Responding to the Global Financial Crisis

Strengthening Financial Systems in Developing Countries

The Case for Incentives-Based Financial Sector Reforms

Biagio Bossone and Larry Promisel
Foreword

The East Asian crisis has underscored the importance of strong domestic policies and institutions in enabling countries to integrate successfully into the global financial community. From the crisis, a debate has emerged on the structural policy reforms needed at both the national and international levels to restore financial stability and to avert and mitigate future crises. These reforms include strengthening financial sectors, establishing a sound business environment and adopting adequate mechanisms for social protection. To advance the dialogue on these issues among a broad group of stakeholders, Bank Group staff have prepared the following five papers:

- Corporate Governance: Emerging Issues and Lessons from East Asia
- Strengthening Financial Systems in Developing Countries: The Case for Incentives-Based Financial Sector Reforms
- Systemic Bank and Corporate Restructuring: Experience and Lessons for East Asia
- The Business Environment and Corporate Governance: Strengthening Incentives for Private Sector Performance
- Social Consequences of the East Asian Financial Crisis

These papers will provide background for discussions during the World Bank’s 1998 Annual Meetings Program of Seminars (website http://www.worldbank.org/html/extdr/pos98/). They were prepared in tandem with East Asia: The Road to Recovery, which assesses the evolution of the crisis and sets out the agenda for stimulating an early recovery. The papers are not intended to reflect the Bank Group’s policies, but rather to stimulate debate and solicit the views of the development community at large.

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Executive Summary

Whenever commerce is introduced into any country, probity and punctuality always accompany it . . . A dealer is afraid of losing his character, and is scrupulous in observing every engagement.

—Adam Smith

An international cooperative effort has been focused on the need to reduce financial fragility and systemic risks in global financial markets. Work is proceeding in three different areas: enhancing financial market transparency, improving the international financial architecture, and strengthening financial systems. Strengthening financial systems (the focus of this paper) means cooperating to promote principles and sound practices for financial stability through development of well-functioning financial systems and market discipline.

Financial sector reform and development is much more than setting rules, articulating standards, approving legislation, and creating new institutions. All are important but ultimately behavior must be changed if there is to be meaningful and lasting financial reform. For that reason, this paper emphasizes the role of incentives to induce appropriate behavior.

Given all that needs to be done, financial sector development will take a long time. The fact that the process will take years, probably decades, to complete should not reduce the sense of urgency. It means, rather, that we should not have unrealistic expectations and that we must be patient.

Empirical research suggests that the effect of financial sector development on economic growth is significant. Banks are one but not the only important part of a healthy financial system. Markets for bonds and equities, too, have an independent effect on growth. But banking and capital markets seem to complement each other throughout most stages of development.

The international approach to financial sector reform

Developing countries have made important progress toward improved financial supervision in the past few years. Reforming financial sectors is a lengthy and complex process of institution building and incentive reorientation, whose success requires full ownership of, and participation in, the process by society and its government.

Beginning in the early 1980s, financial sector reforms in developing countries were rooted in the premise that liberalized economic relationships, macroeconomic stability, and competitive price setting would lead to high and stable economic growth. While most people understood that there was a crucial role for government (prudential supervision of the financial system, for instance), it was not seen as coincidence that, in the countries that pursued strong macroeconomic adjustment and financial liberalization, growth improved markedly.
Since the early 1990s, market volatility and crises, as well as a better understanding of how financial markets work, have led economists and policymakers to re-examine their policy framework. Those financial crises were costly and the risk of systemic repercussions is seen to have risen sharply in recent years. Greater emphasis is now placed on market rule-making that should be consistent across national boundaries. Also, more international policy cooperation is required for managing rules effectively in the new global marketplace. Financial sector reform requires writing effective rules and addressing the question of how to make financial market participants and supervisors respond to those rules adequately, in a timely fashion, and consistently with the objective of maintaining efficiency.

It is now more widely accepted that the government, in cooperation with the private sector, can help markets perform better by providing appropriate financial regulations and infrastructure. Rules should be designed to promote more efficient and open markets, importantly by improving the availability of information and mutual trust. Appropriate incentive mechanisms, though difficult to devise, are crucial. The case for incentive-based financial sector reforms is especially compelling for developing economies. The scarcity of government resources for monitoring and enforcement, recognition that there are greater profit opportunities in producing information where information is relatively scarce, and improvements to be gained in both efficiency and stability when honest and prudent behavior is appropriately rewarded, all point to the benefits of incentive mechanisms that induce good conduct and self-policing in the behavior of those operating in the market.

A strong emphasis must be placed on the microeconomic and institutional dimensions of financial systems, which are linked. Competition and prudential supervision need to be consistently integrated into financial sector reforms. Redressing structural weaknesses relating to distorted incentives, inadequate information, inappropriate allocation of responsibilities, and poor market infrastructures is now regarded as a prerequisite to achieve good governance of financial institutions and establish a solid credit discipline across the markets.

The international community recognizes the need for arrangements that minimize moral hazard, sequencing liberalization consistently with the overall pace of market development, and supporting liberalization with policies aimed at ensuring that there are appropriate incentives and effective market discipline.

Another distinctive feature of international strategy is recognition that financial stability requires strong market regulation and supervision of financial institutions. Current strategy seeks to strike a balance between principles to ensure good institutional governance, mechanisms for inducing effective market discipline, and regulatory and supervisory regimes that are market-friendly and mimic the market in driving agents’ action through incentives.
Financial sector reform: incentives and strategies

To make financial markets stronger and more efficient (and therefore less vulnerable to systemic crises), emphasis must be placed on incentive-based financial sector reforms, that is, on setting up a system of rewards and penalties such that market participants perceive (correctly) that it is in their own best interest to behave in efficient and prudent ways. To support such a system, infrastructure (including the legal, regulatory, and supervisory frameworks) should be the responsibility of government. Reform will be lengthy, however, and require input from both the private and the public sectors, and policy choices involving tradeoffs of one kind or another will be necessary along the way.

Actions that need to be taken specifically in the wake of a crisis are not discussed in this paper; issues associated with bank and corporate restructuring, for example, are addressed in a companion paper to the present work (World Bank, 1998). Actions relating more to the macroeconomy also are not discussed, although some—including the important issue of the liberalization of controls on capital flows—are very closely linked to financial sector reform.

The reform process described in this paper broadly covers three areas— the competitive environment, including issues of franchise value and reputational capital of banks and building capital markets and the nonbank investor base; prudential regulation and supervision, safety nets, and self-regulating mechanisms; and, fundamentally, information, including its production and dissemination and the role of informal finance. Specific recommendations include:

- **Balancing competition in banking with incentives to create franchise value.** Financial sector reform should induce financial institutions to invest in reputational capital. Given that many markets in developing countries are emerging from long periods of underdevelopment and state controls, measures are probably needed to increase the value of bank franchises. Some mild restraints could be used to balance competition with incentives to induce domestic institutions to accumulate sufficient capital (including reputational capital) before being exposed to further financial liberalization.

- **Developing capital markets and an investor base.** An important medium-term objective of financial sector reform is to endow the economy with a modern capital market and to increase participation by institutional investors. Mature financial markets reduce transactions costs associated with limited knowledge and incomplete trust, and thus help allocate savings to the best investment opportunities.

- **Strengthening prudential regulation and supervision.** Governments should complement the creation of franchise value by adopting a regulatory regime based on rules designed to align the private incentives of market
players with the social goal of financial stability, and by strengthening supervision.

- **Adopting incentive-based safety nets.** Safety-net arrangements to reduce the risk of a systemic crisis should minimize moral hazard by limiting risk protection or making the cost of protection sensitive to the risk covered.

- **Encouraging self-policing.** Through the history of trade and finance, market participants have established institutions that ensure honest and prudent behavior, lower transactions costs, and reduce risks. Some of these self-policing bodies may eventually develop into full-fledged self-regulatory organizations. The government can help by providing the supporting legal and supervisory infrastructure.

- **Enhancing production and dissemination of information.** A crucial component of financial sector reform is improvement in the quality and quantity of reliable and timely information. Governments can improve incentives for the optimal provision of information.

- **Strengthening informal finance.** Governments should exploit the comparative advantage of informal financiers and strengthen the complementarity between the formal and informal sectors.

**International cooperation and work of the World Bank**

Reforming the financial sector is a lengthy process for which there is no universal operational blueprint. The longer the process, the greater the risk that measures, originally introduced as temporary, become permanent, weakening (rather than strengthening) the domestic financial system. Countering this risk requires the design of incentives that, over time, push the system towards better performance. It requires a strong government commitment to the reform’s objectives, a transparent program with a well-defined time schedule for implementation, and participation by society in reforms and in monitoring implementation.

Multilateral financial institutions can contribute significantly to this, not only by providing financial and technical assistance, but by ensuring the necessary time consistency throughout the reform. Global standards and international agreements can help commit countries to some aspects of reform strategies.

The Bank’s role in the financial sector begins with the assistance it provides governments in diagnosing the strengths and weaknesses of the financial system; analyzing how the system compares with other current and past models; training bank supervisors, bankers, and other financial market participants; restructuring financial institutions; and advising authorities on the reform process. Lending operations, such as structural adjustment loans or direct support to banks, can be used to further these efforts. A fundamental lesson of the Bank’s experience in this field (confirmed by policymakers) is that assistance in creating a sound strategy for financial sector reform and development is key.
In the past year, the Bank has committed more resources to improve its ability to deliver policy and technical advice and training in the financial sector. And it is moving to disseminate examples of sound practices for all aspects of financial reform, including the pros and cons of controversial policy issues. The Bank has also increased resources devoted to research. Current projects include work on financial structure, deposit insurance, financial regulation, banking crises, bank insolvency, banking privatization and internationalization, pension reform, and capital market development. Ultimately this work will provide some answers to the many questions in this important area of financial sector policy.
Finance is crucial for market economies

Finance deals with the exchange of promises—that is, people trade money now in return for a commitment to repay it at some agreed future date. With costly and limited information distributed unevenly among those involved in transactions, and with unknown future contingencies and incentives for opportunistic behavior, allocating savings and raising finance based on promises would be nearly impossible without instruments and institutions that reduce costs to bearable levels. A financial system (seen as the complex of institutions, contracts, regulations, enforcement and exchange procedures aimed at making promises credible) is necessary to render the terms of promises acceptable for those who receive them, and affordable for those who make them.

