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**BANKS
& CAPITAL
MARKETS**

Edited by
Shahid Javed Burki
Guillermo E. Perry
with
Augusto de la Torre
Mila Freire
Marcela Huertas

PROCEEDINGS OF A CONFERENCE HELD IN SAN SALVADOR,
EL SALVADOR

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**BANKS AND CAPITAL MARKETS: SOUND
FINANCIAL SYSTEMS FOR THE 21ST CENTURY**

Proceedings of a
Conference held in

San Salvador, El Salvador

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Introduction

Opening Remarks

S H A H I D J A V E D B U R K I

I WILL START MY VERY BRIEF STATEMENT THIS MORNING BY REMINDING THE AUDIENCE THAT this is the fourth Annual World Bank Conference on the Development of Latin America and the Caribbean. The first three conferences, held at Rio de Janeiro, Bogota, and Montevideo, covered the subjects of structural adjustment, poverty, and trade and regionalism. The conference that we are starting here this morning will deal with institutional development—in particular, in the financial sector.

This is an appropriate time to deal with this issue. We have a great deal of ground to cover in the next couple of days, which is why I will confine my remarks to just a couple of points. I have prepared a more detailed statement that will be distributed this morning [see page 5].

The point I wish to underscore this morning concerns the progress we must make in developing institutions and promoting organizational reform in order to deal with the forces unleashed by the phenomenon we loosely refer to as globalization. Globalization means many different things. But the aspect of this phenomenon that has caught the attention of so many people is the ease with which capital flows in and out of emerging markets.

The effect of the volatility of these flows is vividly demonstrated by the ongoing crises in East Asia. Institutional and organizational development can deal with this volatility. I believe that the package of policy reforms we generally refer to as the Washington Consensus did not sufficiently address the issue of institutional soundness. This is why we have titled our report for this conference, “Beyond the Washington Consensus: Institutions Matter.”

I want to emphasize that financial-system soundness is undeniably important for growth and development. Employment generation and poverty reduction are not independent of the quality of financial systems. These systems are not mere channels that bridge savings and investment finance. They are information problem-solvers. As my colleague Joseph Stiglitz likes to put it—and perhaps

will reemphasize here this morning—financial systems are to the economy what brains are to the human body.

The ongoing process of financial integration and globalization of financial markets puts a premium on financial-systems strengthening. This process promises large benefits over the medium and long term but carries important risks in the short run. This has been seen in East Asia today. In particular, rapid liberalization and financial market globalization—in the absence of sound legal, regulatory, supervisory, and institutional frameworks for domestic financial systems—are likely to increase vulnerability and increase cyclical swings, raising the probability of financial crises.

These are painful lessons learned from the Tequila and, more recently, the East Asian financial crises. These crises

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have been, to a large extent, the result of rapid increases in perverse incentives in financial systems due to major weaknesses in governance, monitoring, and transparency in the financial and non-financial sectors. These crises have shown that even countries with high savings and investment rates, low recorded budget deficits, and low inflation are not exempt from severe financial disruptions. We have

learned that our economies are only as strong as their financial systems.

These and many other issues will be discussed in the next couple of days. I want to conclude by wishing this conference a great success, and by thanking once again the government of El Salvador and FUSADES for making this occasion possible.

Globalization: Institutional and Organizational Imperatives for the Developing World

S H A H I D J A V E D B U R K I

IN THESE FEW PAGES, I WILL ATTEMPT TO PROVIDE A CONTEXT—AN ANALYTICAL FRAMEWORK—within which I hope we will begin to review the relations between developed and developing countries in the post-Cold War world. The context is that of globalization and the imperatives that it establishes—or reinforces—for institutional and organizational development in the developing world. A major part of what I want to do is to look more closely at a number of much used terms, namely: globalization; institutions and organizations; and “the developing world.”

Globalization

The term “globalization” is used loosely: It has been employed to refer to a number of different phenomena, issues, and trends. For the present purposes, I want to propose a definition that encompasses three distinct elements.

First, I believe the term should include the extraordinarily broad consensus that has developed over the past decade and a half on what constitutes the appropriate basic package of policies that countries should adopt to secure a sustainable pace of development. This agreement on a standard set of basic policies often goes under the label of the “Washington Consensus.” Since the collapse of the Communist regimes in East

Europe, some analysts have indeed suggested that we can declare that history itself (defined as ideological polarization) has come to an end.

Second, this consensus on the content of policy reforms has helped encourage the opening of the economies of the Third World to trade, capital flows, and transfer of technology. This process of opening has occurred at a fast pace, although there are still constraints to a free flow of some of these factors. Constraints are most palpable in the flow of workers across international borders. While we are seeing easier movement of workers across borders *within* the First World (e.g., within the European Union), workers moving from the developing to the industrial world are more likely to migrate illegally than legally.

The third element in the process of globalization is the consequence of changes occurring within the industrial

countries. We need to underscore two of these changes—*first, demographic changes, and second, the redefinition of the role of the state.* A profound demographic change in the developed world has brought about a sharp decline in the rate of fertility over several decades, accompanied by the extension in life expectancy. Together these make for aging populations and rising “dependency ratios” of retirees to active workers.

When this demographic change is read with the change in the way people now view the legitimate role of the state, we begin to see the relevance of these developments for understanding the phenomenon of globalization. It was not only under Margaret Thatcher and Ronald Reagan that the role of the state was so profoundly redefined. The reform of the welfare system has persisted under Bill Clinton and Tony Blair, putting much greater pressure on indi-

viduals and households to take care of their own financial future, including—most specifically—saving to pay for their own retirement, rather than expecting to rely on state-organized “pay-as-you-go” pension schemes. Today, a larger proportion of the gross domestic products of the industrial world is flowing into pension and mutual funds than ever before. Global assets of pension funds alone, for example, reportedly grew from US\$4.3 billion in 1989 to US\$7.0 trillion in 1994 (and their cross-border investments from US\$302 billion to US\$790 billion over the same period).

Institutional investors’ search for high rates of return has taken a significant proportion of global savings to emerging markets—largely because of the expectation that the rate of return in the new markets in the developing world, even when weighted by risk, would be more than can be obtained in the industrial markets. Net private capital flows to developing countries grew almost six-fold between 1990 and 1996, to exceed US\$240 billion in the latter year. The term globalization is thus often used to describe this almost exponential growth in the flow of funds to the developing world.

We need to note three features of this flow of funds between developed and emerging markets. First, the speed of their growth, and the likelihood that—notwithstanding what has happened in East Asia over the last year—this growth will in time resume. Second, their concentration among a few countries. While new destinations are being added gradually to the list of acceptable emerging markets, the fact remains that a dozen developing countries account for four-fifths of total capital movements into the developing world and a score of countries for 95 percent. Third, the ease with which capital can move in and out of emerging markets. This volatility, in turn, is the consequence of three things: opening of financial markets in much of the developing world; rapid development in technology and new financial instruments; and at times—I would argue—lack of sound knowledge among the players in the markets about the economic fundamentals of emerging countries. These three features have produced an extraordinary amount of volatility in the flow of funds. It should be pointed out though that, while capital can move quickly in and out of developing countries, its exit does not necessarily mean that it goes back into the capital markets of the industrial countries. At times these flows may go to and fro among different emerging markets.

Institutions and Organizations

It is useful to handle together the next two commonly used terms in today’s lexicon: institutions and organizations. In so doing, I should be clear at the outset that I feel the underestimation of the importance of institutional aspects has proved to be one of the key missing elements of the original Washington Consensus. By institutions, I mean a set of rules and incentives that affect behavior. By organizations, I mean structures that apply these rules to transactions. Both institutions and organizations can take two different forms and shapes: They can be either formal or informal. Examples of formal institutions are constitutions, legal systems, government regulations, and international treaties. Cultural norms and traditions are examples of informal institutions. Examples of formal organizations are legislatures, courts, financial regulatory systems, and such international entities as the International Monetary Fund (IMF), World Trade Organization (WTO), International Labor Office (ILO), and the International Atomic Energy Agency (IAEA). Examples of informal organizations might include extended families, kinship groups, or networks of ex-classmates.

A two-by-two matrix, with institutions on the horizontal and organizations on the vertical axis, provides what I want to call policy spaces. All these spaces—four in all—are important. The interaction between formal institutions and formal organizations is the policy space in which the Washington Consensus was largely applied. It is also the space in which policy reforms are being introduced as the countries of East Asia deal with their ongoing financial crisis.

The interaction between formal institutions and informal organizations—or between informal institutions and formal organizations—are the two spaces or boxes where many of the problems relating to poor governance occur. The fourth box (of informal institutions and informal organizations) defines the space in which, for example, many of the poorer inhabitants of large Latin American cities principally function (“the informal economy”), as well as some of the more traditional societies of great interest to anthropologists. The ways in which citizens relate to one another, in those aspects of their lives where the formal apparatus of the state is largely absent, have come to be defined in recent years by sociologists—and now many economists—as “social capital.”

The space in the northwestern quadrant of the matrix in Figure 1 is occupied by systems of formal rules and structures at many different levels. In the environment pre-

FIGURE 1
“Policy Spaces” Defined by the Interface between Institutions and Organizations

INSTITUTIONS		
	FORMAL	INFORMAL
Formal	Traditional space for undertaking reforms	Propensity for poor governance
Informal	Propensity for poor governance	Self-regulating “traditional” systems

sented by globalization, we should be interested in four different levels:

- The **international** level, where institutions such as IMF, WTO, Bank for International Settlements (BIS), ILO, IAEA, Global Environment Facility (GEF), and the still evolving structures associated with the Kyoto agreement apply internationally agreed upon norms and sets of rules.
- The **national** level, at which government operates structures such as tax and custom authorities, regulatory agencies, courts, and legal systems to apply sets of rules and norms on which national consensus has been formed. One important aspect of the globalization phenomenon is that, in many areas, international norms have begun to impinge upon national discretion. There is now increasing consensus about the universality of many international sets of rules. Human rights, non-proliferation of nuclear weapons, and controlled emission of greenhouse gases are examples of areas where outcomes from purely national dialogue now need to be constrained by the evolution of international norms.
- The third level where formal structures apply formal rules is **sectoral**. This happens in a variety of ways: Schools and universities impart formal education; hospitals and clinics provide known and accepted treatment; power companies distribute energy at a certain voltage and frequency, etc.
- The fourth level constitutes the formal relationship between **national and sub-national** governments. National constitutions generally provide in varying degrees of detail the sets of rules that govern these relationships. In many cases, important formal structures (such as constitutional courts) exist to ensure that these rules are observed.

The Developing World

The term “developing world” is often used as if there is a homogeneous part of the globe that can be clearly distinguished from the “developed” countries. I want to suggest that this is misleading. In fact, over the last several decades—and particularly since the collapse of Communism in East Europe—two significant developments have occurred. One, the developed world has become more homogeneous and better integrated. This has happened for many reasons, among which perhaps the most important have been the rapid development of information and communications technology, travel and tourism, the rise of the global firm, and standardization of product lines. At the same time, though, the developing world has become more heterogeneous. This is partly because of the significant differences in the ways countries have integrated into the global economic system, and also because of the increasing divergence in the rates of economic growth among developing countries compared with three to four decades ago (conversely, growth rates among the developed countries have converged).

It may be useful to divide the developing world into three categories. First come those countries that are being increasingly incorporated into the global economic system. This group of countries includes most of those in East Asia, several in Latin America, and some in East Europe. The second category of countries are being increasingly marginalized. Most of the countries in sub-Saharan Africa, some in East Asia, and some also in Central Asia belong to this group. The third group falls in between these two categories and this is where modernization and backwardness co-exist. Much of South Asia, North Africa, and the Middle East belongs to this category.

Why draw this distinction among the countries of the Third World? Such a typology helps us to define the emerging relations between the industrial countries and the developing world. A schematic presentation (see Figure 2) helps to identify the principal areas of focus in relations between the developed world and, in turn, each of the three groups of countries we identified above. It also, by implication, underscores the remarkable change that has occurred in these relations since the collapse of Communism in East Europe and the Soviet Union. Governments and the private sector in developed countries now look at the developing world not through the old ideological lenses, but through more pragmatic lenses that focus both on upside opportunities and on downside apprehensions.

FIGURE 2

Globalization and the Evolving Relations between Developed and Developing Countries

THE DEVELOPING WORLD	NATIONAL	SUB-NATIONAL
Countries integrating the global system	<ul style="list-style-type: none"> ✦ International financial markets ✦ International financial regulatory systems ✦ New world trading rules ✦ Global environmental regulations ✦ Labor laws 	<ul style="list-style-type: none"> ✦ International finance (municipal finance) ✦ Provincial/state reforms
Intermediate countries	<ul style="list-style-type: none"> ✦ Official capital flows ✦ New world trading rules ✦ Labor laws ✦ Nuclear non-proliferation 	
Marginalized countries	<ul style="list-style-type: none"> ✦ Concessional assistance ✦ Capacity building 	<ul style="list-style-type: none"> ✦ International non-government organizations ✦ Social capital formation

Finally, I want to point to another aspect of Figure 2—the fact that it further subdivides issues into those at national and those at the sub-national level. It is important to view the developing countries at these two levels since many national governments remain weak; some are even weakening. In India, for instance, many international players are ignoring the federal government and going to the sub-national level. This is particularly true of the software and information industries. If we move from the search for opportunities to the area of fears and apprehensions, we need to note as an illustration the fear that, in extreme cases, the collapse of the state would produce massive migration of people. The Western countries realize that a significant number of migrants would choose destinations in the West. The United States' concern with the developments in Haiti is motivated in part by this fear, which is why there is such a great deal of interest in working with non-government organizations and building social capital in order to preserve social stability even in the presence of economic difficulties.

Conclusion

By way of conclusion, I would like to offer the following four assertions:

One, the process of globalization defined in the broad terms used in this presentation will continue at a rapid pace. However, it will not affect the developing world evenly. It will be of great significance for the first category of developing countries, while it will continue to increasingly marginalize the third.

