisis (for example, in the interbank funding markets, the payments system, the basic credit markets, or the implementation of monetary policy). This approach is often referred to simply as “consolidated supervision.” But while the trend seems to be toward consolidated supervision, there is as yet no international consensus on what adopting this approach means for the regulatory framework.

Prudential regulation

Agreements between bank and securities supervisors in the European Union suggest that prudential regulation of financial conglomerates should involve groupwide application of rules for capital adequacy, diversification, and connected lending. In practice, these are fundamental prudential requirements applied in one form or another to most types of financial institutions. Capital adequacy rules specify the amount of capital an institution must hold as a way to ensure that shareholders have an acceptable amount of real capital at risk. Diversification rules are designed to ensure an adequate spreading of risks, particularly credit risk. Connected lending rules limit lending to insiders—those in a position to influence the policies and decisions of the institution.

The most comprehensive way of applying prudential regulations on a groupwide basis is through consolidated regulation, in which uniform prudential rules are applied to the overall financial conglomerate and to each regulated entity separately. Most or all financial institutions would be subject to the same set of prudential requirements. A fundamental prerequisite for this kind of regulation is the preparation of fully consolidated financial statements for the group that eliminate the effects of intragroup transactions, particularly those that can lead to an overstatement of capital. At present, few authorities require fully consolidated financial statements from financial groups involving banks and insurance companies. Such consolidation raises a number of technical hurdles, but recent work by European accounting bodies suggests that the hurdles are surmountable, including in cases where the group is engaged in substantial commercial or industrial activities. Indeed, some conglomerates are starting to produce their own consolidated statements to improve disclosure.

An alternative to consolidated regulation is to modify existing regulations applicable to different types of institutions to take account of the inclusion of those institutions in financial conglomerates. The main concern is the possibility that a group could overstate its capital as a result of transactions between group entities. In this situation, net group capital can be less than the sum of the capital of the individual institutions. To address this concern, regulations can be modified to allow deduction of investments in, and perhaps credit exposure to, other group institutions before applying the prudential limits to each institution. Deducting these investments prevents double-counting of capital. And deducting other credit exposure prevents an overstatement of capital that could be the consequence, and perhaps the intent, of transactions such as the intragroup sale and financing of assets at inflated values.
More generally, conglomerate regulation should lay the groundwork for adequate supervision, as described below.

**Conglomerate supervision**

While there continues to be a diversity of views on the appropriate means to regulate financial conglomerates, there is more consensus about the best approach to supervision. Even supervisors opting not to take a consolidated approach to regulation will apply some form of consolidated supervision, because the potential consequences for a regulated entity of negative events unfolding in other group entities cannot be ignored. It is generally accepted that supervisors must be in a position to assess these potential consequences and to take action to mitigate perceived risks. This means that the authorities need to have flexible enforcement capacity, the power to deny authorization for the establishment of new group entities, and the ability to obtain and verify information on all group activities.

**Should industrial owners be allowed?**

An important economic policy decision that arises in the context of financial conglomerates is the extent to which links between financial groups and industrial and commercial groups should be allowed. Such conglomerates often mean increased economic concentration. Are there risks in policies that permit, for example, major industrial or commercial groups to control major financial institutions? Policymakers in different countries are far apart on this issue. For financial supervisors, the key prudential concern raised by these mixed-activity groups is the possible loss of objectivity in decisions on potential credit exposure to related entities. In the European Union, this concern is addressed in part by rules limiting the total credit exposure to affiliated entities that a financial group may incur.

**World Bank operations**

World Bank–supported financial sector operations may lead to the formation of new financial conglomerates or to the entry of existing conglomerates into new financial sectors. For example, in Bank-supported efforts to stimulate the development of capital markets or insurance and pension sectors, existing banking organizations often play a significant role. These banks typically form new subsidiaries or affiliates to enter these markets, and consequently become subject to the jurisdiction of additional regulatory regimes and supervisory authorities. Therefore, World Bank operations should make explicit provision for supporting the authorities in implementing a program of groupwide supervision that will stand up to international scrutiny. Operations addressing the banking, insurance, and pension or money and capital market sectors must make provision for this groupwide regulation and supervision. The Bank should consider promoting policies designed to establish consolidated regulation, as defined earlier. Consolidated regulation of the financial sector could foster a more level playing field among different types of financial service providers engaged in similar businesses. It could promote transparency and improved governance by providing for consolidated financial statements of financial groups. And, because it involves using one set of financial reporting standards for all financial institutions, it would facilitate market comparisons of different types of financial institutions and of groups with different structures.

Finally, because many developing countries suffer from a scarcity of skilled human resources and limited institutional capacity, the World Bank should consider promoting policies designed to achieve supervisory efficiency. The Bank may wish to assist governments in exploring the merger of some or all existing supervisory agencies into a single authority. Certainly, in its efforts to promote the development of new financial markets, the Bank should carefully consider the consequences of creating additional supervisory authorities.


*David H. Scott, Senior Financial Sector Specialist, Financial Sector Development Department*