Financial institutions collect, process and disseminate information. Building on their reputations, they provide confidence in markets where individuals cannot easily provide a basis for complete trust. And financial institutions offer the benefits of economies of scale and specialization by concentrating capital that would otherwise be widely held.

Information problems are likely to be magnified by the fragmented institutional and economic environment that is typical of underdeveloped economies. Building an efficient financial sector can especially benefit economies where uncertainty is greater, real economic activity is riskier, and scarcity of information encourages opportunistic behavior.

The effect of financial sector development on growth is significant

The links between financial and economic development have been extensively documented in comparative case studies. These range from studies on the role of banks in explaining the different growth rates of Scotland, England, Germany and France in the 18th and 19th centuries, to the role of finance for railroads and other infrastructure in the United States in the 19th century, to the role of finance in Japan’s and Italy’s pre- and post-war economic success, and to the role of intermediaries in igniting Korea’s economic growth in the early 1960s. Recent research following the seminal work of King and Levine (1993) confirms that strong links exist between growth and finance and that a better-developed finance sector precedes faster growth.

Analyses show statistically significant links between the extent to which commercial banks allocate credit and the tendency of financial systems to lend to private firms, on the one hand, and productivity growth, on the other (Figure 1). More credit extended to private firms likely coincides with banks
performing more effectively their credit assessment, monitoring, and corporate governance functions, as well as doing a better job of providing efficient payments systems, than would be the case if governments and state-owned enterprises were the banks’ main clients. Although it is possible that more developed economies lead to better financial systems, recent evidence suggests that the causality runs the other way, too: economies with deeper financial systems in 1960 saw faster growth in the following 30 years (Figure 2).

**Banks are not the only important part of a healthy financial system**

Capital markets, too, have an independent effect on growth. Of 38 countries with the requisite stock market data, those with highly liquid equity markets in 1976 saw more rapid growth between then and 1994. And those with liquid stock markets and more developed banking systems experienced the most rapid growth (Figure 3). This complementarity of banking and capital markets, which appears throughout most stages of development, likely arises because both debt and equity finance induce better accounting, auditing, and the formation of a cadre of trained finance professionals but also, and perhaps more important, because efficient capital markets need to rely on efficient banking for liquidity, payment, settlement, and securities management services.

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**Figure 1**

**Productivity Growth in Developing Countries, 1960-89**

![Graph showing productivity growth in developing countries](image)

**Notes:** Fig. 1 classifies 80 developing and developed countries in four groups according to the share of credit from commercial bank (and credit to private firms) relative to GDP. On the vertical axis is the unexplained residual (or productivity growth) over the 1960-89 period from a standard cross-country growth regression on initial income level and human capital, subsequent investment ratios, and other factors (political stability, and measures of monetary, fiscal, trade and exchange rate policies) that affect growth. Source: Levine, 1997.
Figure 2
Growth and Financial Depth, 1960-89

Notes: Fig. 2 classifies 80 developing and developed countries in four groups according to the ratio of broad money (M2) to GDP in 1960. On the vertical axis is the per capita growth rate over the 1960-89 period.


Figure 3
Growth and Initial Stock Market and Bank Development

Notes: Fig. 4 five classifies 38 developing and developed countries in two groups according to their stock market liquidity (turnover relative to market capitalization and turnover relative to GDP) in 1976. These two groups are then subdivided into four subgroups according to the ratio of bank loans to private enterprises to GDP, also in 1976. On the vertical axis is the per capita growth rate over the 1976-93 period.

Source: Demirgüç-Kunt and Levine, 1996.
Convincing evidence of the relationship between finance and development also emerges from a look at how financial resources are allocated among firms before and after financial reforms. For example, following financial reforms in some countries in the 1980s, there was an increased tendency for finance to be allocated to more efficient firms than before the reforms. With less intervention in credit allocation and pricing, intermediaries were more likely to allocate capital where it would be used best, thereby raising economic growth. Moreover, a cross-country study with firm level data confirms that finance matters for growth and highlights specific policy changes, such as improvements in the legal system, that foster development. \[ \text{Cross-country research using both firm level and aggregate data show that improvements in legal systems foster growth. Conversely, a financial system with structural impediments, or subject to instability, can greatly disturb the economy’s orderly evolution.}\]

\[ \text{Caprio and Klingebiel (1996a) show the fiscal costs and the costs from foregone output associated with banking crises in several countries (Tables 1 and 2).}\]

### Table 1
**Fiscal costs of selected banking crises**
Percentage of GDP

<table>
<thead>
<tr>
<th>Country (Date)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina (1980-82)</td>
<td>55.3</td>
</tr>
<tr>
<td>Chile (1981-82)</td>
<td>41.2</td>
</tr>
<tr>
<td>Uruguay (1981-84)</td>
<td>31.2</td>
</tr>
<tr>
<td>Israel (1977-83)</td>
<td>30.0</td>
</tr>
<tr>
<td>Cote d’Ivoire (1988-91)</td>
<td>25.0</td>
</tr>
<tr>
<td>Senegal (1988-91)</td>
<td>17.0</td>
</tr>
<tr>
<td>Spain (1977-85)</td>
<td>16.8</td>
</tr>
<tr>
<td>Bulgaria (1990s)</td>
<td>14.0</td>
</tr>
<tr>
<td>Mexico (1995)</td>
<td>13.5</td>
</tr>
<tr>
<td>Hungary (1991-93)</td>
<td>10.0</td>
</tr>
<tr>
<td>Finland (1991-93)</td>
<td>8.0</td>
</tr>
<tr>
<td>Sweden (1991)</td>
<td>6.4</td>
</tr>
<tr>
<td>Sri Lanka (1989-93)</td>
<td>5.0</td>
</tr>
<tr>
<td>Malaysia (1985-88)</td>
<td>4.7</td>
</tr>
<tr>
<td>Norway (1987-89)</td>
<td>4.0</td>
</tr>
<tr>
<td>United States (1984-91)</td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Source: Caprio and Klingebiel (1996a).*

**The current policy debate draws a lot on the still preliminary lessons learned from East Asia’s crisis**

Unlike the Latin American debt crisis in the 1980s, East Asia’s problems revolve around private-sector indebtedness and, in particular, around the short-term nature of private debt and large portfolio outflows. Weak financial risk management in financial institutions and high corporate debt were major sources of instability. These created the conditions for dangerous financial imbalances. Lack of information also played an important part, as markets realized too late that many firms were much weaker than they had thought. Similarly, as the crisis spread, lack of information may have led lenders to a generalized withdrawal of funds from economies, without discriminating between good and bad firms.

Segmentation between the short- and the long-term ends of domestic capital markets may have been a cause of excessive growth in short-term lending to the region. At a time of overheating and over-optimistic expectations, short-term lenders—less concerned with the long-term risk of the investment financed and, in any case, likely
Table 2
Percentage change in GDP five years before and after onset of bank insolvency, 1975-94
Number of observations in parenthesis

<table>
<thead>
<tr>
<th>Region</th>
<th>Five yrs. before crisis</th>
<th>Five yrs. after crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crisis Cases</td>
<td>3.2% (290)</td>
<td>2.0% (240)</td>
</tr>
<tr>
<td>Subsample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• OECD countries*</td>
<td>2.8% (50)</td>
<td>1.8% (52)</td>
</tr>
<tr>
<td>• Non-OECD countries*</td>
<td>3.3% (240)</td>
<td>2.0% (188)</td>
</tr>
<tr>
<td>Memo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-crisis countries**</td>
<td>2.2% (80)</td>
<td>2.3% (63)</td>
</tr>
</tbody>
</table>

Notes: *A t-test (significant at P.0.05) indicates that the pre- and post- means differ.
** Since there was no crisis in these countries, the sample was split in half, that is, 1980-1987 for the first observation and 1988-1994 for the second. Although it should not be necessary, a t-test indicates that there was no significant slowdown in the non-crisis countries.

Source: Caprio and Klingebiel (1996a).

lending with a perception of implicit government guarantees on losses—increased their exposures to domestic enterprises, even though signs may have been growing of an unsustainable pace of capital accumulation. As a result, the production of capital goods exceeded its sustainable demand. To the extent that much domestic borrowing was funded by foreign creditors, it is fair to conclude that not only domestic institutions but international markets failed to perceive the increasing risk in East Asia.

Thus, market failures weakened East Asia’s financial systems, causing excessive risk and bad resource allocation. Governments made things worse. For example, a commitment to unsustainable exchange rate pegs distorted the incentives in a way that led to the build-up of vulnerability, especially in the form of rising short-term dollar-denominated debt. East Asian financial systems also suffered from inadequate regulation and from too rapid liberalization. Domestic and external financial liberalization increased competition for creditworthy borrowers, which reduced the franchise value of banks and induced them to pursue more risky investment strategies. Rapidly growing non-bank financial institutions were an important source of additional competition for banks, especially in Korea and Thailand. Moreover, as non-banks were generally less regulated and subject to weaker supervision than banks, their growth (in numbers and credit expansion) worsened financial sector fragility. Individual bank and non-bank data support this conclusion: finance companies in Thailand and merchant banks in Korea expanded rapidly and relied heavily on foreign exchange borrowings.

The lingering effects of past policies that dealt with financial distress magnified the impact of these weaknesses. Several countries—Thailand in 1983-87, Malaysia in 1985-88, and Indonesia in 1994—experienced a financial crisis that was in part resolved through partial or full public bailouts.
These bailouts reinforced the perception of an implicit government guarantee on deposits, or even other bank liabilities, so damaging market discipline. In some cases, management of restructured financial institutions was unchanged, which did nothing to improve incentives for prudent behavior.
The International Approach to Reform

Crisis highlight the asymmetry between the cross-border nature of today’s financial relationships, and the national jurisdiction of domestic financial policy institutions. The institutional gap that results can be filled through mechanisms adopted by national authorities on either ad hoc or more formal bases, depending on the severity and persistence of the problems. If the problems are of a sufficiently deep structural nature, they may eventually lead to reconsideration and reorientation of financial policy strategies.

The G-7 finance ministers, at their meeting in Halifax, Nova Scotia, in 1995, began to focus on financial fragility and systemic risks. The cooperative effort was reinforced at the G-7 Summit in Lyon in June 1996. Following the Lyon Summit, governments from industrial and emerging economies organized action in three different areas—enhancing financial market transparency, improving the international financial architecture, and strengthening financial systems. In the third area, the aim of cooperation among governments is to set up a concerted international strategy to promote principles and sound practices for financial stability through development of well-functioning financial and regulatory systems and the use of market discipline.