Two, globalization is likely to continue to be associated with volatility in the developing world. The types of crises we saw in Mexico in 1994–95 and are now witnessing in East Asia will continue to occur with frequency unless the developing countries turn their attention to institutional and organizational reform. The big mistake made in the late 1980s and the early 1990s was to assume that policy change as implied by the Washington Consensus could produce positive results without much attention being given to institutional and organizational reform and restructuring.

Three, there are important synergies to be obtained by moving at the same time at all four levels of institutional and organizational reform—international, national, sectoral, and sub-national. There is a tendency to address each crisis by looking at institutional and organizational change that seems most relevant at that time. As globalization proceeds, it is important to adopt a more comprehensive, holistic approach.

Four, I should point to a little noted trend in recent human history when looked at from the perspective of institutional and organizational development. As the global community has faced crises, it has sought institutional and organizational responses principally at the global and the national level. The creation of the United Nations, the Bretton Woods sisters, and the General Agreement on Tariffs and Trade constituted the international set of responses. The New Deal in the United States, the welfare state in the United Kingdom, and much later the adoption of the Washington Consensus are examples of

national responses. While the international and national levels may indeed be the right place to start, we should not forget the third level of response, namely the relationship of the sub-national communities to the nation-state—and the issues related to decentralization. This is a set to which not much attention has been given, yet a recent article in the *Washington Review* reminded us that the global political

system of some 180 states overlays another level of 500 or even 1,000 potential states among entities that possess some kind of distinctive regional identity. The danger that pressures of globalization may encourage a process of fragmentation along these lines is one of the downside risks to which, arguably, too little attention has until now been paid.

The Role of the Financial System in Development

JOSEPH STIGLITZ

ECONOMISTS HAVE LONG RECOGNIZED THE IMPORTANCE OF THE FINANCIAL SYSTEM. IN the year since the onset of the East Asian crisis we have increasingly heard that the financial system was one of the main causes of the crisis, that the financial system needs to be reformed in order to resolve the crisis, and that we need to pay attention to the effects of other reforms on the financial system. Many of these discussions treat the financial system in isolation or link it superficially to the macroeconomy. In my remarks today I would like to discuss the intricate links between the financial system and the macroeconomy. My starting point will be microeconomic models of finance developed over the past 25 years. The main result of these models has been to show just how different the financial sector is from other sectors, including the pervasiveness of non-market clearing and inefficient equilibriums. I will then go on and apply these ideas to a discussion of finance-based macroeconomic models, using them to shed light on the causes of business cycle fluctuations and some of the determinants of growth. Finally, in the last part of my discussion I will respond more directly to developments in international capital flows, including the questions of capital account convertibility and the response to crises.

The Importance and Limitations of Financial Markets

I would like to begin by discussing the role of the financial system and why it is different from other sectors of the economy. Individual entrepreneurs rarely have enough of their own capital to undertake investments themselves. Individual savers, without pooling their money, would not be able to take advantage of the potential increasing returns to scale of their investments, and would face a large degree of risk with little liquidity. The financial system—including banks and other financial intermediaries, equity markets, and debt markets—solves these problems by *agglomerating* capital from many smaller savers, *allocating* capital to the most important uses, and *monitoring* to ensure that it is being used well. At the same time, the financial

system transfers, pools, and reduces risk, increases liquidity, and conveys information.

Well-functioning financial systems do a very good job of selecting the most productive recipients for these resources and ensuring that they are using them in high-return activities. In contrast, poorly functioning financial systems often allocate capital in low-productivity investments. The differences in terms of growth and total factor productivity can be enormous.

In introductory economics courses we are taught to use demand and supply diagrams to analyze markets for apples and bananas. We are also taught that, provided there are no externalities, the competitive price is efficient. Some go on to apply this theory to financial markets, looking at the supply of funds, the demand for funds, and the market-

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clearing interest rate. This simplistic theory is the basis for the belief that financial markets need to be fully liberalized from the “interference” of governments. Unfortunately, this framework makes little sense in approaching finance, which is concerned with the exchange of money today for the *promise* of repayment. Given the existence of uncertainty and the lack of complete futures markets, this intertemporal transaction entails risks, especially the risk of bankruptcy. Information about these risks—both about the type of borrower and the actions he or she undertakes after borrowing the money—is essential.

The fundamental theorems of welfare economics, which assert that every competitive equilibrium is Pareto efficient, provide no guidance with respect to the question of whether financial markets—which are essentially concerned with the production, processing, dissemination, and utilization of information—are efficient (Greenwald and Stiglitz 1986). On the contrary, economies with imperfect information or incomplete markets are, in general, not Pareto efficient; there are feasible government interventions that can make all individuals better off.

These are not just academic details. Governments play a large role in all of the most successful financial markets. Wall Street, the international emblem of free markets, is one of the most highly regulated markets in the United States. But let me also be clear: This observation should not be the basis for the government to take over the financial system. History does not offer many examples of highly successful economies that did not accord the market a central role in the allocation and monitoring of capital. Theoretically, the case for a government-run economy rests on the same highly restrictive assumptions as the case for a purely free market economy, notably the assumption that there is perfect information (Stiglitz 1994b). Governments are often at an even bigger informational disadvantage than the market, and can suffer from more serious principal-agent problems.

I would like to illustrate the importance of these informational problems by discussing the three most important forms of capital: equity, long-term loans, and short-term loans. This discussion will form the basis of my discussion of the role of financial markets in macroeconomic fluctuations and growth.

Equity

Equity has several advantages. Companies share risks with their investors. There is no fixed obligation to repay, and the

value of the equity investment itself varies with the condition of the firm. Unlike debt, equity does not encourage companies to take excessive risks. With debt, a company gets the full benefit of the upside realization of the risk, while the marginal cost of bad realizations is limited. In contrast, the risk incentives are more aligned with equity.

Despite these advantages, in most countries equity is a trivial source of new finance, and net issuance of equity has actually been negative in the United States and United Kingdom over the past decades. While equity markets are a *relatively* more important source of finance in many emerging economies, they are still much smaller than bank finance or retained earnings. Equity also plays a smaller role in international flows. In 1997, \$33 billion worth of net long-term debt flowed into Latin America compared with \$16 billion in portfolio equity investment (World Bank 1998).

The reason for the pervasiveness of what I shall call “equity rationing” is that the new issuance of equity tends to have a negative impact on the valuation of the firm (Asquith and Mullins 1986).

From the perspective of imperfect information, the reason for this is clear. Equity gives rise to serious adverse selection and moral hazard problems. The adverse selection problem is that those entrepreneurs who are most willing to sell shares in their firms include those who believe, or know, that the market has overvalued their shares. If I put up 1 percent of the contents of my wallet for auction, without showing you the wallet and while reserving the right to refuse low bids, there is no way you could end up making a profit. There are, of course, good reasons for issuing equities: Risk-averse individuals with good investment projects requiring more capital than they have will also issue shares. But these individuals and firms are mingled together with those who see an opportunity to cash in on the markets’ ignorance. And unfortunately, the market cannot easily distinguish between the two (see Greenwald, Stiglitz, and Weiss 1984).

The moral hazard problem results from the incentive of management to divert money from shareholders and majority shareholders to divert money from minority shareholders (see Jensen 1986). Takeovers and other market mechanisms provide only a limited discipline for managers, and no market mechanism can protect minority shareholders (see Stiglitz 1982b, and Shleifer and Vishny 1989).

The experience of one Central European economy shows what can happen if securities markets are left alone. In this country closed-end mutual funds were trading at 40 to 80 percent discounts, representing the market's assessment of the value taken away from assets by the manager. In addition, there are large differences in the price of a "control bloc" of a company and the price of individual shares. Both of these phenomena happen because management and controlling shareholders are able to "tunnel" the assets out of the firms they control (Nikitin and Weiss 1997).

Government can help mitigate the adverse-selection and moral-hazard problems in securities markets by promulgating standard accounting procedures, creating and enforcing a legal structure that allows for well-designed contracts, establishing a securities and exchange commission, formulating laws to protect minority shareholders against majority shareholders (and all shareholders against fraud), and providing a balanced approach to bankruptcy. The experience of the United States shows, however, that even with all of these legal protections, the informational problems are so severe that equity will still play only a limited role in new finance.

Short-Term Bank Loans

With debt, the *expected return* incentives of suppliers and users of capital are in some respects more closely aligned than they are with equity. Unlike with equity, an entrepreneur will not borrow if he has secret information that his project is worthless. And the entrepreneur gets the full marginal benefit of increased returns past the cost of repaying the loan, thus not creating any incentive to shirk or divert revenues.

Also, banks are often in a better position to monitor firms than are equity holders (Stiglitz 1985). Because they can threaten to withdraw credit, banks have management on a short leash, giving them considerable influence over a firm's decisions (Stiglitz and Weiss 1983). The possibility of bankruptcy, however, can reverse this relationship, especially when the borrower has substantial debts to a lender, allowing the borrower to "coerce" the lender into rolling over existing credits or even extending new ones. This provides an incentive to monitor, something banks have a comparative advantage in, in part because there are usually only one or a few lenders, thus reducing the "public good" problems associated with monitoring.

Although bank loans suffer less from problems of monitoring and diversion, they do create selection and incen-

tive problems with regard to risk. Entrepreneurs with risky projects will be attracted to debt finance because they enjoy the full benefits of the upside risk while the downside risk is limited to the value of their collateral. Crucially, the borrower may have more information than the lender about the *ex ante* riskiness of the project, and the lender almost certainly cannot perfectly monitor the actions of the borrower to ensure that it is prudent.

As the interest rate charged increases, the "safer" applicants for loans drop out, leaving a riskier and less desirable pool of applicants. Similarly, borrowers have more incentive to take risky actions. As a result, banks may not raise interest rates even when there is excess demand for credit. The interest rate does not perform its market-clearing role, and the market equilibrium may be—and frequently is—characterized by credit rationing (Stiglitz and Weiss 1981). This is the standard result when one instrument (the price) is being used to hit two targets (or possibly three: clearing the market, attracting the right mix of applicants, and inducing the right levels of risk-taking and effort). Although banks typically use another instrument, such as detailed covenants governing the behavior of the borrower, these may limit credit rationing but do not overcome it (Stiglitz and Weiss 1986). (In effect, there are a large set of admissible actions, and even though the set of instruments is large, typically the latter is insufficient to exercise perfect control.)

Bonds

Bonds represent a halfway house between short-term loans and equity. With a bond, a firm has a fixed commitment. It must pay interest every year, and it must repay the principal at a fixed date. As a result, all the problems we have discussed above with loans arise with bonds.

Bonds have one significant advantage—and disadvantage. Because the lender cannot recall the funds, even if he is displeased with what the firm is doing, the firm is not on a "short" leash, the way it is with loans. This has the advantage of enabling the firm to pursue long-term policies—but has the disadvantage of allowing the firm to pursue policies that adversely affect the interests of bondholders. Bond covenants may provide some restrictions, but these generally only foresee a few of the possible contingencies facing firms. In addition, issuing bonds may send a signal that a firm does not want to be put on a short leash, that it is not willing to subject its actions to the scrutiny of

bankers. This may further restrain bond issuances (Stiglitz 1982a).

Primary vs. Secondary Markets

So far I have been discussing primary markets, the place where new finance is issued. But the majority of financial market activity is in the secondary market, where equity claims and debt are traded. Secondary markets are an important complement to primary markets, increasing liquidity and facilitating diversification. An important development in recent years has been the extension of securitization, which by standardizing and pooling loans has translated into lower interest rates for borrowers and safer portfolios for banks.

But secondary markets have other, less beneficial aspects. The volatility in secondary markets is well beyond what can be explained by movements in fundamentals (Shiller 1989). One of the most plausible explanations for this excess volatility is irrational market psychology and bubbles. Keynes put this well when he compared secondary markets to a beauty contest, in which each judge is not concerned with identifying the most beautiful contestant, but in figuring out who the other judges *think* is the most beautiful contestant. Much of this short-term speculative activity has zero or negative social value. The informational value of secondary markets is one of their most overrated benefits. Managers usually have both a better understanding of their own firm and private information that render the information contained in their stock price of relatively little value. Much of the investment by financial institutions concerns getting information earlier than other investors in order to “trick” the other investors into buying or selling shares (Stiglitz and Weiss 1990).

A parable due to Summers and Summers (1989) illustrates this nicely. Suppose you were to drop \$100 bills on the floor in the middle of a large lecture. The equilibrium would be for everyone to bend down and pick up the \$100 bill at their feet, thus disrupting the lecture. A more efficient outcome, however, would be for everyone to wait until the lecture was over, which would allow them to pick up the same money without disrupting the lecture. This, however, is not an equilibrium because each person worries, correctly, that his neighbor will pick up his \$100 bill. As a result, everyone makes a costly investment in getting the \$100 bills earlier—with no social benefits. The implication is that taxes on speculative activity could, in some

cases, increase the efficiency of the market by reducing transactions costs and rent seeking.

The Financial System and Macroeconomic Fluctuations

The special nature of the financial system has important implications for how we understand macroeconomic fluctuations. Traditional Keynesian theory as well as other strands of macroeconomic theory that have not taken modern financial economics seriously suppress the entire financial system into a money demand equation. Increases in the money supply lead to decreases in the interest rate. Investment demand, in these models, depends only on the cost of capital (the interest rate) and the marginal product of capital. When the interest rate falls, investment rises.

Neither traditional Keynesian models nor the other strands that fail to integrate finance in a meaningful way, including new classical and real business cycle theories, can explain several important features of the economy. The most basic is the business cycle itself. Nothing in these theories explains the transmission, amplification, or persistence of shocks. In addition, they cannot explain why many supply shocks, the main impact of which should be redistribution, have such a large impact on the economy. The models also do not explain the relationship between interest rates and output over the cycle, and more broadly why output moves much more than interest rates. They do not explain movements in inventories that should smooth rather than exacerbate fluctuations. Finally, they do not explain why some sectors of the economy (e.g., residential house construction) are so much more cyclically sensitive than other sectors.