The case for financial liberalization

Beginning in the early 1980s, financial sector reforms in developing countries were grounded broadly on the premise that liberalized economic relationships, macroeconomic stability, and competitive price setting would lead to high and stable economic growth. (Some even felt that these conditions were necessary and sufficient—at least in the absence of shocks.) This premise essentially implied that government was to step back from its heavy involvement in decisions in domestic financial markets and let the private sector step in and allocate resources based on individual preferences and profit opportunities. Financial liberalization became a core element of structural policy in an increasing number of countries, although most understood that prudential supervision was important. Many governments deliberated financial liberalization measures only after domestic market institutions had de facto by-passed local restrictions on financial activities, or when it was clear that national regulations were putting institutions at a disadvantage vis-à-vis international competitors. The conviction grew, however, that putting one’s house in order through macroeconomic stabilization and financial liberalization was the best way each government could contribute to the common cause of international financial stability.

In fact, in the countries that pursued strong macroeconomic adjustment and financial liberalization, growth performance for some years improved markedly. As government interference gave way to more open and competitive domestic markets—with lower costs and easier access—economies benefited from efficiency gains.
The need to improve the workings of financial markets

Since the early 1990s, market events, as well as a better understanding of how financial markets work, have led economists and policymakers to re-examine policy frameworks. There have been costly financial crises and the risk of systemic repercussions of local crises is perceived to have risen considerably over the years with the growth of private international capital flows. Greater emphasis is being placed on the view that markets need rules, that, in an increasingly global economy, rules should be consistent across national boundaries, and that international policy cooperation is required for managing those rules effectively. Financial sector reform requires setting up good rules and addressing the question of how to make financial market participants and supervisors respond to rules adequately, in a timely fashion, and consistently to maintain efficiency.

It is now accepted that the government has a central role to play (in cooperation with the private sector) to help markets perform better by providing appropriate financial regulations and infrastructure. Rules should be designed to promote market functioning, importantly by improving the availability of information and inducing prudent behavior. For example, authorities in Chile, Argentina, and New Zealand have moved for more disclosure and require the rating of commercial banks; in Argentina, banks must also issue uninsured, subordinated debt—thus creating a group of investors with an incentive to monitor banks closely—and capital requirements are varied according to banks’ credit and market risks. Although any financial system is vulnerable to large shocks, such incentives can lead financial market participants to internalize rules in their decision-making and induce market institutions to monitor and enforce compliance of individual participants. The case for incentive-based financial sector reforms is especially compelling for developing economies: scarcity of government resources for rule monitoring and enforcement, recognition that there are greater profit opportunities in producing information where these are scarce, and improvements in efficiency and stability—all point to benefits from enacting incentive mechanisms that induce good conduct and self-policing in the behavior of those operating in the market.

The strategy underscores the importance of governments taking full responsibility for policies to reform the domestic financial sector. It also recognizes the need for governments to raise political and social support for those policies. These two aspects mark a significant departure from previous approaches to structural policy, and bear importantly on the agenda for economic development. Reforming the financial sector involves a lengthy and complex process of institution building and incentive reorientation, whose success requires full ownership of, and participation in, the process by the society and government.
The balance between competition and regulation, the importance of incentives

It is now recognized that a strong emphasis must be placed on the microeconomics and institutional dimension of financial systems, and that the two are linked. Redressing structural weaknesses relating to distorted incentives, inadequate information, inappropriate allocation of responsibilities, and poor market infrastructures is now regarded as a prerequisite both to achieve good governance of financial institutions and establish a solid credit discipline across markets. Particular emphasis is on the need to enact and enforce defined legal rights and obligations in financial transactions and to adopt high standards of transparency and accuracy in reporting and disclosing information.

Emphasis on the microeconomic and institutional dimensions is evident also in recommendations for safety nets, liberalization policies, and post-crisis reforms. Incentive problems relating to implicit or explicit promises of bailouts from the public sector are recognized, pointing to the need for arrangements that minimize moral hazard and outright looting. International strategy now underscores the need to sequence liberalization consistently with the pace of development of market institutions and government supervision, which varies from country to country. The strategy also highlights the need to support liberalization with policies aimed at ensuring appropriate incentives and effective market discipline. In the wake of crises, measures to ensure that surviving financial institutions can be operated profitably and soundly over the medium term are necessary to restore domestic and external confidence, and give credibility to sustainability of emergency packages to keep the market going.

Financial stability requires strong market regulation and supervision. The power to control and influence behavior of markets and those operating in them has been affected by the rapid pace of financial and technological innovation. The potential for instability caused by poorly regulated markets, regulatory arbitrage, and competitive deregulation across countries is evident. But a balance must be struck between principles to ensure good institutional governance, ways to induce effective market discipline, and regulatory and supervisory regimes that are market-friendly or mimic the market in using incentives to drive the action of agents.

Principles for sound finance have been developed by international supervisory committees and groupings, and expertise of private-sector international bodies has been tapped to develop standards for sound practice and codes of conduct, and make operational recommendations for market participants. Cooperation and coordination among all those involved, through an ongoing consultative process, ensures that complementarities across the various areas are duly exploited and that overlap and inconsistencies are avoided. An efficient sharing of labor and use of synergies among the multilateral financial
institutions is needed to promote the recommended policy framework at the country level through financial and technical assistance.

All these efforts are important. Mere adoption of rules or standards is easier than changing behavior and outcomes, however. For that to happen, there must be a sustained effort by governments and multilateral institutions, with due attention to the role of incentives in changing behavior.
Incentives and Strategies

Incentive-based financial sector reforms align people’s economic motives with the public aim of financial stability. Rather than dictating to market participants how they should act, it is better to set up a system of rewards and penalties such that those operating in the market perceive—correctly—that is in their interest to behave in efficient and prudent ways. Setting up such a system is not straightforward, however. It involves inputs from the private and public sectors. A sizeable infrastructure is also needed to support the system. This involves institutions and legal, regulatory, and supervisory frameworks that eliminate impediments to participants’ ability to act, permits markets to develop and function, allows and encourages the flow of information, and fairly enforces not only individual rights and contracts but the rules and procedures that provide incentives in the first place.

The current focus on promoting financial stability is an attempt to move economies more quickly to incentive-based systems. Transition to that system is not well defined and will certainly take time. Some trade-offs will be necessary along the way. One task of policymakers is to choose reasonable trade-offs—ones that help, rather than hinder, progress toward the final objective and reflect changing market behavior.

A financial sector reform strategy based on incentive mechanisms is especially fitting in circumstances where the need to economize on scarce resources is more pressing. In particular, three contentions justify the use of incentive mechanisms in developing countries:

• **Developing economies suffer from relatively scarce institutional resources in both the public and private sector.** In developing economies, resources to be devoted to monitoring and enforcing rules and regulations are typically more scarce than in industrial countries. The necessary skilled human resources have a relatively higher opportunity cost (and technologies available for control are presumably less effective) than in industrial countries. Similarly, the opportunity cost of building up skills and technologies for monitoring and enforcement is likely to be higher the less developed the economy.

• **If information is scarce, a potential market for it exists.** Where information is scarce and asymmetrically distributed, and incentives for opportunistic behavior are significant, big profits can be made from producing and disseminating information and from building trust, provided that the returns can be appropriated by private agents. Where these activities are inhibited by problems such as externalities or lack of coordination, the public sector can take measures to induce the private sector to provide them, either cooperatively or competitively. The public sector may also engage directly in providing such services.

• **Incentives improve efficiency and stability.** Unlike regulatory practices that seek to achieve stability by constraining business activities, incentive schemes that reward market participants for prudent behavior benefit both
growth and stability. In risk management, rules can be designed that encourage private sector institutions to reduce risk exposures and to economize on capital. Also, letting participants choose their own risk control methods, under the threat that ex post miscalculation is penalized, gives them an incentive to improve procedures to reduce errors that lead either to inefficient capital allocations or insufficient risk coverage.

**Elements of incentive-based reforms**

Incentive issues relevant to financial sector development can be addressed under three headings: competition, regulation, and information.

The competitive environment influences the incentives for institutions to develop enduring franchises. Profitability (or franchise value) is closely linked to the concept of reputational capital—that is, to the complex set of variables that signal at any one point in time the probability that an institution is able and willing to fulfill its obligations. The ability and motivation to build reputational capital depend on the institution having positive franchise value—that is, it must be a going concern. In turn, reputational capital will tend to increase profitability. Policy has an important role in influencing the degree and nature of competition within the banking system and between banks and non-bank financial institutions.

Designing prudential regulation and deposit insurance needs careful attention to avoid perverse effects on incentives. Self-regulatory organizations complement these measures.

Incentives for acquiring, exploiting, and disseminating information are central to effective financial markets. An explicit market in financial information is an important aspect of maturing financial systems. But personal and social links that characterize information structures in informal financial markets also need to be respected, as they cannot readily in replicated by the formal sector.

**Balancing competition in banking with incentives to create franchise value**

Financial sector reform should induce financial institutions to invest in reputational capital. For financial systems that are underdeveloped and were previously subjected to state controls, measures to increase the value of bank franchises are important. Some mild restraints may be needed to balance competition with incentives to induce domestic institutions to accumulate sufficient capital, including reputational capital, before being exposed to further financial liberalization.

To raise profitability of financial institutions whose franchise value is too low rationalization of the financial sector is key. Authorities should aim to ensure an adequate number of private institutions with sufficient franchise value to induce them to invest in reputational capital. This might involve mergers of
existing private institutions or privatization of state-owned financial institutions. The prospects for higher franchise value could also benefit from regulatory changes that allow domestic financial institutions to operate across the maturity spectrum and in various market segments, provided that their activity in each segment would be appropriately supervised and that supervision would be consistent across market segments and carried out on a consolidated basis.

Investment in infrastructure (including, notably, telecommunications and the legal system) can significantly increase bank franchise value by lowering transactions costs. Real sector restructuring and investments would also have important positive indirect effects on franchise value, because of long-term productivity gains that would strengthen borrowers’ net worth and broaden the domestic borrower base.

Some mild financial restrictions on banking competition could also be a way to increase the franchise value of domestic institutions, especially in the least-developed countries and in those emerging from long periods of financial repression or in deep financial crisis and restructuring their financial sectors. (Most industrial countries employed various restrictions from the 1930s to the 1970s.) Restraints such as temporary market-based deposit-rate ceilings and restrictions on market entry may allow banks to raise profits during the initial phase of reform, giving them incentives to invest responsibly and monitor the performance of borrowers carefully. Especially for banks emerging from heavy financial repression with state-administered interest rates, market-linked ceilings on deposit rates could be a way for banks to move toward market-determined rates.