In addition to these empirical shortcomings, Keynesian economics had a number of undesirable theoretical properties. The assumptions were basically ad hoc and at variance with those used by microeconomists. Most importantly, the most important results in traditional microeconomics were the Fundamental Theorems of Welfare Economics, which established the efficiency of the market economy. These, however, are at variance with the motivation of Keynesian economics that the economy can suffer from prolonged periods of inefficient underutilization of resources. Paul Samuelson tried, unsuccessfully, to reconcile this difference by saying that the economy is efficient, except when it is in recessions. (The alternative approach, taken by some Chicago economists, is to deny that there ever are recessions or depressions—just workers deciding

to enjoy more leisure—is even less convincing.) The more natural perspective is that recessions are only the visible tip of the iceberg, and that inefficiency is far more pervasive. This is the perspective that motivated the developments in microeconomics that I discussed in the first part of this talk, in particular the application of imperfect information to the study of financial markets. This reorientation of microeconomics provides the basis for building sounder macroeconomics on the basis of microeconomic models.

The Risk-Averse Firm and Investment

These finance-based macroeconomic models (see Greenwald and Stiglitz 1993a,b) provide a way to understand business cycles with some important policy implications. The most important element of these models is the determinants of investment. In their investment decisions, firms are risk-averse, rather than risk-neutral as in the traditional neoclassical model (Greenwald and Stiglitz 1990a). Finance-based models explain why this is so, and empirical evidence corroborates the theoretical predictions. One explanation focuses on the fact that firms face equity rationing; because of the adverse-selection and moral-hazard issues I discussed earlier, they are unable to raise all of the funds they need in equity markets. They thus must turn to loans and bonds; if their cash flow is insufficient, they may go bankrupt, an outcome to which they are very averse.

When firms undertake the decision to produce, they exchange a fixed cost today (investment) for an uncertain value in the future (e.g., the spot market value of their product when it is finished). New investment thus carries an additional cost, above the interest rate in the neoclassical model, which is the marginal cost of bankruptcy. Anything that affects this marginal cost of bankruptcy will affect investment. Several factors are important. One is the firm's equity position. The stronger the equity position, the lower the marginal cost of bankruptcy from additional investment. As a result, anything that increases a firm's equity will increase its investment.

Second, a firm's cash flow affects its borrowing needs. The lower its cash flow, the more it needs to borrow, and the greater the probability of bankruptcy and the marginal cost of bankruptcy. As a result, it will invest and produce less at any given set of prices and wages—that is, its supply curve will shift inward. These implications contrast strongly with the neoclassical model, which says that investment should only depend on productive opportunities and the cost of

borrowing, not on the current state of a firm's equity or cash flow. They are also consistent with the empirical literature, which has found the relationship between investment and contemporaneous output, cash flow, and equity to be much more robust than its relationship with interest rates (e.g., Fazzari, Hubbard, and Peterson 1988).

Third, anything that increases risk increases the marginal cost of bankruptcy and thus reduces investment. In contrast, in the neoclassical model risk does not matter because it is efficiently distributed by equity markets, leading firms to act in a risk-neutral manner.

The finance-based macroeconomic model can explain why fluctuations in output persist. The initial shock to a firm's output, whatever it is, lowers cash flow and thus equity. This leads them to decrease investment and output, thus transmitting the shock to other firms. The increased uncertainty and lower net worth translates into lower desired inventory investment, thus leading to even deeper production cuts and exacerbating the downturn. (This explains the puzzle of procyclical inventories, which seems to contradict the production smoothing model.) It takes a long time for the firm to rebuild its net worth, thus leading to a prolonged period of slower investment. (Introducing a labor market with efficiency wages would translate this slowdown into increased unemployment. Hiring and firing costs provide further explanations of slow responses of employment to changing market conditions as in Greenwald and Stiglitz 1995.) This cycle can even be set off by a redistributive shock, because investment is a concave function of net worth: The declines by the firms that are hurt by the shock will be larger than the increases by the firms that are helped by the shock.

These effects will be felt more in sectors like residential construction, which face greater uncertainty about future demand and which are more highly leveraged, more equity-rationed, and in which the extent of credit rationing may vary greatly over the cycle.

Banks and Credit Rationing

The risk-averse firm, and the consequent multiple determinants of investment, is an important component of investment. The same factors that make firms risk averse also make banks—a special category of firms—risk averse. The consequence is that when their net worth declines, they will face the increased chance of bankruptcy and thus will shift their portfolio toward safer activities like invest-

ing in Treasury Bills. The result could be a reduced supply of funds, higher lending rates, and even greater credit rationing.

In addition to the conventional Keynesian “money channel” (an increase to the money supply leads to lower interest rates to induce people to hold the additional money, and thus to greater investment and output), monetary policy can work through the “credit channel” (see Blinder and Stiglitz 1983, Bernanke and Blinder 1988, and Stiglitz and Weiss 1992). Monetary policy also has effects on credit availability and thus investment. Take a decrease in the discount rate, which, among other things, raises the real wealth of banks, making them more willing to bear risk and therefore to make more loans. Because the ratio of loans to net worth is very large, even small changes in net worth can have a large impact on loans.

Parenthetically, not only has modern finance emphasized the relative importance of this credit channel, it has actually challenged the validity of the older “money” channel, as an increasingly large fraction of money bears interest, as the ratio of transactions involved in exchanges of assets to those related to income generating activities has increased, as it has been recognized that this relationship itself changes dramatically over time and over the cycle, and as new developments in financial markets make an increasingly large fraction of transactions not dependent on money, as conventionally defined.

The focus on the credit channel of transmission has several important implications for the conduct of monetary policy:

1. The relationship between money and credit will change over the business cycle. Similarly, the relationship between interest rates and output will change over the business cycle. In particular, monetary policy may have little effect during recessions because the excess liquidity in the banking system will mean that it has little effect on the availability of credit, and can thus only operate through the conventional, and weaker, “money channel.”
2. Movements in interest rates will not always be a good gauge of the effects of monetary policy. Monetary policy can have large effects even with little movement in the real interest rate.
3. Monetary policy will matter less as substitutes for bank lending, like commercial paper, are developed. But informational considerations, namely the bad

signal of trying to avoid bank loans, will probably continue to ensure that bank loans are an imperfect substitute for other forms of borrowing.

Financial Markets and Growth

Like traditional theories of fluctuations, traditional models of growth place little if any emphasis on the financial sector. The workhorse model of traditional growth theory, the Ramsey-Cass-Koopmans model, which is the Solow model with a consumption decision rather than an exogenous savings rate, treats the financial sector as the equilibrium of the supply of savings and the demand for investment. Capital is automatically allocated to all of the most efficient projects—that is, all of the projects with marginal returns greater than the equilibrium interest rate. The financial system matters essentially insofar as it influences the spread between deposit and loan rates. In this sense a more efficient financial system can lead to a slight increase in investment, and thus in growth (at least temporarily). In traditional growth models the most important source of growth, total factor productivity growth, is treated exogenously and is thus clearly unrelated to the financial system.

I have just argued, however, that investment depends on much more than just the interest rate. At the same time, “investment” can be broadened to include research and development, human capital, learning by doing, improved management, and other elements of “total factor productivity”—issues that have received renewed attention in recent endogenous theories of economic growth (see Lucas 1973 and Romer 1990). This opens up the possibility of studying how the financial system affects long-run growth.

There is a strong empirical basis for thinking that it does. Research by Ross Levine and others surveyed in Levine (1997) shows a strong link between economic growth and the depth of the banking system and liquidity of financial markets. The magnitudes of the results are striking: One study found that between 1976 and 1993, countries in the highest quartile of stock market liquidity in the beginning of the period saw GDP grow 3.2 percent annually, compared with 1.8 percent annual growth for countries in the lowest quartile of stock market liquidity. The difference in GDP growth between countries with high and low financial depth was even larger, 3.2 percent versus 1.4 percent.

I have extended the finance-based macroeconomic model I used to discuss economic fluctuations to the study

of long-run growth (see Greenwald, Kohn, and Stiglitz 1990 for a theoretical model, and Greenwald, Salinger, and Stiglitz 1992 for some empirical evidence). As with capital investment, one of the most important implications of finance-based macroeconomic models is that investments in research and development—which often entail high risk—are sensitive both to the firm's cash flow and to its net worth, as well as to the perceived uncertainty of the economic environment. There is reason to believe that research and development is even more credit- and equity-constrained than physical capital investment because it is so difficult for an investor to predict its risks and returns and because it does not produce anything that can be used as collateral. One important implication is that a temporary shock can have a long-lasting effect on growth. An unexpected expansion will increase cash flow and equity, raising investment in research and development, and thus increasing productivity growth.

Another implication is that mild financial restraints, that is deposit rate controls and limitations on competition in the financial sector, may be beneficial for growth (Murdock and Stiglitz 1993). Let me be clear, major financial repression is very damaging to the economy. One of its common characteristics is that the government represses deposit rates in order to extract rents from the private sector to finance large budget deficits. Not surprisingly, the consequence is usually undercapitalized banks lacking commercial orientation and often engaging in unsound practices. Moreover, financial repression is associated with high (and volatile) inflation rates and low growth. In contrast, mild financial restraint requires low inflation with slightly positive and predictable real interest rates. Pooling the extreme cases of financial repression together with those of mild financial restraint led to the misleading finding that *financial restraint* is bad for growth (Gelb 1989). (The initial finding suffered from other problems, including simultaneity problems and the exclusion of high inflation as an explanatory variable. These are discussed in Murdock and Stiglitz 1993 and Stiglitz 1994a).

The basic principle of mild financial restraint is that the government does not extract rents from, but creates rents within, the private sector. The purpose of these rents is to create incentives for the private sector to undertake socially beneficial actions (prudential lending). It is the opposite of the government-directed approach where the government undertakes these actions itself. By lowering the cost of bor-

rowing, the government increases the profitability of firms and thus their investment. At the same time it offers lower interest rates to households, which could decrease household savings slightly, although most estimates suggest that the interest rate elasticity of savings is close to zero. Finally, lower interest rates mean that banks will attract a safer mix of applicants, thus lowering the probability of default and increasing the safety of banks. The resulting increase in their franchise value may lead to more prudent behavior by banks and thus a more efficient financial system (Caprio and Summers 1996). And the greater safety may induce more savings, more than offsetting the small direct effect. It has also been shown that increases in capital requirements are an inefficient substitute for the franchise value that is lost as a result of full liberalization; Pareto efficiency requires the use of both instruments, even in banking systems without deposit insurance (Hellman, Murdock, and Stiglitz 1997).

This analysis is but one example of a general principle: Government intervention can help improve the performance of financial markets. One could go further: There are virtually no examples of successful financial markets in which governments do not play an important role. The discussion of a decade ago about deregulation of financial markets was thus totally misplaced. The question is not whether there is a role for government, but what that role should be. The crisis in Thailand, for instance, was due to too little government regulation, not too much. Had Thailand maintained the regulations that it had had during the period of the Asian Miracle, which restricted the flows of lending to speculative real estate, and had it not been influenced by outsiders suggesting that such restrictions interfered with the efficient allocation of resources (though how investing in empty office buildings is supposed to be more efficient than investing in productive plant and equipment is a source of puzzlement), then Thailand might well not be facing the crisis it is today, its first year of negative growth in more than three decades.

Responding to International Capital Flows

Finally, I would like to discuss international capital flows. Many of the same principles that apply in domestic capital markets also apply in international capital markets. The probability of default is essential to understanding international capital flows and exchange-rate movements. Asymmetric information—between foreign and domestic

investors, for instance—can have important consequences. And, as in domestic markets, there is no presumption that the market, left to itself, is efficient.

Ironically, many of the strongest advocates of free markets also think that the government often is more efficient than the market in setting one key price, the exchange rate. Also, they advocate occasional but large “interferences” in the market, namely bailouts. I will leave the discussion of these two issues—and the seeming cognitive dissonance—to another time. Let me just point out that once we accept government interference—or even if we just expect that it is likely that the government will interfere (and historical experience certainly is on that side)—then we are in the world of second-best economics. The question, then, is not should the government intervene, but how best should the government intervene. The answer may be not at all or only minimally, but we should not allow our ideology to preempt our answer.

The financial system has become even more important with the increased flow of private capital to developing countries. Net long-term private capital flows to developing countries reached \$256 billion in 1997—more than six times the \$42 billion level in 1990. Over that same period, official flows have drifted down from \$56 billion to \$44 billion (World Bank 1998). Substantial capital flows now reach more countries and come in a greater variety of instruments and forms than ever before. (It is important to put the private capital flows themselves in perspective. Developing countries saved roughly \$1.4 trillion in 1997, also dwarfing the contribution of private and public flows to capital accumulation from developed countries.)

Today, developing countries are more vulnerable to international capital flows than ever before. What would have been a mistake with minor consequences in a closed economy can become magnified into a major crisis in an open economy. This is the lesson many people draw from the East Asian crisis, which has struck some of the most successful economies in the world. Inadequate financial supervision and regulation, problems with macroeconomic management, and a general lack of transparency certainly contributed to the problems. But without volatile international capital flows, the East Asian financial crisis of 1997 would probably have been no more memorable than the Korean crisis in 1980 or the Thai crisis in 1983.

But even with the best economic management, small open economies remain vulnerable. They are like small

rowboats on a wild and open sea. Although we may not be able to predict it, the chances of eventually being broadsided by a large wave are significant no matter how well the boat is steered—although, to be sure, bad steering probably increases the chances of a disaster, and a leaky boat makes it inevitable, even on a relatively calm day.

Capital Account Liberalization

As recently as 10 years ago there was a fierce debate about multinational enterprises. Some saw them as exploiting developing countries, and others saw them as a valuable source of capital, jobs, and technology. Almost everyone now agrees about the value of foreign direct investment. Partly this is because the world has changed. The days of monopolistic international firms that can extract all of the rents from the process of foreign investment, which is the economic term for exploitation, are over. Today, developing countries benefit from fierce competition from international investors, all of which would potentially be interested in producing in them. You can choose the ones offering the most attractive benefits. By taking advantage of this competition, developing countries can benefit enormously from multinational enterprises.