Restraints are more applicable in the early stages of reform and should be re-evaluated as banks, in the judgment of supervisors, accumulate sufficient skills and capital. Supervision should ensure that rents are used by the banks for internal reorganization and restructuring, for improvement of the quality and safety of financial services supplied to the economy, and for the buildup of a stronger capital base. Supervisors should ensure also that banks develop internal skills to evaluate risks in a competitive environment and to adopt appropriate risk-management systems so as not to squander the capital.

Temporary restrictions on market entry may be warranted to protect domestic financial institutions until they are ready to face competition, but these restrictions must be balanced against the desirability of a financial sector that is open to domestic and foreign investment. Entry restrictions should eventually be replaced by strong and safe rules for market entry, which include minimum requirements on capital, on organizational and operational structures, and on risk management capacity. Strong criteria for evaluating whether bank owners and managers are “fit and proper” are also crucial. Weak licensing has been at the root of many problems in developing countries (Indonesia and Russia, for example). Licensing requirements and standards, as well as enforcement, should be transparent and based on objective criteria. They should be set at levels that imply serious initial commitments from
owners and management wishing to enter the market. This would help authorities select well-motivated entrants, induce potential entrants to evaluate correctly the prospects for sound business, and protect franchise values from entry of unfair and imprudent competitors.

Foreign participation in financial reorganization and restructuring, or de novo entry, should be explored, bearing in mind the need to weigh potential gains against possible adverse consequences for domestic firms. Recent empirical evidence from a group of 80 industrial and developing countries (Claessens et al., 1998) shows that a larger share of foreign bank ownership (and, so, more competition) forces domestic banks to operate more efficiently. Moreover, foreign entry can strengthen domestic financial markets by bringing in experience and technology, and allowing greater diversification of individual portfolios. Some countries that have experienced large shocks—triggered in part by macro and micro distortions—reacted quickly by opening up to foreign financial firms and benefited, suggesting that internationalization can overcome the risks and up-front costs, including reduced franchise value for domestic firms. In Mexico and Venezuela, foreign banks emerged as key players in recapitalization of banks; in Poland and Hungary, they brought much needed know-how and capital; and in Argentina and New Zealand, they also brought in fresh capital. In transition economies, cooperation between foreign and domestic banks has helped to improve capacity of local institutions.

Foreign financial institutions also have proven to be a source of stable funding in the face of adverse shocks. Following the Tequila crisis of 1994-95, the Argentine authorities allowed more foreign participation in their banking system and by late 1997, nine of the top ten banks were majority foreign owned. And after restricting bank privatization to domestic residents, Mexico allowed sharp increases in foreign participation in banking following the peso crisis. In both countries, foreign banks helped maintain access to off-shore funding, while domestic banks were strained. In some East Asian countries, as uncertainty increased, depositors moved to locally based foreign banks, thus retaining deposits for the local economy. Greater entry by foreign financial firms can allow countries to reap more benefits and minimize the potential costs from capital account liberalization.

**Developing capital markets and an investor base**

An important medium-term objective of financial sector reform is to endow the economy with a modern capital market and to increase participation by institutional investors. Developing financial sectors’ market structures reduces transactions costs and helps allocate savings to the best investment opportunities.

Because of the role that banks can play, especially in the least developed countries, governments should concentrate scarce resources on establishing good, sound banking foundations. At the same time, however, they should plan to remove impediments to capital market development as a medium-term
objective. Good information, risk management capabilities, and a strong legal
and regulatory framework are important for institutional investment. Beyond
these basic elements, laws and regulations that strengthen rights of minority
shareholders lead to more rapid capital market development.

Institutional investors are the backbone of modern capital markets. They can
mobilize substantial resources, increase liquidity and depth of domestic
capital markets, and help agents to both overcome information constraints and
diversify risks. In developing countries, venture capital funds can usefully
support investments in the small- and medium-size enterprise sector, by
attracting financial, technological and managerial resources from abroad and
promoting industrial innovation.

In some Latin American countries, demand for capital market services was
boosted with the reform and privatization of social security. Mutual funds
have mushroomed, especially in Argentina and Chile. But among developing
countries, Chile is the only one where the combined resources of institutional
investors are large and where they have a big or growing contribution to the
development of capital markets, including mortgage and corporate bonds,
privatized utilities, and venture capital. Singapore and Malaysia have sizeable
institutional investors, but because they have invested their resources mostly
in non-marketable government debt, their impact on financial sector
development has been more modest.

In some cases, restrictions have hindered growth of financial management
services—for example, preventing mutual funds from entering the pension
fund business and thus limiting their ability to exploit economies of scale.
Also, regulations have created perverse incentives by requiring guaranteed
minimum returns, which limit competition and lead to funds offering identical
portfolios. Moreover, where banks dominate the mutual fund industry, they
have not developed the industry aggressively, apparently due to lack of
competition.

To the extent that domestic financial law allows banks to operate in various
financial market segments, institutional investors (closed-end funds, mutual
and pension funds, and so on) would not weaken the domestic banking
industry. In fact, under appropriate incentives, banks may help to build
confidence in capital market institutions and investments. As domestic banks
enter new market segments through affiliates, they would be motivated to
strengthen and develop banking services relating to liquidity and securities
management, necessary for them to operate efficiently in the new fields.
Moreover, banks’ money management skills (which could be scarce in the
early days of institutional investment) could be an asset for new fund
managers.

Development of institutional investment, with the support of the banking
system, should be accompanied by strong prudential regulation and
supervision. Regulators should limit the ways banks can exploit links with
their affiliated non-financial and financial firms. Banks, for instance, should
not be allowed to transfer risks to themselves from these firms, so as to benefit from government safety nets. Also, banks should not be allowed to use subsidiaries and affiliates to monopolize an activity. For this reason, banks should be required to report and disclose information on their affiliates and subsidiaries, showing ownership, strategy, portfolio and risk structure. Comprehensive, consolidated supervision of the entire banking industry is essential. Strong legal and regulatory frameworks for investor protection in particular, are necessary if trust in the new institutions is to emerge. Investment fund regulation should address prudential rules, custodial arrangements to protect investors in the event of fund insolvency, transparency of funds’ strategies, risk profiles and fees. Legislation should also require independent directors on the board of funds.

**Strengthening prudential regulation and supervision**

*Governments should complement the creation of franchise value by adopting a regulatory regime based on rules designed to align the private incentives of market players with the social goal of financial stability, and by strengthening supervisory practices.*

Creation of franchise value should go hand in hand with development of a strong regulatory and supervisory regime. This should include incentives that align interests of owners and managers of market institutions with financial stability, and effective enforcement. The financial sector law adopted in Chile after the 1982 banking collapse is an example of how government can incorporate substantive incentives within the regulatory framework (Box 1).

Various measures can strengthen prudential regulation and supervision along market-compatible principles. Putting restrictions on asset growth is one. Especially early in the reform process, franchise values of domestic banks are likely to be highly sensitive to the dynamics of asset portfolios, which depend on the portfolios’ structure in the pre-reform stage and on structural adjustment measures introduced with reform. For example, if pre-reform credit programs limited banks’ real estate exposures, ending this would lead to investment in property and, possibly, to a speculative bubble. Witness Malaysia. Portfolio allocation rules kept the real estate and construction exposure of Malaysian banks to only about 5 percent of total assets in the early 1970s. As these programs were reduced, banks increased real estate lending, contributing to higher property prices, so making more lending to the real estate sector seemingly even more attractive. By the late 1970s, property lending accounted for about half of all new loans, and when the real estate bubble burst in the mid-1980s, banks’ exposure had risen to about 38 percent of total assets. Similar forces may have contributed to the Thai bubble. In short, financial deregulation can lead to portfolio reallocations and shifts in asset prices, underlining the wisdom of understanding banks’ balance sheets and risk management systems, as well as the case for gradual reform.
Similarly, if the pre-reform environment featured forced allocation of government bonds at below-market rates, ending the constraint could generate portfolio shifts toward higher yielding and riskier investments. On the other hand, where financial sector reform and structural adjustment in the real sector take place simultaneously, uncertainty and lack of information may drive domestic banks to retreat into riskless assets and cut credit to the economy. Portfolio limits and speed limits on growth of bank assets have been proposed, on the grounds that rapid loan growth has often been associated with individual, as well as systemic, bank failures. Such limits should aim to ensure risk diversification and smooth and reasonably sustainable growth. Growth and portfolio limits should be used to ease transition from one regime to another (especially in markets with many inexperienced players) and to prick incipient speculative bubbles. But, as with financial restraints, they should be temporary.

Box 1

Chile’s incentive-based banking regulation

Banking regulation reform should include rules designed to strengthen the incentives to limit risk, in particular through better information and safety nets that are not open-ended. Look at the way Chile did it following the massive government-financed bank recapitalization, which ended in 1986. Chile reformed its capital adequacy requirements and sought to improve credibility of (and confidence in) government supervision and regulation.

The Chileans adopted aggressive market value accounting and mandatory private supervision (auditing) of banks. In addition to government supervision of internal risk ratings and valuations by the bank, two independent private accountancy firms must audit each bank every year, and their findings must be published. Financial investments with more than one year maturity have to be repriced every month at market values.

The superintendent of banks is required to publish in a national newspaper three times a year a detailed report on each bank’s compliance with capital requirements and ratings of the bank’s assets (which reflects explicit estimates of the probabilities of loss on those assets). Moreover, the superintendency is forbidden by law from delaying recognition of losses in a bank’s accounts. Regulators’ opinions are a matter of public record.

The Chilean reform also introduced deposit insurance but only with partial coverage, so that private debtholders retain the incentive to monitor banks and punish imprudent behavior.

If a bank is in violation of its capital or liquidity requirements, its shareholders must immediately raise capital to comply with the law. Banks that cannot recapitalize must be closed, unless both their uninsured creditors and the superintendency (which insures deposits) agree to restructure the bank. Because subordinated debt holders must approve restructuring and because any restructuring plans must be approved quickly after the bank sinks below its minimum capital and reserve requirements, there is little incentive for undercapitalized banks to adopt high-risk strategies, since doing so would induce subordinated debt holders to block a restructuring to avoid liquidation. If the uninsured-debt holders are unwilling to rescue a troubled bank, the law also provides for a consortium of other private banks to make an uninsured loan that can be used to meet capital requirements.