Today, the discussion has shifted to capital account liberalization, and whether governments should strive for free movement of capital across borders analogously to the push for free movements of goods across borders. In this, too, there are important areas of consensus. Almost everyone believes the international capital flows play an important role and that countries with highly closed systems would benefit greatly by opening up to the world. At the very least, trade credits and current account convertibility are necessary for trade, and trade promotes growth. And almost everyone agrees that it would be foolhardy to push full and immediate capital account liberalization in countries that have, for instance, very weak financial sectors (although nine months ago views were more diverse). There is no easy answer, however, to the question of how to pace reforms and what the ultimate goal should be.

Rather than offering prescriptions, I would like to discuss some of the economic evidence. Experience had led many people to the belief that financial liberalization made crises more likely. A recent study done jointly by a researcher at the World Bank and a researcher at the International Monetary Fund found strong evidence for this belief on the basis of a systematic study of a cross section of countries

(Demirgüç-Kunt and Detragiache 1998). They also found that the instability engendered by crises could be, to some degree, mitigated by institutional development.

I think the statement that capital market liberalization increases risk is uncontroversial. In U.S. Deputy Treasury Secretary Lawrence Summers' memorable metaphor, in a world of internationally mobile capital the airplane crashes will be that much larger. But many believe that the overall gains from flying far outweigh the occasional crash, regardless of the headlines that such a crash might receive. But is that the case? What is the evidence?

We must weigh these costs of capital market liberalization against the benefits that it brings. What does research tell us about these benefits? There is much literature that documents the positive consequences of trade liberalization, including faster growth, higher wages in exporting jobs, and lower prices for consumers. We do not have anything resembling this body of research establishing the positive effects of capital account liberalization. One recent study, a paper by Dani Rodrik (1998), showed that there is no statistically significant relationship between growth or investment and capital account liberalization. I do not think that this one study is definitive. What it does show, however, is that the positive benefits of capital account liberalization do not jump out from the data.

Why might this be? One contributing factor is that full capital account liberalization often means larger short-term borrowing. Unlike foreign direct investment, short-term capital does not bring with it ancillary benefits. Some short-term capital, especially trade credits, is essential for the economy to run. But when the savings rate is already high, and when the marginal investment is being misallocated, the main effect of additional short-term capital flows is to increase the vulnerability of the economy. The most productive investments are long term, and the mismatch between the maturity of assets and liabilities can give rise to serious problems. The *net* benefits appear even smaller when the reserves set aside to protect against the volatility of short-term capital are taken into account. From the consolidated balance sheet of the borrowing country, it may appear as if they are borrowing from the developed countries at higher rates, only to re-lend a large fraction back in the form of Treasury bills and other low-rate-of-return instruments. These problems are very clear in the crisis countries in East Asia, where external debt levels were relatively low but the levels of short-term debt relatively

high. The crises were precipitated in part by the refusal of lenders to roll over these short-term loans. Moreover, there is a high cost—beyond the budgetary cost of the almost inevitable bailouts—associated with the economic disruption that follows from financial crises: The evidence is that for a substantial period after the crisis, countries grow substantially more slowly.

We do, however, have well-documented evidence that foreign direct investment brings with it not just capital but also knowledge and market access. Our goal should be to encourage stable, productive capital flows, especially foreign direct investment, while discouraging rapid roundtrips of short-term money. There are several components to such a strategy:

First, we need to eliminate the tax, regulatory, and policy distortions that may, in the past, have stimulated short-term capital flows. Examples of such distortions are evident in the case of Thailand, where the Bangkok International Banking Facilities effectively encouraged short-term external borrowing. But subtle examples exist almost everywhere. More subtly, other measures, like capital requirements that are not adjusted for risk, also distort incentives by imposing the same “price” for assets and liabilities with very different degrees of risk attached to them. Appropriate bank regulatory structures may provide incentives for banks to charge interest rates to corporations to induce them to take into account more fully the risks associated with high debt-equity ratios and foreign uncovered exposures.

Second, several countries have imposed prudential bank regulations to limit the currency exposure of their institutions or even the exposure of corporations to whom they lend.

But these measures may not go far enough, especially because they do not fully address the issue of corporate exposure. Among the ideas currently under discussion are policies dampening short-term capital inflows, especially of the Chilean type. Chile has imposed a reserve requirement on all short-term capital inflows—essentially a tax on short-maturity loans. While these controls have been the subject of much discussion, even most critics of the Chilean system acknowledge that the reserve requirement has significantly lengthened the maturity composition of capital inflows to Chile without significantly adversely affecting overall flows. This, together with solid fundamentals and a sound financial system, may be the reason that Chile was one of the few countries in Latin America

that was relatively unaffected by the contagion from the Tequila crisis in 1994-95.

Still other possibilities use tax policies by, for example, limiting the extent of tax deductibility for interest in debt that is denominated or linked to foreign currencies. The problems of implementing these policies may in fact be less than those associated with the Chilean system.

Managing Crises: How to Restore Confidence

So far, I have discussed the benefits of capital inflows, especially certain types, and some of the steps emerging markets could take to encourage them. I have also discussed the rationale for measures to *prevent* crises by discouraging the buildup of vulnerability and excessive volatility of short-term flows. If there is one lesson that the history of capitalism has taught us, however, it is that further crises are inevitable. I would briefly like to discuss how countries should respond to a currency or balance-of-payments crisis in which there is large-scale withdrawal of funds and domestic capital flight.

There is a consensus that countries in the midst of a crisis need to restore confidence. How can this be done? This is a very hard question to approach theoretically or empirically. Confidence is an elusive concept. One is tempted to define it as a successful outcome, but then all we are left with is the unhelpful tautology that successful policies lead to successful outcomes. We often see this tautology whenever someone says that attempts to stem the outflow of capital failed because “the government did not show adequate resolve.” The problem is that all governments issue some qualifying statements or are less vigorous in some policies than in others. If *ex post* the crisis continues, then these statements or policies will be trotted out to demonstrate lack of resolve. If, however, the situation stabilizes, they will be forgotten.

I prefer to approach the question of restoring confidence from an *economic* perspective. From this view, confidence will be restored if the aggregate economy is kept as strong as possible and if widespread bankruptcies and bank closures are avoided. This puts the question on much firmer ground; after all, we do know a lot about economic relationships between policies and outcomes.

Our understanding of these economic relationships has been improved greatly by the research I have been discussing today, especially the finance-based macroeconomic models. In the traditional macroeconomic models, raising

the interest rate would increase the rate of return and thus create an additional incentive to invest in a country. There was a trade-off between wanting to keep interest rates low and wanting to maintain the strength of the currency. In the new finance-based macroeconomic models, there need not be a trade-off. The reason is that potential investors consider not just the *promised* nominal interest rate, but also the probability that loans will not be repaid. The recognition that loans may not be repaid is central to understanding credit markets. If there were no concern about loans being repaid, then of course there would have been no hesitancy by foreign banks in rolling over their loans to Korea or Indonesia. The probability of being repaid depends on the overall state of the economy and the interest rate charged. Raising interest rates may lower the probability of being repaid, both because it induces actions by the borrower that lower the repayment probability (for example, more risk taking) and because it may weaken the macroeconomy. Thus although higher interest rates entail a higher *promised* return, they also decrease the probability of being repaid, and thus may even decrease the *expected* return. Strengthening this consideration is the fact that risk-averse lenders care not about the expected return, but the risk-adjusted expected return. If raising interest rates increases uncertainty about the economy, then it will make investing in a country even less attractive.

Which of these effects predominates—the direct effect on the promised return or the indirect effect through the default probability—is an empirical question and may vary depending upon the features of the country. In a country with high debt-equity ratios, for instance, higher interest rates are more likely to lead to bankruptcies and defaults. As a result, the country would not face the traditional trade-off between interest rates and exchange rates, but would instead be left with higher interest rates and a weaker exchange rate. It is also possible that at lower interest rates the “direct effect” dominates, but at higher interest rates the “indirect effect,” the increased bankruptcies, become very large.

The issue of how to restore confidence becomes even more complicated when we ask, Whose confidence? Often we think of “the market,” ignoring the fact that there are different groups—domestic investors, outside investors, speculators, etc.—that have systematically different information, initial portfolio compositions, and risk preferences. Steps like higher interest rates might restore the

inflow of foreign capital at the same time that it heightens uncertainty and increases the chances of a weaker economy, leading prudent domestic investors to diversify by moving their own money out of the country. Again, which of these effects is stronger is an empirical question.

In East Asia, there is strong evidence that these are not simply theoretical possibilities; they are absolutely central. Raising interest rates did not “restore confidence”; exchange rates continued to fall, and capital flight from at least some of the countries continued. In two of the cases, only when a form of debt moratorium was announced (though not necessarily with these words) was the decline arrested.

Ultimately, however, the goal of confidence-restoring measures is to maintain a strong economy, not to maintain the strength of the exchange rate or to restore the inflow of capital (although these may be important means toward that end). Finance-based macroeconomic models also shed light on this issue. They point out that higher interest rates deplete net worth, raising the risk of bankruptcy directly, but also exacerbating the problems posed by relatively sound firms. Since outsiders may not know the extent to which different firms are adversely affected, they may ration credit to all firms. Moreover, high interest rates and depleted net worth may induce firms to undertake more risk, and thus may increase “credit rationing”—whereby access to credit is diminished at the same time that the cost of credit increases. The extent of credit availability may also be adversely affected by bank closures, which result in the destruction of relevant informational capital. Break-downs anywhere in the credit system can have large systemic effects. While it is absolutely essential to deal with mismanaged and undercapitalized banks, how this is done can make an enormous difference for the sustenance of the informational and organizational capital of the economy, and for the maintenance of credit flows, all of which are absolutely essential to the quick resolution of a crisis. There has now emerged a consensus that the way it was done in Indonesia did not take these lessons into account, and thereby exacerbated an already serious situation.

Finally, I would like to address the role of structural reforms in the response to crises. In particular, I would like to caution against trying to solve every alleged and genuine structural problem in a country in the midst of crisis. Indeed, raising issues not directly related to the crisis undermines market confidence by making the solution of

the crisis itself seem more difficult. However genuine the problems are (e.g., impediments to international trade), they are often unrelated to solving the crisis at hand. Furthermore, structural reform is a long and difficult process. Attempting to undertake these reforms quickly and in the midst of the crisis is unlikely to lead to good policies and will often lead to “quick fixes” that increase problems over the longer term.

At the same time, it may be perceived as imposing reforms from outside, which gives rise to resistance and makes it less likely that reforms will stick after the immediate problems have passed. Equally important, even if the reforms are done well, so that they enhance the long-run productivity of the economy, they may do so at the expense of its short-run recovery. For example, if, in the midst of the savings and loan crisis, the United States had reduced agricultural subsidies, which are generally seen as a serious distortion, the result would have been falling land prices, exacerbating the banking crisis. The bottom line is that in the midst of crises we need to avoid the temptation to try to solve every problem.

The converse of the caveats about undertaking far-reaching structural reforms in the midst of the crisis is that there is no better time for reform than when the economy is doing well. Many Latin American countries have been growing strongly in recent years. Economically, this is an opportune time to forge a comprehensive development strategy to address the major challenges that stand in the way of even better economic performance.

Concluding Remarks

We have come a long way since the time when many viewed the financial system simply as a sideshow, or a passive channel that allocated scarce resources to the most efficient uses. Today almost everyone agrees that the financial system is essential for development. Improving the financial system can lead to higher growth and reduce the likelihood and severity of crises. It is essential in understanding the causes of business cycles and the working of monetary policy. In thinking about financial reform, we need to treat liberalization as a means rather than an end. Instead of pushing for immediate deregulation, we should be trying to understand the important role government plays in financial markets. These steps will not only result in the better and more stable allocation of domestic capital, but also help countries to manage international capital flows.

References

- Asquith, P., and David Mullins (1986). "Equity Issues and Stock Price Dilution." *Journal of Financial Economics*.
- Bernanke, Ben, and Alan Blinder (1988). "Credit, Money, and Aggregate Demand." *American Economic Review* 78, (May): 435–39.
- Blinder, Alan, and Joseph E. Stiglitz (1983). "Money, Credit Constraints and Economic Activity." *American Economic Review*, 73(2), May: 297–302.
- Caprio, Gerard, and Lawrence Summers (1996). "Financial Reform: Beyond Laissez Faire." In Dimitri Papadimitriou, ed., *Stability of the Financial System*. London: Macmillan.
- Demirgüç-Kunt, Asli, and Enrica Detragiache (1998). "Financial Liberalization and Financial Fragility." Paper presented to the Annual World Bank Conference on Development Economics, Washington, D.C., April 20–21.
- Fazzari, Steven, Glenn Hubbard, and Bruce Peterson (1988). "Financing Constraints and Corporate Investment." *Brookings Papers on Economic Activity* 1: 141–95.
- Gelb, Alan (1989). "Financial Policies and Growth." Policy Research Working Paper 202. Washington, D.C.: World Bank.
- Greenwald, Bruce, and Joseph E. Stiglitz (1986). "Externalities in Markets with Imperfect Information and Incomplete Markets." *Quarterly Journal of Economics* 101 (May): 229–64.
- Greenwald, Bruce, and Joseph E. Stiglitz (1990a). "Asymmetric Information and the New Theory of the Firm: Financial Constraints and Risk Behavior." *American Economic Review* 80(2): 160–65.
- Greenwald, Bruce, and Joseph E. Stiglitz (1990b). "Macroeconomic Models with Equity and Credit Rationing." In *Asymmetric Information, Corporate Finance, and Investment*. R. B. Hubbard (ed.). Chicago: University of Chicago Press: 15–42.
- Greenwald, Bruce, and Joseph E. Stiglitz (1993a). "Financial Market Imperfections and Business Cycles." *Quarterly Journal of Economics* 108(1): 77–114.
- Greenwald, Bruce, and Joseph E. Stiglitz (1993b). "New and Old Keynesians." *Journal of Economic Perspectives* 7(1): 23–44.
- Greenwald, Bruce, and Joseph E. Stiglitz (1995). "Labor Market Adjustment and the Persistence of Unemployment." *American Economic Review* 85(2) (May): 219–25.
- Greenwald, Bruce, Meir Kohn, and Joseph Stiglitz (1990). "Financial Market Imperfections and Productivity Growth." *Journal of Economic Behavior and Organization* 13: 321–45.
- Greenwald, Bruce, Michael Salinger, and Joseph Stiglitz (1992). "Imperfect Capital Market and Productivity Growth." Manuscript, April.
- Greenwald, Bruce, Joseph E. Stiglitz, and Andrew Weiss (1984). "Informational Imperfections in the Capital Markets and Macroeconomic Fluctuations." *American Economic Review* 74(2): 194–99.
- Hellman, Thomas, Kevin Murdock, and Joseph E. Stiglitz (1997). "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?" Unpublished.
- Jensen, M. (1986). "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers." *American Economic Review* 76 (May): 323–29.
- Levine, Ross (1997). "Financial Development and Economic Growth." *Journal of Economic Literature* 35(2): 688–726.
- Lucas, Robert Jr. (1973). "On the Mechanics of Economic Development." *Journal of Monetary Economics* 22 (July): 3–42.
- Murdock, Kevin, and Joseph E. Stiglitz (1993). "The Effect of Financial Repression in an Economy with Positive Real Rates." Background paper for World Bank, *East Asian Miracle*. Washington, D.C.: World Bank.
- Nikitin, Georgiy, and Andrew Weiss (1997). "Performance of Czech Companies by Ownership Structure."
- Rodrik, Dani (1998). "Who Needs Capital Account Convertibility?" *Essays in International Finance* 207 (May), Princeton: 55–65.
- Romer, Paul (1990). "Endogenous Technological Change." *Journal of Political Economy* 98 (October, Part II): S71–S102.
- Shiller, Robert (1989). *Market Volatility*. Cambridge, MA: MIT Press.
- Shleifer, Andrei, and Robert Vishny (1989). "Management Entrenchment: The Case of Manager Specific Investments." *Journal of Financial Economics* 25(1): 123–39.
- Stiglitz, Joseph E. (1982a). "Information and Capital Markets." In *Financial Economics: Essays in Honor of Paul Cootner*. William F. Sharpe and Cathryn Cootner (eds.). New Jersey: Prentice Hall: 118–158.
- Stiglitz, Joseph E. (1982b). "Ownership, Control and Efficient Markets: Some Paradoxes in the Theory of Capital Markets." In *Economic Regulation: Essays in Honor of James R. Nelson*. Kenneth Boyer and William Shepherd (eds.). Ann Arbor, MI: Michigan State University Press: 311–41.
- Stiglitz, Joseph E. (1985). "Credit Markets and the Control of Capital." *Journal of Money, Banking, and Credit*, 17(2) (May): 133–52.
- Stiglitz, Joseph E. (1989). "Using Tax Policy to Curb Speculative Short-Term Trading." *Journal of Financial Services Research* 3(2/3): 101–15.
- Stiglitz, Joseph E. (1991). "Capital Markets and Economic Fluctuations in Capitalist Economies." *European Economic Review* 36: 269–306.
- Stiglitz, Joseph E. (1992). "Banks versus Markets as Mechanisms for Allocating and Coordinating Investment." In *The Economics of Cooperation: East Asian Development and the Case for Pro-Market Intervention*. J. A. Roumasset and S. Barr (eds.). Boulder, CO: Westview Press: 15–38.
- Stiglitz, Joseph E. (1994a). "The Role of the State in Financial Markets." In *Proceedings of the World Bank Conference on Development Economics 1993*. Washington, D.C.: World Bank.
- Stiglitz, Joseph E. (1994b). *Whither Socialism?* Cambridge, MA: MIT Press.
- Stiglitz, Joseph E., and Andrew Weiss (1981). "Credit Rationing in Markets with Imperfect Information." *American Economic Review* 71(3).

- Stiglitz, Joseph E., and Andrew Weiss (1983). "Incentive Effects of Termination: Applications to the Credit and Labor Markets." *American Economic Review*, 73(5) (December): 912–27.
- Stiglitz, Joseph E., and Andrew Weiss (1986). "Credit Rationing and Collateral." In *Recent Developments in Corporate Finance*. Jeremy Edwards, et al. (eds.). New York: Cambridge University Press: 101–35.
- Stiglitz, Joseph E., and Andrew Weiss (1990). "Banks as Social Accountants and Screening Devices for the Allocation of Credit." *Greek Economic Review*, 12(0): 85–118.
- Stiglitz, Joseph E., and Andrew Weiss (1992). "Asymmetric Information in Credit Markets and Its Implications for Macroeconomics." *Oxford Economic Papers* 44(4): 694–724.
- Summers, Lawrence, and Victoria Summers (1989). "When Financial Markets Work Too Well: A Cautious Case for a Securities Transaction Tax." In *Regulatory Reform of Stock and Futures Markets: A Special Issue of the Journal of Financial Services Research*. Boston, MA: Kluwer Academic Publishers.
- World Bank (1998). *Global Development Finance 1998*. Washington, D.C.

I. Financial Structure:
Relative Importance of
Banks and Capital
Markets in
Intermediation

PART 1:
DETERMINANTS
AND IMPLICATIONS

Banks, Markets, and Structure: Implications and Determinants

R O S S L E V I N E

COUNTRIES GROW AT STARTLINGLY DIFFERENT RATES. SINCE 1960, REAL PER CAPITA GROSS domestic product (GDP) has grown at more than 5 percent per annum in Japan and Korea, at close to 3 percent in Brazil, but at less than 1 percent in Argentina, El Salvador, Guatemala, Peru, Uruguay, and Venezuela. Given the potential impact on human welfare, economists have suggested a variety of explanations for these growth differences, ranging from macroeconomic stability (Easterly and Rebelo 1993; Fischer 1993), to openness toward international trade (Krueger 1997), to institutional development (Knack and Keefer 1995), and even to ethnic diversity (Easterly and Levine 1997).

Some have also argued that cross-country differences in financial sector development and financial structure help determine cross-country differences in long-run economic growth rates. A growing body of theoretical and empirical work suggests that banks and stock markets are an inextricable part of the growth process (Levine 1997a). Indeed, recent work suggests that financial systems exert a first-order causal impact on economic growth (Demirgüç-Kunt and Maksimovic 1996b; Levine, Loayza, and Beck 1998; Rajan and Zingales 1998). Thus, poorly functioning financial systems have negative implications for economic development.

While economists can confidently inform policy-makers about the importance of well-functioning financial systems for economic development, we are embarrassingly less capable of telling them exactly how to create such well-functioning financial systems. We do not have sufficiently detailed and comprehensive cross-country empirical evidence concerning the core determinants of healthy banks and securities markets. Furthermore, a long debate persists on the proper structure of the financial system, where “structure” refers to the relative importance of banks and markets in the economy. The classic controversy involves comparisons between bank-based financial systems, such as those in Germany and Japan, and market-based systems, such as those in the United Kingdom and the United

States. In terms of financial structure, there exists sparse evidence about the comparative benefits of bank-based or market-based systems for growth. Thus, it is difficult to assess the implications for economic development of having either system.

This paper examines three issues: banks, markets, and financial structure.

Banks. The paper first describes the implications of a sound banking system. Specifically, I discuss why banks emerge, what they do, and how they affect economic performance. Basically, banks acquire and process information about firms and managers, exert corporate control, provide risk-management services, and facilitate resource mobilization. By providing these services to the economy, banks can

enhance resource allocation and stimulate economic growth. Then I present evidence from Levine, Loayza, and Beck (1998), which suggests that well-functioning banks exert a causal and economically important impact on long-run growth. Finally, I examine some of the legal and accounting determinants of healthy banking development. Following La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998), Levine, Loayza, Beck (1998) show that countries with (1) laws that give a high priority to secured creditors' getting the full present value of their claims against firms, (2) legal systems that rigorously enforce contracts, including government contracts, and (3) accounting standards that produce high-quality, comprehensive and comparable corporate financial statements tend to have better-developed financial intermediaries. The evidence suggests that legal and regulatory reforms that strengthen creditor rights, contract enforcement, and accounting practices boost banking sector development and accelerate economic growth.

Stock Markets. The paper examines the implications of well-functioning stock markets on economic development and searches for core determinants of healthy stock market development. Are developing countries' stock markets simply casinos where an increasing number of foreigners are coming to place bets? Or, do the developing countries themselves reap large benefits from well-functioning markets? If markets are important, what can policy-makers do?

Existing evidence suggests that well-developed stock markets foster economic growth. They can enhance incentives to acquire information about firms, because individuals can profit from first obtaining good information and then trading in liquid markets. Furthermore, well-developed markets make it easier to take over firms, which may help discipline managers to act in the best interests of owners. Also, well-developed securities markets lower the costs of custom-designing risk-hedging devices, which can improve welfare and resource allocation. The data support this view. Levine (1997b) and Levine and Zervos (1998) show that liquid stock markets exert a big, positive impact on economic growth. There is also a growing body of research on the legal and accounting determinants of stock market development. Here, I again rely on the pioneering work of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998), along with some of my own extensions by Levine (1997b). Particular characteristics of national legal

and regulatory systems—the protection of minority shareholders and the quality of corporate financial statements—exert a major influence on stock market development. Moreover, Latin America stands out. It has relatively weak accounting standards, and Latin America's legal system is comparatively lax in enforcing the rights of minority shareholders. Once one views the strong empirical connection between the legal and regulatory environment, the financial system, and growth, Latin America's legal and regulatory systems stand out as deserving particularly careful scrutiny as the region looks to promote faster growth.

Financial Structure. Is a bank-based or a market-based financial system better for promoting economic development? Proponents of bank-based systems note that in highly liquid markets, information is quickly revealed to investors at large. This creates a free-rider problem. Individuals may be dissuaded from spending much time and money researching firms and exerting corporate control because the fruits of these labors will be publicly revealed in markets to those who do not undertake the costly activities of researching firms and overseeing managers. Furthermore, proponents of bank-based systems question the real-world ability of small outside investors to exert corporate control. Outsiders generally have less information than insiders, so there is little reason to believe that outsiders can effectively peer over the shoulders of managers and then swoop down to take over firms and fire incompetent managers. Further, the incestuous relationship between boards of directors and management increases the likelihood of golden parachutes, poison pills, and other measures that thwart takeovers and give power to corporate managers. Also, liquid markets make it easy for worried stockholders to simply sell their shares rather than coordinate pressure against management. All of these market failures combine to reduce the efficiency of firm operations with negative implications for long-run growth. Champions of bank-based systems argue that large banks with long-term relationships with particular firms mitigate these market failures.

“Marketeers” counterattack by focusing on the practical failures of big banks. Big banks exert a controlling hand with potentially negative implications for resource allocation, innovation, and growth. In practice, big banks tend to encourage firms to undertake very conservative investment strategies, and big banks extract large rents from firms as shown by Weinstein and Yafeh (1998). Thus,

banks may lower corporate profits and reduce incentives for new and innovative products. Furthermore, Wenger and Kaserer (1996) show that managers of huge banks in a bank-based system (Germany) effectively wrest control of banks from the owners of banks. Because big banks control big industry, once bank managers take control of the banks from bank owners, the managers enjoy excessive control over both banks and industry. This may have deleterious effects on investment and growth. Finally, while bank-based systems may provide inexpensive risk-management services for standardized situations, market-based systems provide a richer array of financial instruments that permit greater customization of risk-management techniques.

Who is right? The truthful answer is we don't know. Although I present some preliminary evidence from a research project I am conducting with Asli Demirgüç-Kunt, there is insufficient empirical evidence to argue confidently that bank-based or market-based systems are better. There is even some evidence that suggests the answer is both: The issue is not banks or markets; rather, both banks and markets provide complementary services to the economy with positive implications for economic performance. Even this answer, however, enjoys scarce empirical support. We need much more research into the underlying determinants of financial structure and the resultant implications for long-run growth.

I. Banks and Economic Growth

In a world with no information, enforcement, or transactions costs, there is no need for financial intermediaries—coalitions of agents—to form and expend resources researching projects, scrutinizing managers, and easing risk management. Because such a world does not exist, financial intermediaries emerge to acquire information, enforce contracts, and make transactions. Thus, as they move to ameliorate market frictions, financial intermediaries may facilitate the efficient allocation of resources across space and time. The first subsection below briefly discusses the emergence of financial intermediaries, what they do, and how they positively affect economic performance. The next subsection will provide empirical evidence on (1) the causal relationship between financial intermediaries and growth and (2) some of the legal and regulatory underpinnings of financial intermediaries. Later sections discuss the potential negative consequences of excessively powerful intermediaries.

A. Concepts: How Banks Affect Economic Performance

Financial intermediaries, first of all, may reduce the costs of acquiring and processing information about firms and managers and thereby produce better information about firm prospects and better corporate control (Diamond 1984; Boyd and Prescott 1986; and Williamson 1986). Specifically, there are large costs associated with evaluating firms and managers (Carosso 1970). Without intermediaries, each investor would face these high costs, which could lead to duplication of effort in terms of acquiring and processing information about firms and managers. Moreover, small investors might attempt to free ride off of large investors, who have greater incentives to pay the large costs associated with evaluating firms and managers. This free-rider problem can lead to too little effort being expended toward acquiring information and monitoring managers, which adversely affects resource allocation. Instead of this inefficient situation, financial intermediaries can evaluate firms and managers for a large group of investors. By reducing duplication and free-rider problems, financial intermediaries promote better information about firms.¹ Because it is particularly difficult to monitor the performance of managers once outsiders have funded firms, financial intermediaries may play a particularly important role in rigorously monitoring managers (Boyd and Prescott 1986; Boot and Thakor 1997). By improving information acquisition, financial intermediaries can affect long-run economic growth (Greenwood and Jovanovic 1990; King and Levine 1993b).