Chilean law also requires fire walls that legally separate the financing and risks of insured banks from those of non-depository affiliates, and does not permit banks to hold equity.

Source: Adapted from Calomiris (1997).
Authorities should place particular emphasis on the strength of banks’ financial capital. The Basle Accord on capital adequacy addresses this question directly by setting minimum capital requirements for internationally active banks, determined according to the risk structure of banks’ portfolios. Of course, using capital ratios as a supervisory device for monitoring and enforcing appropriate risk management requires that capital can be meaningfully measured. This, in turn, requires clear notions of what constitutes capital. It also presumes adequate procedures for evaluating asset quality and for proper loan-loss provisioning. In short, it requires good accounting principles and practices, and sophistication on the part of bank managers and supervisors.

Capital requirements should be seen as only one element (albeit an important one) in an effective supervisory or risk management system. On the supervisory side, attention is increasingly being paid to internal controls and risk management and other procedures, as distinct from judgments about specific portfolio decisions. In terms of risk management, especially for large institutions facing a complex array of risk exposures, capital ratios alone are too crude. They must be supplemented by more sophisticated tools that can assess and take account of the full range of exposures and their interrelationships.

To the extent that the market rewards a strong capital base, banks have an incentive to hold capital in excess of the minimum requirements. This already happens in some countries, including developing ones, and authorities explicitly or implicitly encourage higher capital ratios as market or credit risk rises. Banks in Argentina, Hong Kong, and Singapore had capital asset ratios of 15-19 percent in 1997.

It is a subject of debate whether capital requirements in developing economies should be higher than in industrial countries. On the one hand, it is sensible to argue that banks operating in a more risky environment should have a stronger capital base. Small community banks in the United States, for example, tend to have higher capital ratios than money center banks, partly because their portfolios tend to be less diversified. Inadequate accounting practices, leading to difficulties in assessing capital and assets, also argue for a greater capital cushion. On the other hand, several concerns can be raised. Higher capital requirements could lead banks to select a point further out on the risk-return frontier, or to disintermediation or booking of loans in offshore subsidiaries. Alternatively, to comply with higher capital requirements, banks may be forced to invest an excessive portion of their assets in government bonds, which typically bear lower private (and social) returns.

Sanctions for misconduct should be enacted and strictly enforced, which would make financial institutions more sensitive to risk. The scheme adopted in the United States in 1991 as part of deposit insurance reform (the Federal Deposit Insurance Corporation Improvement Act) provides one example of
incentive-based corrective measures for under-capitalized financial institutions.14

Prudential regulation and supervision could mimic the market also by rewarding prudent and honest behavior with positive incentives. These could include differential capital requirements depending on quality of internal risk-management systems or less intrusive supervision and regulation of institutions judged to be better managed.

Transitional measures could be introduced to cushion the effects of new accounting practices on asset valuations, giving banks more time to adjust to the new environment without weakening them. For this to be successful, however, the authorities would need to pre-commit publicly to the end targets and the time frame. They would have to explain to the public the reasons for agreeing on lower requirements, and hold institutions to the announced standards. These provisions would put the credibility of policymakers at stake and increase their accountability.

As banks develop their risk management capacity and increase activity in international markets, they should be advised—and assisted—to adopt more advanced risk management methods. That would require, among other things, training and technical assistance for bank staff and supervisors to acquire the necessary technical expertise.

All this requires governments to improve, and constantly upgrade, the quality of supervisory institutions and give them the necessary power, legal liability limits, and independence. Corruption must be eliminated among supervisors and in the financial sector generally. Where corruption is found, appropriate penalties must be imposed. Supervisors must be held accountable for their actions.

**Adopting incentives-based safety nets**

*Safety-nets to reduce the risk of a systemic crisis should also minimize moral hazard by limiting protection or by making the cost of protection sensitive to the risk.*

Market-based economic systems are vulnerable to financial crises. The fiscal costs of resolving systemic crises and their effects on output understandably make governments acutely aware that measures must be in place to avoid them—typically, lending of last resort and central bank liquidity facilities for payment systems, conservatorship, insurance of bank deposits and so on. But at the heart of all safety nets is a fundamental incentive problem relating to the credibility of governments and their ability to avoid bailouts.

In many countries, the safety net adopted by governments is a deposit insurance scheme. These differ across countries. In many cases, deposit insurance amounts to an implicit government guarantee—that is, bankers and depositors assume that government stands ready to absorb banks’ losses if there is a crisis.
However, more formal arrangements, with explicit insurance and specific covenants, are becoming increasingly popular (Figure 4). They can also involve private risk-sharing. Whatever the form, deposit insurance schemes are intended to prevent bank runs, thus eliminating a principal cause for transmitting financial shocks throughout the economy.

Experience in both industrial and emerging economies has shown, especially in the 1980s, that financial risks are not entirely exogenous and often are deliberately taken by institutions and individuals knowing that they are protected by some form of public insurance. Banking breakdowns of huge proportions have been seen in countries with explicit deposit insurance arrangements and, as it turned out, some of these schemes were themselves a destabilizing factor through perverse incentives to aggressive risk-takers. Indeed, in some cases (Argentina in 1990 and Chile in the mid-1980s, for instance) eliminating safety nets was necessary to restore the right incentives for financial prudence.

Moral hazard is a serious problem. Indeed, deposit insurance and other elements of a safety net lose their rationale if they fail to alter perceptions as to the likelihood of government intervention if there is a systemic crisis. With deposit insurance, bank managers need to be less concerned about the potential impact of decisions on depositors and, hence, on the banks’ reputational capital. For the same reason, depositors have less of an incentive

**Figure 4**

**Number of explicit deposit insurance systems**

![Graph showing number of explicit deposit insurance systems from 1980 to 2005 for both developed and developing countries.](image-url)

*Source: Demirgüç-Kunt and Kane (1998)*
to monitor bank managers, or to assess the reputational capital of banks where they deposit their money.

Therefore, the focus of the debate on safety nets is on incentives. Some argue that deposit insurance should be explicit, with limited coverage and mandated membership, and with government powers to promptly intervene in weak participating banks. On the other hand, implicit guarantees are usually ambiguous, which should make agents sensitive about the risk of not being bailed out. There is a large knowledge gap in this area, however. In practice, it is difficult to retain the positive features of a public safety net, while limiting moral hazard. This is an area in which further analysis and research is warranted.

Bank discipline might be improved if insurance risk premiums were correlated with bank risks (determined, for example, on the basis of a bank’s capital and credit rating). An alternative is a subordinated-debt requirement. This relies on the informed agent assumption. Banks would be required to finance a minimum portion of their non-reserve assets with subordinated debt (uninsured certificates of deposits), bearing interest not greater than the riskless rate plus a given spread. Holders of subordinated debt would be well-informed market participants who face the trade-off between holding a higher earning bank liability and receiving no protection in case of default. They would have an incentive to monitor banks to keep their overall portfolio risk consistent with the maximum risk premium requirement. Their superior information would allow them to sell their holdings if banks failed to meet that requirement. Limits on the yield spread would also help insurers to set premiums closer to the true risk exposure of the banks.

This would supply the market with reliable signals on behavior of banks, provided there was a liquid secondary market for the subordinated debt and that the requirement to issue the debt was credible and effective in the first place. For this purpose, banks should not be allowed to buy their own debt, or overprice their debt with side payments to debtholders. Enforcing the limits would be tricky and likely require substantial financial and criminal penalties for any abuse.

**Encouraging self-policing**

*Market participants can establish institutions that reduce risks, ensure honest and prudent behavior, and lower transactions costs, through self-policing. The government can help by providing the necessary legal and supervisory infrastructure.*

There can be no strong financial system without strong enforcement. Often, poor enforcement, rather than lack of rules, is the cause of financial sector problems, especially in developing economies. Institutions that provide people with incentives to mutually monitor their actions can help enforce rules for financial stability. Spontaneous self-policing arrangements are found in the history of international trade and commercial law and in 19th century commercial bank clearing houses (Boxes 2 and 3). In developing countries,
Strengthening Financial Systems in Developing Countries: The Case for Incentives-Based Financial Sector Reform

**Box 2**

**How 11th-century Maghribi traders regulated themselves**

Almost a thousand years ago, Maghribi traders had probably one of the first private-sector, self-regulatory schemes based on market incentives for reputational capital and mutual trust. Of course, to them it was just good business sense.

The Maghribi were Jewish traders who lived in the Abbasid caliphate (centered in Baghdad) until the first half of the tenth century, when they emigrated to North Africa. They coped with the uncertainty and complexity of trade by operating through business associates, who they relied upon to handle some of their business dealings abroad.

In the jargon of today’s economists, agency relations at the time were characterized by asymmetric information—that is, merchants could never be sure that agents actually handed over the entire proceeds of business done abroad on their behalf. And courts were generally unable to verify agents’ claims and actions or track down an agent who absconded with the merchant’s money. The Maghribi traders solved the problem by organizing themselves into a coalition which served as a grapevine for information on (honest and dishonest) agents. Coalition members were governed by an implicit contract which stated that member would employ only member agents. Any agent who ripped off a member could never hope to do business again with other members. The flow of information that uncovered cheating also added to the standing (reputational capital) of honest coalition members. As a result, agents resisted double-dealing, since the loss in business (franchise value) far outweighed the gain from chiselling a Maghribi trader.

*Source:* Adapted from Greif (1989).

**Box 3**

**An early example of self-regulatory organization: the Medieval mercantile law**

In Europe, in the eleventh and twelfth centuries, as more and more rural folk moved to towns and cities, a new class of merchants emerged to meet the demands of the growing urban population. Significant barriers had to be overcome, however, before substantial interregional and international trade could develop: different languages and cultures, as well as geographic distances, frequently prevented direct communication, let alone building strong personal bonds that might lead to mutual trust. Also, local and often contradictory laws and business practices produced hostility towards foreign commercial customs, usually leading to confrontations.

It was during this period that the basic concepts and institutions of modern Western mercantile law (*lex mercatoria*) were formed. After the eleventh century virtually every aspect of commerce in Europe (and even outside Europe) was governed by this body of law.

In fact, the commercial revolution of the eleventh through the fifteenth century, and the later industrial revolution could not have happened without it. Mercantile law was, moreover, voluntarily adjudicated and voluntarily enforced.

Merchants formed their own courts to adjudicate disputes. These courts were also a sort of clearing house for reliable information on the reputation of individual merchants. Courts’ decisions were accepted by winners and losers alike because they were backed by the threat of ostracism from the merchant community. A merchant who broke an agreement or refused to accept a court ruling would not be a merchant for long. The threat of a boycott of all future trade (and, therefore, loss of livelihood) proved effective enough.

*Source:* Adapted from Benson (1989).
The Euro Clearing and Settlement System

Box 4

The Euro Clearing and Settlement System shows how a cooperative, private sector (commercially-based) arrangement can solve the information and trust problems in a cross-border payment system. Owned and operated by an association of commercial banks, the Ecu Banking Association (now Euro Banking Association), it was established in 1985 as the Ecu Clearing and Settlement System and headquartered in Paris for the clearing and settlement of payments denominated in a currency (then the ecu) for which no central bank of issue and lender of last resort existed. Settlement takes place at the Bank for International Settlements (at the European System of Central Banks from January 1, 1999).

Banks can be admitted as clearers by a Euro Banking Association committee, subject to compliance with requirements based on credit standing, technical and operational capacity, and willingness to participate (within approved limits) in risk-sharing schemes that ensure daily completion of settlement. Similarly, banks can be excluded in cases of serious deterioration in credit standing, or persistent non-compliance with the system’s rules. The institutional and organizational structure of the Association ensures participation of all members in decision-making. Risks connected to the highly interrelated nature of the payment and clearing business, as well as the lack of a lender of last resort, have so far provided the members with strong incentives for their own prudent behavior, careful monitoring of counterparty behavior, and improvement of the system’s robustness.

In the absence of a central bank of issue, the system operates as a closed circuit where each participant with a provisional net debit position can only square it by borrowing excess funds from participants with a provisional net credit balance. Successful daily clearing relies on the willingness of banks to re-flow their surpluses into the system to finance banks in deficit. The system also provides for facilities that commit banks with surpluses to channel liquidity (up to a limit) to a deficit (solvent) bank if one participant opposes lending to that bank. Clearing banks have access to real-time information that enables them to monitor the clearing. The system establishes multilateral and bilateral mandatory limits on each bank’s net debit and credit position, and breaches are subject to sanctions. Lately, compliance has been enforced through automated procedures.

In the past, the system has been under the oversight of the European Union’s central banks, then the European Monetary Institute, in cooperation with the central banks. The role rests now with the European System of Central Banks. Attention has been focussed on ensuring the smooth functioning of the system and monitoring its impact on ecu money markets. The overseers have also played an essential role in inducing the Euro Banking Association to take structural measures to strengthen the stability and operational security of the system according to internationally agreed minimum standards (see Group of Ten, 1990). Under the overseers’ pressure, the Association is currently developing a collateral-based liquidity-sharing arrangement and a loss-sharing arrangement to strengthen the system against insolvency of any major participant. Both schemes will reinforce the incentives for mutual monitoring and prudent risk taking.

Experience shows that, with the responsibility for system’s operation, maintenance, improvement and rule design resting with the participating banks, and through the continuous dialogue between the oversight authorities and the Euro Banking Association, satisfactory progress toward robustness can be achieved in ways that take into account both the need for economic and operational efficiency and the interest of systemic stability.
Strengthening Financial Systems in Developing Countries: The Case for Incentives-Based Financial Sector Reform

Cooperative arrangements for governing and managing natural resources are common. Such arrangements also have been established in financial sectors, especially in payments and securities markets. In some cases, they have evolved into full-fledged self-regulatory organizations, with internal statute-backed rules, financial resources, and formal structures involving members, managers, and employees, formal codes of conduct, and oversight. In developing countries, their effect is less clear cut. Where stock exchanges have been privatized for example, and become dynamic and innovative, their impact on the quality of regulation is unclear.

The underlying rationale of any self-regulatory organization is to exploit the self-interest of members by rewarding compliance and punishing non-compliance. Its purpose is to reduce credit and other risks and transactions costs. As history shows, members ultimately face the risk of losing their entire reputational capital by being ostracized by their peers. Responsibilities of self-regulators include regulation of market transactions (listing requirements, market and system surveillance, trading regulations, clearing and settlement, information disclosures); regulation of market participants (admission and licensing, capital requirements, codes of business and ethical conduct); and dispute resolution and enforcement actions, including those that deal with insider trading.

Some problems, however, may complicate setting up cooperative arrangements in financial sectors in developing countries. Scarcity of institutional and human resource may constrain the quality of oversight, and lack of reasonably homogeneous institutions could impede the formation of internally balanced structures. Moreover, with limited competition in securities markets, for instance, self-regulation may not be enough to ensure safe and efficient markets. Yet, the incentives exist for cooperative arrangements to develop over time and to play a constructive role in developing countries.

Government has an interest in supporting them. Because efficiency of dispute resolution and adjudication processes and their consistency with the objective of facilitating transactions are crucial for the success of self-regulatory organizations, the promotion of legal certainty is of paramount importance. Timeliness and quality of information are also vital.

By adding additional strands to the web of restraint that curbs imprudent behavior, self-regulatory bodies can strengthen the financial system. In general, though, they are best thought of as complements to, not substitutes for, prudential regulation and supervision (Box 4). Supervisory authorities should monitor the strategy and operations of financial self-regulators, and ensure that rules are fair and based on considerations of stability and efficiency. Government should protect market competition, or allow for full market contestability when market concentration is inevitable. The criteria for admission to self-regulatory organizations and for sanctioning misbehavior should be objective and transparent.
The government should ensure that members, shareholders, managers and employees of the organization have proper incentives. It should also make sure that members are fully aware of the risks in their business, and that their technical and risk management capacity is sufficient to make the market robust and resilient against big financial and operational shocks.

**Improving production and dissemination of information**

_A critical component of financial sector reform is improvement of the quality and quantity of available information. Governments can greatly improve incentives for the optimal provision of information._

Investors need to know about creditworthiness of financial intermediaries and the quality of financial services they purchase, just as intermediaries need to assess the reliability of their financial counterparties and borrowers and need to know about their misconduct. The flow of good quality information is critical to the efficient working of markets: it improves the franchise values of

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**Box 5**

_Do depositors punish banks for bad behavior?_

Reliable and timely information is essential if market participants are to be able to accurately judge the quality and strength of banks, and to reward or punish them according to performance and risk-taking attitude. A forthcoming World Bank study, examines market discipline in the banking systems of Argentina, Chile, and Mexico in the 1980s and 1990s by looking at the extent to which private depositors punish risky banks by withdrawing deposits (Martinez Peria and Schmuckler, 1998). The study compares data on insured and uninsured deposits, small and large deposits, and deposits denominated in pesos and dollars. The results consistently show that bank fundamentals help explain the behavior of bank depositors. As fundamentals deteriorate, so does depositors’ confidence, and they move their money out, irrespective of the size and denomination of deposits, and whether or not they are insured. In particular, depositors seem to react to information on banks’ financial strength, quality of services, portfolio diversification and risk composition.

Even insured, small depositors discipline banks. They reason probably vary. One may be lack of credibility of deposit insurance schemes: if depositors believe that in the event of a crisis their deposits will not be covered, they have an incentive to closely monitor banks. Another possibility is that, even if the insurance is credible, depositors want to avoid the costs and aggro they might face when banks fail and they have to wait to be repaid through the insurance fund.

The study confirms that depositors can be infected by contagion—that is, their decision to withdraw funds from banks is affected not only by the risk taken by their own banks, but by the action of other depositors. In the presence of contagion, market discipline may falter, since depositors, influenced by others’ decisions, may withdraw deposits from otherwise healthy banks. To avoid this herd mentality, supervisory authorities should take measures to increase information disclosure and, in general, the transparency of banking system. Also, improving the quality of information could boost the credibility of deposit insurance schemes, reduce contagion and thus avoid runs on good banks. The authors conclude that the evidence favors regulatory efforts to increase reliance on market discipline to control bank risk taking.
financial institutions with higher reputational capital and facilitates monitoring by creditors and depositors.

Government action to set the right incentives can greatly help a private market for information to develop. On the demand side, investors’ sensitivity to capital losses motivates them to use information to screen, select, and monitor institutions, or to delegate to specialized agents, to minimize risks of loss. Deposit insurance schemes, for instance, should retain strong incentives for depositors to monitor banks’ behavior and to penalize imprudent conduct (Box 5). In particular, large depositors, at least, should not be given the impression that losses from bank defaults would be covered fully by public money.

Market demand for information would prompt intermediaries, seeking to enhance their reputation, to spontaneously provide reliable information. For example, where issue of subordinated debt is a requirement for banks, healthy banks have an incentive to disclose their true status, so that the holders of subordinated debt, otherwise unable to discriminate good banks from bad, do not indiscriminately sell their holdings in the face of aggregate shocks.

Given these demand and supply factors, specialized agents may emerge to provide financial information, although issues of quality, reliability, and credibility of the information provided are not easy to resolve (credit bureaus, rating agencies, securities underwriters and so on). Information can be

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**Box 6**

**Peru: one good deed deserves another**

More than four-fifths of the countryside in developing countries has no legally recognized owner. Now, a Peruvian, Hernando de Soto, and his Institute of Liberty and Democracy are trying to bring market forces to the job of titling.

Why does titling matter? Governments gain because they can collect property taxes. Utilities can more easily identify, and then charge, those who use their services at a given address. For ordinary citizens, recognized ownership brings pride, security, and credit. (In the United States, more than half the loans to new businesses depend on formal titles as collateral.) Ownership means more investment and better upkeep for houses, workshops, and farms. Better value, too. A recent study in the Philippines found that providing deeds for property raised its value by a third.

In Peru, with support from President Alberto Fujimori, Mr. de Soto’s institute began to simplify the process of getting a deed by creating its own computerized register of land and commercial property.

This went beyond titling: experience in Africa has shown that titling alone will not expand credit if links to the financial sector are missing. So the institute’s Peruvian database is designed to be used by lenders and utilities. Easier credit appraisal and the assurance of more certainty in foreclosures or cutting off services, if need be, means less risk. The institute’s scheme is said to cost a fraction of officialdom’s.

The institute claims that properties which were given deeds under its scheme doubled in value in the plan’s first three years. Mr. de Soto sees potential partners in financial firms: the more titles, the more mortgages, and in time, a secondary market in mortgage-backed securities.
provided uniformly and disseminated widely, through for instance, periodic standardized reports on financial institutions, with assessments based on selected criteria and indicators. Or it could be customized for individual clients.

Information providers might be profit or non-profit outfits. Providers of customized information might operate for a profit and sell specialized reports for a fee. If information is proprietary, its production can be profitable (Box 6). Providers of uniform information could organize themselves as consumer unions or producer cooperatives, remunerated by their respective communities.