As a crucial addendum to this information role, financial intermediaries may ease cash-flow constraints, facilitate debt renegotiations, and ease private workouts in times of corporate distress. Specifically, once financial intermediaries gain substantial information about firms, they are in a better position than a diffuse set of ill-informed small creditors to distinguish the natural vagaries of market conditions—which may simply require patience and renegotiation—from poor management, which may require more stern intervention (Myers 1977; Gilson, John, and Lang 1990). Thus, corporate investment decisions will be dictated more by expected profits and less by current cash flow (Hoshi, Kashyap, and Scharfstein 1990; Petersen and Rajan 1994; Berger and Udell 1995; Schiantarelli and Sembenelli 1996).²

Second, financial intermediaries may ease risk-sharing and pooling by lowering transaction costs. Traditional

financial theory focuses on cross-sectional risk-sharing, where individuals hold a very small amount of lots of different assets. Financial intermediaries may lower the costs of holding a standardized portfolio of assets if there are fixed costs to each purchase. Moreover, financial intermediaries may facilitate the intertemporal smoothing of risk (Allen and Gale 1997). Risks that cannot be diversified at a particular point in time, such as macroeconomic shocks, can be diversified across generations. Long-lived intermediaries can facilitate intergenerational risk-sharing by investing with a long-run perspective and offering returns that are relatively low in boom times and relatively high in slack times. While this type of risk-sharing is theoretically possible with markets, intermediaries may increase the feasibility of intertemporal risk-sharing by lowering contracting costs.³

Intermediaries also can eliminate liquidity risk (Diamond and Dybvig 1983; Bencivenga and Smith 1991). Many profitable investments require a long-term commitment of capital, but investors are often reluctant to relinquish control of their savings for long periods. Intermediaries make long-term investment more attractive by pooling savings and engaging in liquidity transformation. They provide liquid securities to savers that allow savers to liquidate their investments if they need access to their savings. Although intermediaries do not know exactly which individuals need access to their investments quickly, they have very good information on the fraction of investors who will liquidate their investments quickly. Thus, by pooling lots of resources they can invest just enough in short-term securities to satisfy those with liquidity needs. At the same time, intermediaries can make a long-run commitment of capital to firms. By facilitating longer-term, more profitable investments, well-functioning financial intermediaries improve the allocation of capital and thereby boost productivity growth. In sum, by pooling resources and facilitating contracting both cross-sectionally and intertemporally, financial intermediaries reduce impediments to risk management with beneficial effects on welfare on the efficiency of investment.

Third, financial intermediaries facilitate savings mobilization—pooling—by economizing on the transaction costs associated with mobilizing savings from many disparate agents (Carosso 1970) and by overcoming the informational asymmetries associated with making savers comfortable in relinquishing control of their savings (Sirri and

Tufano 1995; De Long 1991; Lamoreaux 1995). By effectively mobilizing savings, financial intermediaries not only ease capital accumulation, they also improve resource allocation by permitting the exploitation of economies of scale. For example, Bagehot (1873, pp. 3–4) argued that a major difference between England and “all rude countries” was that in England the financial system could mobilize resources for “immense works.” Bagehot was very explicit in noting that it was not the national savings rate per se that allowed this; rather, it was the ability to pool society’s resources and allocate those savings toward the most productive ends.

Thus, existing theory advances intuitively appealing arguments for why better intermediaries—that is, intermediaries that are better at researching firms and exerting corporate control, providing mechanisms for pooling and managing risk, and facilitating the mobilization of savings—will positively influence economic performance. The data support this perspective.

B. Evidence: Intermediaries Exert a First-Order, Causal Impact on Growth⁴

A growing body of evidence suggests that the level of financial intermediary development has a large, causal effect on long-run economic performance. The evidence emerges from firm-level studies (Demirgüç-Kunt and Maksimovic 1996b), industry-level studies (Rajan and Zingales 1998), country-case studies (Cameron 1967; McKinnon 1973; Haber 1991, 1996), time series (Neusser and Kugler 1998; Wachtel and Rousseau 1995), and cross-country studies using an array of econometric methodologies (King and Levine 1993a,b; Levine 1998a,b). Because I have already reviewed much of this literature (Levine 1997a), I will instead focus on a recent paper that rigorously addresses the issue of causality and discusses some underlying causes of cross-country differences in financial intermediary development.

1. Methodology

Levine, Loayza, and Beck (1998), henceforth LLB, use new data and new econometric procedures to shed additional light on the issue of causality and to illuminate the close association between key legal and accounting characteristics and financial intermediary development. In terms of causality, LLB use two econometric procedures. First, they use a pure cross-sectional approach, where data for 71

countries are averaged over the period 1960–1995, with one observation per country. As in much of the cross-country growth literature, the dependent variable is the growth rate of the real per capita GDP. The regressors include a variable of particular interest—in this case financial intermediary development, along with a set of conditioning information.

Unlike much of the literature, however, LLB use instrumental variables to extract the exogenous component of financial intermediary development. Specifically, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998; henceforth LLSV) note that most countries can be divided into countries with predominantly English, French, German, or Scandinavian legal origins, and that countries typically obtained their legal systems through occupation or colonization.⁵ Thus, LLB view legal origin as an exogenous “endowment.” After extending the LLSV sample from 49 to 71 countries, LLB use the legal-origin indicators as instrumental variables to extract the exogenous component of financial intermediary development.

The second method for examining causality uses panel data and exploits the cross-country and time-series dimensions of the data. LLB assemble a panel data-set, with data averaged over each of the seven five-year intervals composing the period 1960–1995. LLB use a Generalized Method of Moments (GMM) dynamic panel estimator that corrects some inherent problems with the purely cross-sectional estimator. Specifically, this procedure addresses the econometric problems induced by country-specific effects, endogeneity, and the routine use of lagged dependent variables in growth regressions (Holtz-Eakin, Newey, and Rosen 1990; Arellano and Bond 1991; Arellano and Bover 1995; Alonso-Borrego and Arellano 1996; and Blundell and Bond 1997).

In conducting this research, LLB focus on new measure of financial intermediation called PRIVATE CREDIT, which measures the extent to which financial institutions funnel credit to private-sector activities. PRIVATE CREDIT equals the value of credits by financial intermediaries to the private sector divided by GDP. This measure of financial development is more than a simple measure of financial sector size. PRIVATE CREDIT isolates credit issued to the private sector, as opposed to credit issued to governments, government agencies, and public enterprises. Furthermore, it excludes credits issued by the central bank. PRIVATE CREDIT is LLB’s preferred indicator because it

improves on other measures of financial development used in the literature. For example, King and Levine (1993a,b) use a measure of gross claims on the private sector divided by GDP. But, this measure includes credits issued by the monetary authority and government agencies, whereas PRIVATE CREDIT includes only credits issued by banks and other financial intermediaries. Also, Levine and Zervos (1998) and Levine (1998a,b) use a measure of deposit money bank credits to the private sector divided by GDP over the period 1976–1993. That measure, however, does not include credits to the private sector by non-deposit money banks and it only covers the period 1976–1993. PRIVATE CREDIT is a broader measure of credit-issuing financial intermediation, and its time dimension is twice as long, 1960–1995. While PRIVATE CREDIT does not directly measure the amelioration of information and transaction costs, LLB interpret higher levels of PRIVATE CREDIT as indicating higher levels of financial services and therefore greater financial intermediary development. Moreover, they produce similar conclusions.

2. Causality Results

The simple, cross-sectional instrumental variable procedure and the dynamic-panel econometric technique produce very consistent findings regarding causality: *financial intermediary development exerts a large, causal impact on economic growth*. The results of the LLB causality tests are provided in Tables 1 and 2. Econometrically, the results indicate that the close empirical association between finance and growth is not the result of simultaneity or omitted variable bias. The exogenous component of financial intermediary development is positively correlated with economic growth. Economically, the impact of finance on growth is large. For example, the estimated coefficients suggest that if Argentina had enjoyed the level of financial intermediary development of the average developing country during the 1960–95 period, it would have experienced about one percentage point faster real per capita GDP growth per year.

3. Causes of Intermediary Development

Next, LLB undertake a search of potential legal and accounting determinants of financial intermediary development. LLB use three indicators to characterize differences in national legal and regulatory systems: the legal rights of creditors, the soundness of contract enforcement, and the level of corporate accounting standards.

TABLE 1

Financial Intermediation and Growth: Cross-Section Regressions, 1960–95

Dependent Variable: Real Per Capita GDP Growth, 1960–95

Instrumental Variables: Legal Origin Dummy Variables

Regression Set #1: simple conditioning information set

Explanatory Variable	coefficient	standard error	t-statistic	p-value	number of observations	j-statistic	lm-test OIR
PRIVATE CREDIT	2.515	0.814	3.090	0.003	71	0.001890566	0.13

Regression Set #2: policy conditioning information set

Explanatory Variable	coefficient	standard error	t-statistic	p-value	number of observations	j-statistic	lm-test OIR
PRIVATE CREDIT	3.222	1.245	2.589	0.012	63	0.007993	0.50

Regression Set #3: full conditioning information set

Explanatory Variable	coefficient	standard error	t-statistic	p-value	number of observations	j-statistic	lm-test OIR
PRIVATE CREDIT	2.966	1.409	2.105	0.040	62	0.010466	0.65

Critical values for LM-Test Over Identifying Restrictions (2 d.f.): 10% 4.61; 5%=5.99

Simple conditioning information set: logarithm of initial income per capita and schooling.

Policy conditioning information set: simple set, plus government size, inflation, black market premium, and openness to trade.

Full conditioning information set: policy set, plus indicators of revolutions and coups, civil liberties, political assassinations, and ethnic diversity.

Source: Levine, Loayza, Beck 1998; Table 3.

TABLE 2

Financial Intermediation & Growth: Dynamic Panel Regressions, Summary

ESTIMATOR	CONDITIONING INFORMATION SET	PRIVATE CREDIT	OBSERVATIONS	INSTR. PER VAR.	TOTAL # INSTR.
System	limited	2.237 (0.001) (0.283)	359	all	72
	extended	1.448 (0.001) (0.417)	359	1 instr.	77
Differenced	limited	1.601 (0.001) (0.197)	285	all	69
	extended	0.599 (0.001) (0.342)	285	2 instr.	55
Levels	limited	2.151 (0.001) (0.259)	359	1 instr.	22
	extended	2.063 (0.001) (0.349)	359	1 instr.	42

numbers in parentheses are p-values (1st line) and Sargan-test (2nd line)

Limited conditioning information set: logarithm of initial income per capita, average years of secondary schooling.

Extended conditioning information set: limited set plus government size, openness to trade inflation, black market premium.

PRIVATE CREDIT credit by deposit money banks and other financial institutions to the private sector divided by GDP

Source: Levine, Loayza, Beck 1998; Table 4.

Creditor Rights. LLB use four measures of the legal rights of banks:

AUTOSTAY equals one if a country's laws impose an automatic stay on the assets of firms upon filing a reorganization petition. **AUTOSTAY** equals zero if this restriction does not appear in the nation's legal codes. The restriction would prevent creditors from gaining possession of collateral or liquidating a firm to meet a loan obligation.

MANAGES equals one if firm managers continue to administer the firm's affairs pending the resolution of reorganization processes, and zero otherwise. In some countries, management stays in place until a final decision is made about the resolution of claims. In other countries, management is replaced by a team selected by the creditors. If management stays pending resolution, this reduces pressure on management to pay creditors.

SECURED1 equals one if secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. **SECURED1** equals zero if non-secured creditors, such as the government or workers get paid before secured creditors. In cases where **SECURED1** equals zero, this certainly reduces the attractiveness of lending secured credit.

CREDITOR is a cumulative index of these creditor rights indicators.

$$\text{CREDITOR} = \text{SECURED1} - \text{AUTOSTAY} - \text{MANAGES}.$$

CREDITOR takes on values between 1 (best) and -2 (worst). One would expect countries with higher values of **CREDITOR** to have stronger creditor rights and better-developed financial intermediaries, all else equal.

Brazil, Colombia, France, Mexico, Peru, and the Philippines (all countries with a French legal origin) are countries where **CREDITOR** = -2, indicating that their legal systems do not stress the rights of creditors. In contrast, the legal codes of Egypt, Hong Kong, India, Indonesia, Israel, Korea, Malaysia, Nigeria, Pakistan, Singapore, Thailand, United Kingdom, and Zimbabwe stress the rights of creditors, such that **CREDITOR** = 1. **CREDITOR** does not incorporate information regarding enforcement.

Enforcement. The laws governing secured creditors will affect secured creditors only to the extent that the laws are enforced. Consequently, measures of the efficiency of the legal system in enforcing contracts are included from LLSV (1998).

RULELAW is an assessment of the law-and-order tradition of the country that ranges from 10, strong law-and-

order tradition, to 1, weak law-and-order tradition. This measure was constructed by International Country Risk Guide (ICRG) and is an average over the period 1982–1995.

CONRISK is an assessment of the risk that a government will—and therefore can—modify a contract after it has been signed. **CONRISK** ranges from 10, low risk of contract modification, to 1, high risk of contract modification. Specifically, “modification” means either repudiation, postponement, or reducing the government's financial obligation. This measure was constructed by ICRG and is an average over the period 1982–1995

ENFORCE equals the average of **RULELAW** and **CONRISK**. The empirical analyses focus on this aggregate index of the efficiency of the legal system in enforcing contracts (**ENFORCE**) and the aggregate index of creditor rights (**CREDITOR**).

The countries with very high values of enforcement—values of **ENFORCE** greater than 9—are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Japan, Netherlands, New Zealand, Norway, Sweden, and Switzerland. In contrast, countries where contract enforcement is poor—values of **ENFORCE** less than 5—include Colombia, Nigeria, Pakistan, Philippines, Peru, and Zimbabwe.

Accounting Standards. Information about corporations is critical for exerting good corporate governance and identifying the best investments. **ACCOUNT** is an index of the comprehensiveness of company reports. The maximum possible value is 90 and the minimum is 0. The Center for International Financial Analysis and Research assessed general accounting information, income statements, balance sheets, funds-flow statements, accounting standards, and stock data in company reports in 1990. Sweden had the highest score, 83, while Egypt, at 24, had the lowest in LLB's sample. The United States scored 71, which is well above the mean value of 61.

Results on Determinants of Intermediary Development. Table 3 (which is Table 7 in LLB) shows that cross-country differences in creditor rights, enforcement quality, and accounting standards help explain cross-country differences in financial intermediary development. The basic message that emerges from Table 3 is that countries with (1) laws that give a high priority to secured creditors, (2) legal systems that rigorously enforce contracts, and (3) accounting standards that produce comprehensive and

TABLE 3

Legal Environment and Financial Intermediary Development

	DEPENDENT VARIABLE					
	LIQUID LIABILITIES		BANK- CENTRAL BANK		PRIVATE CREDIT	
C	3.814 (0.000)	2.600 (0.000)	4.013 (0.000)	3.878 (0.000)	2.668 (0.001)	1.550 (0.000)
CREDITOR	0.096 (0.142)	0.155 (0.007)	-0.016 (0.528)	-0.010 (0.637)	-0.038 (0.526)	0.016 (0.747)
ENFORCE	0.241 (0.000)	0.180 (0.000)	0.042 (0.020)	0.036 (0.004)	0.262 (0.000)	0.206 (0.000)
ACCOUNT	-0.001 (0.900)	-0.001 (0.906)	0.004 (0.027)	0.004 (0.035)	0.011 (0.017)	0.011 (0.030)
INCOME	-0.214 (0.048)		-0.024 (0.551)		-0.197 (0.088)	
Obs.	39	39	37	37	39	39
Prob(F-test)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

P-values are in parentheses.

Source: Levine, Loayza, Beck 1998; Table 7.

comparable corporate financial statements tend to have better developed financial intermediaries.

Furthermore, Table 4 (which is Table 8 in LLB) shows that creditor rights, enforcement quality, and accounting standards influence financial intermediary development, and that this component of financial intermediary development positively affects economic growth.

LLB's findings (in conjunction with those in LLSV 1998) are consistent with the view that countries with particular legal origins tend to create particular types of

laws, regulations, and enforcement mechanisms. It is these laws, regulations, and enforcement mechanisms that help determine the level of financial intermediary development and thus long-run economic growth. While it is difficult to change legal origin, the results offer a strategy for boosting financial development and accelerating long-run growth. Countries can target reforms that ensure that lenders have confidence that the legal system will quickly, transparently, and effectively enforce their claims against borrowers and that outside investors have easy access to

TABLE 4

Financial Intermediation and Growth: Cross-Section Regressions, 1960–95

Dependent variable: Real Per Capita GDP Growth, 1960–95

Instrumental variables: Legal Environment variables (CREDITOR, ENFORCE, & ACCOUNT)

Regression #1: simple conditioning information set

Explanatory Variable	coefficient	standard error	t-statistic	p-value	number of observations	j-statistic	lm-test OIR
PRIVATE CREDIT	2.248	0.281	8.006	0.000		37	2.55

Regression #2: full conditioning information set

Explanatory Variable	coefficient	standard error	t-statistic	p-value	number of observations	j-statistic	lm-test OIR
PRIVATE CREDIT	2.579	0.709	3.637	0.001		34	2.33

Critical values for LM-Test Over Identifying Restrictions (2 d.f.): 10% 4.61; 5%=5.99

Simple conditioning information set: logarithm of initial income per capita and schooling.

Full conditioning information set: simple set, plus indicators of revolutions and coups, civil liberties, political assassinations, size of government, inflation, black market premium, and openness to trade.

high-quality, comprehensive, and comparable information about firms.

C. Cautionary Note

It is important to be clear about what LLB do *not* show. LLB do not show that economic growth does not influence the banking system. The results do not contradict theories by Patrick (1966), Greenwood and Jovanovic (1990), and Greenwood and Smith (1997), which suggest that causality runs in both directions; banking development influences economic growth, and economic growth influences banking sector development. LLB provide evidence for the hypothesis that the exogenous component of banking development promotes economic growth.

Furthermore, we do not yet have good cross-country information on an array of potential issues associated with the development of healthy banking systems. Existing works are not yet able to examine the determinants or the effects of various financial regulations in a cross-country context involving developing countries. Thus, I do not consider the determinants or effects of deposit insurance (Calomiris 1989; Demirgüç-Kunt and Detragiache 1997; Kane 1985), restrictions on banking activities (Kroszner and Rajan 1994; Calomiris 1995; Barth, Caprio, and Levine 1998), or a wide array of supervisory and regulatory issues that may affect bank stability and performance (Barth, Nolle, and Rice 1996; BIS 1997; Calomiris and Gorton 1991; Kroszner and Strahan 1996). Rather, this paper makes a more limited point: The legal environment influences the banking sector, and this component of banking sector development is strongly linked with long-run rates of economic growth.

II. Markets and Economic Growth

A. Concepts: How Stock Markets Affect Economic Performance

Well-functioning stock markets may stimulate the acquisition and dissemination of information. As markets become larger (Grossman and Stiglitz 1980) and more liquid (Kyle 1984; Holmstrom and Tirole 1993; Boot and Thakor 1997; and Maug 1998), agents may have greater incentives to expend resources in researching firms because it is easier to profit from this information by trading in big and liquid markets. Moreover, this improved information about firms should improve resource allocation substan-

tially with corresponding implications for economic growth.

Besides influencing the acquisition of information *ex ante*, well-developed stock markets may help in exerting corporate control *ex post*, i.e., after financing has occurred. Stock markets may stimulate greater corporate control by facilitating takeovers (Jensen and Meckling 1976; Scharfstein 1988; Stein 1988; and Bolton and von Thadden 1998) and by making it easier to tie managerial compensation to performance (Diamond and Verrecchia 1982; Jensen and Murphy 1990). Thus, if well-functioning stock markets facilitate takeovers, then outsiders can purchase poorly operating firms, change management, and set the stage for greater profitability. Similarly, if well-functioning stock markets make it easier to link managerial compensation with stock price performance, this helps align the interests of managers with those of firm owners.

Well-functioning stock markets ease risk diversification and the ability to avoid liquidity risk. Stock markets are best designed for traditional, cross-sectional risk-sharing, where individuals can create a tailor-made portfolio of assets. In better-developed markets—markets where it is easier to trade securities—it is easier for agents to construct portfolios with a minimum of middlemen. In addition, markets can ease liquidity risk (Levine 1991; Bencivenga, Smith, and Starr 1995). Many profitable investments require a long-term commitment of capital, but investors are often reluctant to relinquish control of their savings for long periods. Liquid equity markets make long-term investment more attractive because they let savers sell equities quickly and cheaply if they need access to their savings. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating longer-term, more profitable investments, liquid markets improve the allocation of capital and thereby boost productivity growth.

Well-developed securities markets can assist resource mobilization. Mobilizing the savings of many disparate savers is costly because it involves overcoming the transaction costs associated with collecting savings from different individuals and also overcoming the informational asymmetries associated with making savers comfortable with relinquishing control of their savings. Well-developed securities markets, out of necessity, tend to encourage the development of effective accounting standards, information-disclosure procedures, and contracting systems that lower impediments to resource mobilization. Also, “market makers” are gener-

ally very concerned about establishing stellar reputations, so that savers feel comfortable about entrusting their savings to others (De Long 1991; Lamoreaux 1995).

B. Evidence: Stock Markets Exert a First-Order, Causal Impact on Growth⁶

The body of empirical evidence on the relationship between stock market development and growth is less extensive than that on financial intermediation and growth. Nonetheless, substantial research suggests a positive link between stock market liquidity and growth, whether this analysis is conducted in a pure cross-section of countries (Levine and Zervos 1998), using time-series procedures (Rousseau and Wachrel 1998), or firm-level data (Demirgüç-Kunt and Maksimovic 1996b). Instead of discussing these papers in detail, I will summarize some recent research that I have conducted, which again attempts to evaluate the causal link between stock market development and growth and to identify some of the legal underpinnings of equity markets.

1. Data on Stock Market Liquidity

Levine (1998b) uses the following measure of stock market liquidity: the total value of the trades of domestic stock on domestic stock exchanges divided by GDP and calls this measure **Value Traded**.⁷ While not a direct measure of trading costs or the uncertainty associated with trading on a particular exchange, theoretical models of stock market liquidity and economic growth directly motivate Value Traded (Levine 1991; Bencivenga et al. 1995). Value Traded measures trading volume as a share of national output and should therefore positively reflect liquidity on an economy-wide basis. The value-traded ratio is likely to vary with the ease of trading: If it is costly and risky to trade, there will tend to be less trading.

2. Data on the Legal Environment

Consider the connection between the legal protection of minority shareholders and the liquidity of equity markets. Conceptually, legal systems that protect shareholders, especially minority shareholders, encourage greater participation. Shareholders exercise their power by voting for directors. Thus, to quantify the legal treatment of shareholders, I use five measures of the voting rights of shareholders.⁸

PROXY equals one if shareholders can vote not just by showing up in person or sending an authorized representa-

tive, but by mailing in their vote. PROXY equals zero if shareholders cannot vote by mail; this can impede participation of shareholders, who must either attend the meeting or go through the legal procedure of designating an authorized representative.

CUMULATIVE equals one if the Company Law or Commercial Code allows shareholders to cast all of their vote for one candidate, and zero otherwise. The ability to vote all one's shares for one candidate may make it easier for minority shareholders to put their representatives on boards of directors.

BLOCKED equals one if the Company Law or Commercial Code prohibits firms from requiring that shareholders deposit their shares prior to a General Shareholders Meeting, thus preventing them from selling those shares for a number of days, and zero otherwise. When shares are blocked in this manner, the shares are kept in custody until a few days after the meeting. This practice prevents shareholders who do not bother to go through this arduous exercise from voting.

MINOR equals one if the Company Law or Commercial Code grants minority shareholders either a judicial venue to challenge the management decisions or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, the disposition of assets, and changes in the articles of incorporation. The variable equals zero otherwise.

MEETING equals one if the minimum percentage of ownership share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than 10 percent, and zero otherwise. The minimum percentage of ownership share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting ranges from one to 33 percent, with a median of 10 percent. Mexico has the highest value in the sample of countries. Presumably, the harder it is for minority shareholders to call a meeting and contest management, the less attractive it will be for agents to participate in equity markets.

SRIGHTS aggregates these five indicators into a conglomerate index of shareholder rights.

3. Summary Statistics on the Legal and Accounting Environment

Belgium, Italy, and Mexico (all countries with a French legal origin) are countries where SRIGHTS equals the minimum value of zero, indicating that their legal systems do not stress the rights of minority shareholders. In contrast,

the legal codes of the United States stress the rights of shareholders, such that SRIGHTS = 5. The French legal tradition is clearly evident in Latin America. This region's legal system places comparatively less emphasis on the legal rights of shareholders, particularly minority shareholders, than other regions. It is also important to note the cross-Latin America variation. The legal codes of Argentina, Brazil, and Chile actually place a comparatively high priority on minority shareholder rights, while Colombia, Mexico, and Venezuela are far below the international average.

Latin America also tends to provide less comprehensive and comparable information about corporations to investors as measured by the low value of ACCOUNT. Moreover, Latin America's (overall) comparatively weak legal protection of shareholders and its relatively uninformative accounting systems have a price: comparatively poor stock markets.

4. Regression of Stock Market Liquidity on Legal and Accounting Variables

My analysis (Levine 1997b) also indicates a strong link between stock market liquidity and the availability of high quality information about firms. As shown in Table 5 (which is Table 4 of Levine 1997b), there is a statistically significant relationship between ACCOUNT and the measure of stock market liquidity, Value Traded, when controlling for the legal rights of shareholders. In contrast, shareholder rights do not have a very robust link with stock market liquidity. SRIGHTS is strongly linked with market size. Thus, good information, ACCOUNT, is strongly linked with both market size and liquidity, while SRIGHTS is strongly associated with overall market size, but not with market activity. These findings stress the importance of good regulations governing information disclosure.⁹ Furthermore, the relationship between ACCOUNT and liquidity is economically meaningful. For example, an increase of one standard deviation in ACCOUNT (12) increases Value Traded by 0.058 (0.058 = 0.0048*12), which is about the median value of Value Traded in the sample (0.054). Although the R-squares in these regressions are low, about 10 percent, the legal and accounting variables do help account for cross-country variations in stock market size and liquidity.

Before continuing, it is critical to note that SRIGHTS is not simply a proxy for the overall quality of a country's legal system. As shown by Levine (1998a,b), legal variables

TABLE 5

The Legal Determinants of Market Liquidity

INDEPENDENT VARIABLE	DEPENDENT VARIABLE: VALUE TRADED		
	(1)	(2)	(3)
c	-0.32 (0.172) {0.074}	-0.05 (0.320) {0.884}	-0.11 (0.308) {0.731}
Income	0.04 (0.021) {0.058}	-0.02 (0.044) {0.651}	-0.01 (0.043) {0.765}
Srights	0.04 (0.017) {0.037}		0.02 (0.017) {0.194}
Account		0.01 (0.002) {0.005}	0.00 (0.002) {0.013}
observations:	45	40	40
R-Squared	0.08	0.1	0.12

(standard errors in parentheses)

{P-values in brackets}

Note: Income = logarithm of real per capita GDP in 1976; Srights = an index of the legal rights of shareholders, especially minority shareholders, that takes values between 0 and 5.

Account = an index of the comprehensiveness and comparability of corporate financial statements.

Value Traded = total value of shares traded divided by GDP; Turnover = total value of shares traded divided by Capitalization.

Source: Levine, Loayza, Beck 1998; Table 4.

that define the rights of creditors are closely connected to banking sector development. But, SRIGHTS is not highly correlated with banking sector development. Also, the legal rights of creditors are not highly correlated with stock market development. Thus, the legal variables are capturing particular aspects of the legal environment. They are not proxies for overall legal efficiency.

5. Linking Legal and Regulatory Environment to Stock Market and Then to Growth

Levine (1997b) also uses instrumental variables procedures to determine whether the exogenous component of stock market development is linked with long-run growth. The basic regression takes the form:

$$(1) \quad \text{GROWTH} = \alpha + \beta \text{SMI} + \gamma \text{X} + \epsilon,$$

where the dependent variable, GROWTH, is real per capita GDP growth over the 1976–93 period, SMI is Value Traded, and X represents a matrix of conditioning information that controls for other factors associated with economic growth. I use SRIGHTS and ACCOUNT as instru-

mental variables for each of the SMI indicators and use a GMM estimator.