The government can play an important role in provision of information. Much official international discussion has focussed on the setting of standards for creating and disseminating information, with much emphasis on quality. Standards alone are not enough, however. They must be adopted and implemented. Government could subsidize for a while one or a few private enterprises until an information market takes off. Through self regulatory organizations, the government could induce private sector financial institutions to set up information services for their mutual benefit and for the benefit of clients. The government could initially provide some information services directly, as in the case of the Central de Deudores in Argentina, although at some point the possibility of letting the private sector take over would need to be assessed (Box 7).

Government could also provide infrastructure that would ease the flow of private information. It could disseminate information on bank credit risk collected in its banking supervisory capacity, and establish a centralized registry for collateral interests. Information on bank credit risk would provide basic inputs for more analytical assessments by specialized institutions, who could cross-check or combine that information with other market or network information. It would also make it possible for rating agencies to credit-score smaller firms that normally do not get ratings, enabling these firms to have access to financial services otherwise inaccessible to them. A centralized registry for collateral interests would avoid improper information on collateral use and would therefore help lenders make better decisions on lending volumes and allocation. Furthermore, the government could support the training of professionals in financial information (accountants, auditors, market survey specialists, information technology experts, even economists). Finally, the government could compile and disseminate statistical information necessary for more advanced risk-management technologies.

International discussions are currently debating the idea of promoting incentives for sound finance through global rating of financial systems. Governments could ask to have their financial systems and regulatory or
Box 7

Setting the right incentives: Argentina’s Central de Deudores

After three costly banking collapses in the 1980s, Argentina launched far-reaching financial sector reforms in the 1990s. As part of its program, the government took steps to improve credit risk transparency for banks and borrowers, and reduce informational asymmetries that may have prompted contagion withdrawal of deposits from otherwise solid banks during times of crises. Reforms included a new bankruptcy code, centralization of collateral registration for bank loans, and a centralized credit bureau—the Central de Deudores—to collect and publish the fundamental characteristics of bank borrowers and the credit risk they pose for individual banks.

The credit bureau, run by the Banco Central de la Republica Argentina, serves five related purposes:

- Enhancing banks’ abilities to control credit risk;
- Permitting banks to improve their risk-management practices;
- Facilitating the supervision of banks;
- Reducing systemic risk; and
- Supporting capital market development.

The bureau collects and distributes information about every individual and corporate borrower. This includes the cumulative debt of firms or individuals, value of collateral pledged for each loan, classification of the debt, and the business of the firm or profession of an individual. In September 1997, the bureau expanded the information it collects from banks to include data on individuals (age, marital status, income and property holdings) and balance sheet data, employment figures, and payment status of payroll taxes for firms. The bureau is investigating the possibility of further expanding the information base to include tax records, data from provincial credit registries and court records.

The data is accessible to the public via the internet. The bureau also markets a monthly CD-ROM with data on all people and firms that have defaulted on loans.

The goals of the Central de Deudores could be enhanced by making the new expanded data base available to rating agencies. This would help those agencies develop a statistical basis for judging loan quality, for both private and public purposes.

The public role in developing credit information registries should be reviewed. Public involvement may be useful in the short term to help adopt, and then strengthen, a new credit culture in Argentina. The rationale for public investment in what could be a private sector activity should, however, be re-evaluated periodically to ensure that the policy is justified.

depending on what they expect others to do. Thus close monitoring of markets and institutions by well-trained supervisors is necessary, as well as clear and timely policy responses from them to abnormal conditions.

**Strengthening informal finance**

*Governments should exploit the comparative advantage of informal financial institutions and strengthen the complementarity between the formal and informal sectors.*

The poorest people of rural and urban societies live beyond the frontier of formal finance. Credit is scarce, costly, and related to social ties. Financial transactions are personalized and often conducted directly, or through informally established groups or institutions. Savings are held in cash or real commodities, and often lent to relatives or friends on terms of reciprocal assistance.

Informal financial service providers have an incentive to deal with small amounts of money and to interact with people who are spread widely across the country. They do not carry the cost of documentation and bookkeeping, and act on information exchanged through face-to-face relationships and on rules enforced through social controls. This makes honest informal intermediaries better placed than formal institutions and government agents to reach out effectively to people beyond the frontier, and to implant the principles of a modern, market-oriented credit culture.

The modern approach to informal finance seeks to exploit the comparative advantage of informal financial institutions. Reforming the financial sector in developing countries should aim at strengthening the complementarity between the formal and informal sectors. Formal financial institutions who find it uneconomical to deal with informal borrowers directly could operate through informal lenders; these would act as second-layer intermediaries. Through them, large pools of small savings could be placed in formal markets and benefit from greater diversification and higher returns. Similarly, savings from the formal sector would flow into informal sector projects, something that would not normally happen. While formal institutions would lend to the second-layer intermediaries against collateral, end-borrowers may not have to pledge collateral, given the information and enforcement systems assisting informal lenders.

Another important advantage of any informal-formal link is that formal financial institutions would have an incentive to select the best informal service providers and, so, eliminate the low-quality ones from the market. The franchise value of those informal providers doing business with formal institutions would increase. Indeed, they would seek out ties with the formal sector, a powerful incentive to strengthen their reputational capital by serving their community fairly and efficiently. One example of successful links between the formal and the informal sector is offered by moneyshops in the Philippines (Box 8).
Box 8

How moneyshops tie together the formal and informal sectors in the Philippines

Forging links between the informal and formal financial systems that benefit borrowers and lenders in both (complementarity, in the jargon) is nothing new. A commercial bank in the Philippines did it more than 25 years ago and now has a thriving business in moneyshops that serve market stallholders, informal vendors and other customers.

Moneyshops in the Philippines were pioneered in 1973 by the (then) Philippines Commercial & Industrial Bank (now Philippine Commercial Bank). Moneyshops are located close to public food markets and serve market stallholders and their customers. Their loans allow stallholders to pay cash for produce and other inventory upon arrival. Moneyshop lending is unsecured; borrowers do not sign any documents, although moneyshops usually require a copy of the lease agreement between the stallholder and the market owner. Moneyshops are usually staffed by two teller-collectors, one supervisor-accountant, and one officer to approve loans and oversee operations. Teller-collectors go through the market once or twice a day to collect loan installments and accept savings deposits. This daily collection system is critical: it relieves borrowers of the burden of leaving their stalls to make payments, and permits the lender to monitor borrowers’ activities.

Stallholders have long-standing business ties with itinerant vendors who do not have stalls but sell small volumes of produce near the market. Both parties to these relationships are called suki and both benefit. The suki relationship allows small vendors to both obtain produce at favorable prices and in good condition, and get credit from stallholders; as a result, stallholders enjoy greater turnover and risk diversification. Hence, moneyshop credit to stallholders facilitates convenience to consumers (some consumers obtain credit as part of their suki relationship with small vendors), and allows more people to participate in financial markets by lowering transaction costs associated with monitoring and enforcement, and by reaching out to individuals that do not have access to formal finance. As the links between the formal and the informal sectors enhance the involvement of informal market participants in the formal economy, these become more attractive to formal intermediaries seeking new business, and obtain better conditions for access to financial resources.

Source: Adapted from Von Pischke (1991).

Informal service providers need to be able to price their services consistently with the need for a fair return on the risks taken, and should be permitted to offer saving and transaction services to their customers (for instance, saving and deposit accounts, money transfers and payment services). Such services would enhance the relationship between the service provider and end-users, as they would convey more information on the income and payment time profile (and, ultimately, on creditworthiness) of loan customers, while they would supply end-users with means to test the reliability and accessibility of providers. In close communities, saving and transaction services increase the loan customers’ incentive to repay loans, knowing that loans effectively come from neighbors rather than distant, anonymous agencies; peer pressure and peer monitoring can create powerful incentive effects. Furthermore, these services contribute to the formation of larger financial savings by inducing small rural savers to convert their accumulated tangible stores of value (jewelry, livestock, cash, and so on) into higher-yielding and more liquid
financial assets. By doing so, they add to liquidity of the economy and enable small savers to diversify away from local risks.

In the longer term, improving incentives in the informal financial sector would strengthen the domestic base of savers and borrowers, and increase the quality of resource allocation and use in those parts of society otherwise condemned to stagnation and poverty. Governments should help strengthen the debt repayment capacity of informal sector agents. Investments in physical infrastructure in poor rural and urban areas, improvements in enforcement of contracts and property claims, regulatory reforms in land titling and registering, and extension of information services all can trigger significant changes in the income generation capacity of the local people and prod their entrepreneurial spirit with relatively modest public spending.

Government could mobilize resource expertise to help identify technologies and projects best suited to local communities. Likewise, governments could help the best-performing informal service providers with technical and financial assistance on accounting techniques, financial practices (such as asset and liability management), project evaluation and performance analysis, monitoring, management-information and risk-management systems.
Economic theory and empirical evidence show that efficient and stable finance lies at the heart of economic development, as much as unstable and weak financial sectors, may be a cause of protracted interruptions of domestic economic growth and long-term productivity decline. International attention is now focused on the need to build up stable, robust and shock-resilient domestic financial sectors in all countries as a way to ensure sustained development and reduce global volatility. Policymakers agree that, for this to happen, competitive market forces must be combined with sound regulatory and supervisory regimes aimed at enforcing good conduct from all market players.

Reforming financial sectors is a long process for which there is no universal blueprint. But the longer the process, the greater the risk that measures intended to be temporary become permanent, weakening (rather than strengthening) domestic institutions, preserving rent positions, and generating inefficiencies. Moreover, the longer the process and the more delayed the benefits, the greater the temptation for the government to resist difficult measures and postpone reform indefinitely.

Countering these risks requires the design of incentives that, over time, push the system towards better performance. It requires strong government commitment to the objectives of reform, a transparent reform program with a well-defined time schedule for implementation, and participation by all parts of societies in the process and in monitoring reform implementation.

Markets sometimes fail but market failure is not reason enough to replace markets. Governments, too, suffer from severe information and incentive problems. Policymakers recognize that market failures need to be measured against government failures. Sound policymaking involves the design of current policies that will lead to a good trade-off between risks of the two types of failure.

Identifying and promoting ways to help markets perform better is an essential task of development institutions, such as the World Bank, and critical for their client members. Indeed, it is in the long-term interest of the entire international financial community to assist developing countries in reforming their financial sectors at an early stage of economic development, to allow them to achieve stable and sustainable growth and promote their integration into world markets with a stable and efficient financial sector, robust enough to face external shocks and avoid the risk of spreading instability.

Multilateral financial institutions can contribute to this significantly not only by providing financial and technical assistance, but through conditionality, development of sound practices, surveillance, and policy dialogue with the countries involved.
The World Bank’s role begins with the assistance it provides government in diagnosing the current strengths and weaknesses of the financial system; analyzing how the system compares with other current and past examples or models; training bank supervisors, bankers, and other financial market participants; restructuring financial institutions; and advising authorities on the reform process. This advice relates to areas such as sequencing policy changes, impact of changes on the entire system, sources of assistance in specific areas, and pension finance and more generally institutional investors. Bank lending operations, such as structural adjustment loans or lines of credit, can be employed to further these efforts. A fundamental lesson of the Bank’s experience in this field (confirmed by policymakers) is that assistance in creating a sound strategy for financial sector reform and development is key.

In the past year, the Bank has committed resources to improve its ability to deliver policy and technical advice in the financial sector, has increased staffing in the financial sector by almost 25 percent, and is moving to disseminate (both on the web and in other media) examples of sound practices for all aspects of financial reform and the pros and cons of controversial policy issues. The Bank’s Economic Development Institute has, for some years, been increasing its training programs. The Institute’s programs in banking, finance, and capital markets aim to help strengthen financial systems through seminars, workshops and interventions that promote policy dialogue and skill transfer. The broad range of programs and activities target senior-level policy makers, financial market participants and others who are themselves involved with training. Programs are designed and delivered in partnership with institutions in member countries of the World Bank, and global financial sector organizations.

The newly created Toronto International Leadership Center for Financial Sector Supervision provides an international forum in which financial sector supervisors exchange practical experience about how to strengthen financial markets, forge new contacts, and hone strategic thinking. The Toronto Center was launched by the World Bank Group and the Government of Canada, in cooperation with the Schulich School of Business of York University, the International Monetary Fund, the Bank for International Settlements, and the International Organization of Securities Commissions. Programs are targeted at senior public sector executives with responsibility for financial sector regulation and supervision.

Given the many unanswered questions in finance, the Bank has also increased resources devoted to policy-oriented research in this critical area. Current projects include:

- **Financial structure**: What type of financial structure will best support growth in a country; and what legal, regulatory, and policy changes will create a growth-promoting financial sector;

- **Deposit insurance**: How the provision and design of a safety net influences banking outcomes;
Financial regulation: How countries’ financial systems are regulated and supervised, how they can be quantified, and to what extent the differences matter;

Banking crises: Further refinements on a model that can be used to predict banking crises, using macro, financial, and institutional indicators;

Bank insolvency: How countries have dealt with insolvency, and what the relationship has been between political economy factors and success or failure in coping with crises;

Banking privatization and internationalization: How privatization and internationalization have affected the performance and outcomes in the banking sector and the economy;

Pension reform: “Second generation” issues in the design and regulation of funded pension schemes; and

Capital market development: Legal and infrastructure preconditions, regulation of nonbank financial intermediaries, and so on.

For the benefit of policy makers, their advisers, and the development community at large, the World Bank will make available—on the internet beginning by the first half of 1999—the results of these projects, along with other information on how financial systems are structured, regulated, and supervised.
**Endnotes**


5. As the report of the Working Party on Financial Stability in Emerging Market Economies (1997) indicates, “A fundamental guiding principle in the design of all regulatory/supervisory arrangements is that they should seek to support and enhance market functioning, rather than displace markets”. The report emphasizes that “[w]here governments do intervene, it is important that they do so in ways that restore as fully as possible the channels of market discipline, to the extent that those channels are not disruptive to financial stability”. Elsewhere, the report recommends that “[w]here financial systems are less developed, a key objective of policy is to reduce the need for regulation in the future by improving the quality of private market forces”. Drawing on the historical experience of industrial countries, the report goes on noting that “the emphasis in regulatory and supervisory approaches shifts as markets liberalise from explicit limits or other rules towards primary reliance on guidelines, supervisory assessments, and incentives for sound business behaviour on the part of owners, stakeholders and management”.

6. The principles developed by the international supervisory committees and groupings are: the *core principles for effective banking supervision* developed by the Basle Committee on Banking Supervision (BCBS); the *principles of securities regulation* developed by the International Organisation of Securities Commissions (IOSCO); the *principles of sound regulatory and supervisory framework for insurance companies* drawn up by the International Association of Insurance Supervisors (IAIS); recommendations issued by the Committee on Payment and Settlement Systems of the G-10 central banks for the smooth functioning of domestic and cross-border payments and securities settlement systems. The BCBS, IOSCO and IAIS will also cooperate in a joint
international bodies involved in the exercise are: the International Accounting Standards Committee, the International Swaps and Derivatives Association, the International Securities Market Association, the Emerging Market Traders Association, and the Group of Thirty.

One of many examples can be drawn from the literature on credit risk management. Treating all credit exposure (across all outstanding financial contracts) with a single counterparty as components of a single portfolio, price correlations underlying the contracts, or the existence of a netting settlement agreement with the counterparty, or the co-presence in the portfolio of derivative contracts with offsetting claims on income flows, can all reduce the total portfolio exposure considerably below the sum of exposures on individual contracts. As a result, the capital to be allocated to the expected portfolio loss is less than the capital that would have to be immobilized if the exposures were treated separately. See Smithson et al. (1995).

The example of CreditMetrics in credit-risk management is illustrative. As the interest of regulators in limiting banks' credit risk on derivatives has grown considerably over recent years, banks have introduced internal credit limit systems for counterparties. As it turns out, methodologies to calculate such limits are *ad hoc* and often lead to over- or under-use of bank capital. Eventually, one market agent has developed and commercialized a methodology (CreditMetrics) that replaces exogenous limits with endogenously-determined, credit risk-based, optimal credit exposures. These optimal values are obtained by equating the return from expanding the exposure incrementally with the additional risk associated with the increase in exposure.

Among the variables that determine reputational capital, the most relevant are: the institution’s long-term mission and strategy, its presence in the market, its financial strength and profitability, the strength of its organization and governance, its capacity to manage financial and operational risks, its past compliance with legal and financial obligations, the quality of the service and advice it delivers, the quality of projects it finances, the quality and ethics of management and personnel, and its transparency.


These points were made by Calomiris in the context of related policy discussions.

See Caprio, 1994, Chapter 10.


Corrective measures—whose intensity varies with the degree of bank under-capitalization—involves limits on deposit taking, suspension of...
dividends, requirement of a capital restoration plan, restrictions on asset
growth, approvals for acquisitions, branching and new activities,
ordering of recapitalization by existing owners, restricting inter-affiliate
transactions, restricting deposit rates, restricting pay of officers,
suspension of payment on subordinated debt, restricting some other
activities, initiation of resolution process, and initiation of
receivership/conservatorship.

15 On central bank lending and on conservatorship, see IMF (1998). On
issues relating to conservatorship, see World Bank (1998).

16 Caprio and Klingebiel (1996a, 1996b) and Lindgren et al. (1996) provide
evidence of the relevance of the moral hazard problem in financial systems both
in industrial and developing countries.

17 See Keehn, 1989; Wall, 1989; Calomiris, 1997.

18 See Keehn, 1989; Wall, 1989; Calomiris, 1997.

19 An alternative to a safety net is “narrow banking.” A narrow bank, chartered
within a bank holding company, would issue insured deposits fully backed by
low-risk, market-priced assets. All other operations of the bank holding company
would be unregulated, and deposits outside the narrow bank would be restricted
to uninsured time deposits. To the extent that banks can lure depositors into
uninsured short-term deposits bearing higher yields, however, the narrow
banking scheme would still leave the system unprotected and banks vulnerable to
runs in the event of perceived risks by depositors. Moreover, the financial system
could be seriously disrupted by problems in the unregulated financial sector—
including, for example, the payment system—which would become a much
larger and even more important element in the financial system. In the light of
such vulnerability, narrow banking is not politically credible.

20 Interestingly, examples drawn from history show that spontaneous cooperative
arrangements have developed within the private sector in the absence of
government action to overcome constraints that high transaction costs were
posing to otherwise profitable international business opportunities: the prospects
of long-term profits drove agents to establish self-policing rules that made those
prospects possible by reducing the costs of transaction. More recently, as
governments have realized the importance of international cooperation, they
have increasingly taken a more active role in promoting and sustaining private
sector cooperative arrangements at industry levels. In international finance, an
illustrative example is provided by the implementation of the strategy of the G10
central banks for reduction of settlement risk in foreign exchange transactions

21 Ostrom (1990) observes that all successful cases of self-policing
arrangements featured a operational principles: 1) clearly defined
boundaries and membership; 2) congruence between members’ resource
appropriation and provisions; 3) member participation in defining
operational rules; 4) monitoring; 5) graduated sanctions; 6) conflict-
resolution mechanisms; 7) members’ right to devise own institutions unchallenged by government; and 8) in the case of larger systems, activities were organized in multiple layers of nested enterprises. Certain conditions are necessary for self-policing arrangements to emerge: First, a relationship of reciprocity must result from a deliberate and voluntary agreement of the parties involved. Second, reciprocity must be perceived by members as involving fair exchanges of values. Third, the relationship between members must be reversible: each may be called on by (or themselves call on others to provide, the services agreed under the arrangement (see Fuller, 1964 and Benson, 1997). A fourth fundamental condition is that each member must be in a position to own the (positive or negative) rewards from her action: members must be held responsible for their action, and must be able to appropriate the benefits and the costs associated with their action are here adapted to the context of self-policing arrangements.

Government should not preclude (indeed, it should encourage) private judicial mechanisms and institutions that enforce good conduct. This would be particularly useful in countries with slow judicial processes and where the general orientation of law is biased against private commercial practice. In some cases, out-of-court procedures have been successfully employed to govern corporate restructuring (see World Bank, 1998). As history shows, self-policing arrangements have been successful even in the absence of the coercive power of the government. Members formed their own courts to adjudicate disputes, and courts’ decisions were accepted by members under the threat of reputational capital losses. “Private” adjudication schemes guaranteed speed, informality and technical competence. The adjudicative procedures and the rules adopted by the courts were designed to facilitate commercial interactions.

23 The monthly report “Financial Information” of the Chilean Superintendency of Banks and Financial Institutions provides an example of public disclosure of bank credit risk (see Honohan, 1997).
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<td>1998b</td>
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