To control for “other factors,” I include three different conditioning information sets. Conditioning Information Set No. 1 includes a constant, the logarithm of initial per capita GDP, the logarithm of initial secondary school enrollment, and the number of revolutions and coups. Conditioning Information Set No. 2 includes these variables plus government spending to GDP, inflation, and the black market exchange-rate premium. Conditioning Information Set No. 3 includes all the control variables in Conditioning Information Set No. 2 plus BANK, which equals bank credit to the private sector divided by GDP.

The results indicate a strong, positive relationship between the exogenous component of stock market development and economic growth. Table 6 (which is Table 5 of Levine 1997b) summarizes the results. After controlling for a wide array of factors, the exogenous component of Value Traded enters the growth regression with a significant coefficient (at the 0.05 level). Moreover, the strong link between the exogenous component of stock market development and growth holds using alternative instrumental variables. Specifically, I also used the dummy variables for legal origin—English, French, or German—as instrumental variables without using SRIGHTS and ACCOUNT. I did this because some may view the legal origin variables as better instruments

than SRIGHTS and ACCOUNT because legal origin is less prone to endogeneity problems. The results with these alternative instruments are very similar to those reported in Table 5: The stock market indicators are robustly correlated with economic growth. The exogenous component of stock market development—the component of stock market development defined by the legal and accounting regime—is positively associated with long-run economic growth.¹⁰

The linkages from the regulatory regime through stock market liquidity to long-run growth are economically meaningful. For example, the results imply that if Argentina implemented regulatory changes that improved the quality of corporate financial statements from the recorded value of 45 to the average for OECD countries (65), the growth would be 0.6 percentage points faster per year. This is large, considering that Argentina’s real per capita GDP growth averaged only about 0.2 percentage points per year over this period. Furthermore, after a decade, 0.6 percentage points faster per capita GDP growth implies that each Argentinean would be earning 6 percent more *per year*. This is meant to be illustrative. Because the analysis does not consider any country in detail, the coefficients should not be applied to any individual country. Instead, the example serves to demonstrate the large potential costs, in terms of slower long-run growth, of permitting poor information disclosure to persist.

TABLE 6

Stock Markets and Growth: Using Instrumental Variables

$Growth = a + B[\text{Matrix of Conditioning Information}] + c(\text{SMI})$

Instruments: Matrix of conditioning information, plus srights and account

SMI is alternatively Value Traded, Turnover, Capitalization, and IPO

SMI	CONDITIONING INFORMATION set #1	CONDITIONING INFORMATION set #2	CONDITIONING INFORMATION set #3
Value Traded	0.056 ** (0.023)	0.056 ** (0.023)	0.060 ** (0.024)
Turnover	0.059 * (0.031)	0.060 * (0.033)	0.059 * (0.030)
Capitalization	0.031 ** (0.011)	0.032 ** (0.001)	0.033 ** (0.011)
IPO	0.005 * (0.002)	0.005 ** (0.002)	0.006 ** (0.002)

Conditioning information set #1: logarithm of initial income per capita, logarithm of initial secondary school enrollment, and number of revolutions and coups.

Conditioning information set #2: conditioning information set #1, plus the initial values of government spending divided by GDP, inflation, and black market exchange rate premium.

Conditioning information set #3: set #2, plus initial value of bank credit to the private sector divided by GDP.

Note: Estimated using Generalized Method of Moments.

Source: Levine, (1997b); Table 5.

C. *Cautionary Note*

It is important to be clear about what these results do not show.

First, the results in Levine and Zervos (1998) and Levine (1997b) do *not* show that economic growth does not influence stock markets. The results do not contradict the argument that causality runs in both directions: Financial development influences economic growth, and economic growth influences financial sector development. Rather, existing work provides evidence consistent with the hypothesis that the exogenous component of stock market development promotes economic growth.

Second, Levine (1997b) and LLSV (1997) do not examine a slew of factors that may influence the operation of stock markets. For instance, a wide range of regulations influence stock market activity beyond those summarized by SRIGHTS and ACCOUNT. These range from listing requirements, to requirements governing the trading of securities, to supervision of broker/dealers, etc. Market microstructure may importantly influence stock market development. These factors were omitted due to a lack of data availability, not to potential relevance. Rather, LLSV (1997) and Levine (1997b) make more limited points: Legal heritage is closely linked to the legal rights of shareholders and the quality of corporate financial statements; legal and accounting characteristics influence stock market size and liquidity; and the exogenous component of stock market development is strongly linked with long-run rates of economic growth.

Third, the empirical results in conjunction with the theoretical overview do not imply that every country needs its own active bourse. Conceptually, firms and savers benefit from easy access to liquid stock markets. It is the ability to trade and issue securities easily that facilitates long-term growth, not the geographical location of the market. Thus, capital control liberalization may improve the ability of firms to raise capital both by improving the liquidity of domestic exchanges and by providing greater access to foreign exchanges.

Fourth, these analyses use cross-country comparisons. They do not examine any single country in depth. Thus, while LLSV (1997) and Levine (1997b) have very clear policy implications, these must be viewed as illuminating a reform strategy. These papers do not offer a precise blueprint. Nonetheless, the results—and therefore the policy implications—jump out. Particular characteristics of the

legal and regulatory environment are strongly linked with how well the stock exchange operates, with important spillovers for economic development.

III. Is a Bank-Based or Market-Based Financial System Better?

The classic controversy about financial structure involves comparisons between the bank-based systems of Germany and Japan versus the more market-based financial systems of England and the United States. In this section I first discuss arguments in favor of the bank-based system. Then, I review arguments that contradict this view. Next, I present some very preliminary evidence on the implications and determinants of financial structure from a research project with Asli Demirgüç-Kunt (1997). Finally, I conclude by arguing that (1) there exists considerable debate, with sparse evidence, about the relationship between financial structure and economic growth; and (2) there are good reasons for believing that the issue is not banks or stock markets, but that both banks and stock markets provide services to the economy that promote economic progress.

A. *The Case for a Bank-Based System*

As noted above, financial intermediaries can improve the acquisition of information on firms, the intensity with which creditors exert corporate control, provision of risk-reducing instruments, and mobilization of capital by reducing information and transaction costs. In contrast, market-based systems might not provide these financial services as well as bank-based systems.

Stiglitz (1985) argues that because well-developed markets quickly reveal information to investors at large, individual investors will be dissuaded from spending much time and money researching firms. There is a basic free-rider problem that reduces incentives for investors to expend resource acquiring information when this information is revealed in the market to others who have not spent time and money carefully investigating investment opportunities. This problem is less severe in bank-based systems since banks can make investments without revealing their decisions immediately in public markets.

Furthermore, many argue that the threat of outsiders' taking over the firm is a poor way of exerting corporate control and convincing managers to act in the best interests of firm owners. First, insiders probably have better information about the corporation than outsiders. This

informational asymmetry mitigates the potential effectiveness of takeovers because it is less likely that ill-informed outsiders will outbid relatively well-informed insiders for control of firms (unless they pay too much!) (Myers and Majluf 1984; Stiglitz 1985). Second, liquid equity markets may facilitate takeovers that, while profiting the raiders, may actually be socially harmful (Shleifer and Summers 1988). Third, more liquidity may reduce incentives to undertake careful—and expensive—corporate governance. By reducing exit costs, stock market liquidity encourages more diffuse ownership, such that each owner has fewer incentives to oversee managers actively (Bhide 1993; Shleifer and Vishny 1986). Fourth, if an outsider expends lots of resources obtaining information, the results of this research will be observed by other market participants when the outsider bids for shares of the firm. This will induce others to bid for shares, so that the price rises. Thus, the original outside firm that expended resources to obtain information must, therefore, pay a higher price for the firm than it would have to pay if “free-riding” firms could not observe its bidding. The rapid public dissemination of costly information reduces incentives for obtaining information and making effective takeover bids (Stiglitz 1985). Fifth, existing managers often take action—poison pills—that deter takeovers and thereby weaken the market as an effective disciplining device (Stiglitz 1985). There is some evidence that, in the United States, the legal system hinders takeovers and grants considerable power to management (Jensen 1991; Roe 1990; Szewczyk and Tsetsekos 1992).

Shareholders should be able to control management through boards of directors. However, an incestuous relationship may blossom between boards of directors and management. Members of a board enjoy their lucrative fees and owe those fees to nomination by management, so they are more likely to approve golden parachutes to managers and poison pills that reduce the attractiveness of takeovers. Thus, this incestuous link may further reduce the effectiveness of the market for corporate control (Allen and Gale 1997).

In sum, proponents of bank-based systems argue that there are fundamental reasons for believing that market-based systems will not do a good job of acquiring information about firms and overseeing managers. This will hurt resource allocation and economic performance. Banks do not suffer from the same fundamental shortcomings as markets; they will do a correspondingly better job at

researching firms and overseeing managers. Furthermore, while markets may potentially provide the best tailor-made products for hedging risk, markets are imperfect and incomplete. Thus, in some circumstances—particularly those involving intertemporal risk-sharing—bank-based systems may offer better risk-ameliorating services than market-based systems (Allen and Gale 1997).

B. The Case for a Market-Based System

The case for a market-based system is essentially a counterattack that focuses on the practical efficacy of bank-based systems. Bank-based systems may involve intermediaries with a huge influence over firms, and this influence may manifest itself in negative ways. For instance, once banks acquire substantial, inside information about firms, this allows banks to ease financing constraints but it also allows banks to extract rents from firms; firms must pay for their greater access to capital. In terms of new investments or debt renegotiations, banks with power can extract more of the expected future profits from the firm (than in a market-based system). This ability to extract part of the expected payoff to potentially profitable investments may reduce the effort extended by firms to undertake innovative, profitable ventures (Rajan 1992). Also, banks (as debt issuers) have an inherent bias toward prudence, so that bank-based systems may stymie corporate growth. Weinstein and Yafeh (1998) find evidence of this in Japan. While firms with close ties to a “main bank” have greater access to capital and are less cash constrained than firms without a main bank, the main bank firms tend (1) to employ conservative, slow growth strategies and do not grow faster than firms without a “main bank,” (2) to use more capital-intensive processes than non-main bank firms holding other features constant, and (3) to produce lower profits, which is consistent with how the powerful banks extract rents from the relationship. Allen and Gale (1997) further note that although banks may be effective at eliminating duplication of information-gathering and -processing, which is likely to be helpful when people agree about what needs to be gathered and how it should be processed, banks may be ineffective in non-standard environments. Thus, banks may not be effective gatherers and processors of information in new, uncertain situations involving innovative products and processes.

Another line of attack on the efficacy of bank-based systems involves corporate governance. Bankers will act in

their own best interests. Bankers may become captured by the firm, or collude with firms against other creditors. Thus, influential banks may prevent outsiders from removing inefficient managers, thereby eliminating one avenue of corporate control (Black and Moersch 1998). Wenger and Kaserer (1998) provide convincing evidence for the case of Germany. In Germany, bank managers voted the shares of a larger number of small stockholders. For instance, in 1992 bank managers exercised on average 61 percent of the voting rights of the 24 largest companies, and in 11 companies this share was higher than 75 percent. This control of corporations by bank management extends to the banks themselves. In the shareholder meetings of the three largest German banks, the percentage of proxy votes was higher than 80 percent, much of this voted by the banks themselves. For example, Deutsche Bank held voting rights for 47 percent of its own shares, while Dresdner votes 59 percent of its own shares (Charkham 1994). Thus, the bank management has wrested control of the banks from the owners of the banks and also exerts a huge influence on the country's major corporations. Wenger and Kaserer (1998) also provide examples in which banks misrepresent the accounts of firms to the public and systematically fail to discipline management.

Finally, market-based financial systems provide a richer set of risk-management tools that permit greater customization of risk-ameliorating instruments. While bank-based systems may provide inexpensive, basic risk-management services for standardized situations, market-based systems provide greater flexibility to tailor products. Thus, as economies mature and need a richer set of risk-management tools and vehicles for raising capital, they may concomitantly benefit from a legal and regulatory environment that supports the evolution of market-based activities, or overall growth may be retarded.

C. Some Very Preliminary Evidence

First, it is worth observing that there are noticeable changes in financial structure as countries develop. As first noted by Goldsmith (1969) and then shown by Demirgüç-Kunt and Levine (1998), the financial structure of countries varies with income. When moving from poorer to richer countries, commercial banks and non-banks grow in importance, while the role of central banks diminishes. Furthermore, the financial system allocates more credit to the private sector (as opposed to public enterprises and

governments) in richer countries. Finally, richer countries tend to have larger and more active stock markets as shares of GDP than poorer countries. The data suggest that as countries grow richer, specialized financial intermediaries and equity markets grow in importance.

To illustrate further how financial structure differs across countries, consider Table 7 (source: Demirgüç-Kunt and Levine 1998), which reports a measure of a financial structure. RELATIVE SIZE equals the ratio of stock market cap-

TABLE 7

Measures of Financial Structure 1980–1990

GDP/CAP is the real GDP per capita in US \$. Relative Size is defined as the ratio of stock market capitalization to liquid liabilities of financial intermediaries. All figures are 1980–1990 averages.

	GDP/CAP (US \$)	RELATIVE SIZE
Japan	19140	0.51
Denmark	19043	0.39
Norway	18509	0.25
Sweden	18494	0.76
United States	17884	0.86
Germany	17756	0.31
Finland	17295	0.33
France	15788	0.25
Canada	15347	0.68
Austria	15295	0.09
Netherlands	14655	0.48
Belgium	14065	0.56
Italy	12877	0.17
Australia	12340	0.83
United Kingdom	11491	1.36
New Zealand	10822	0.86
Israel	8539	0.41
Singapore	7744	1.25
Hong Kong	7561	0.69
Spain	7332	0.24
Greece	4610	0.09
Portugal	3614	0.12
Argentina	3396	0.18
Korea	2840	0.55
Venezuela	2652	0.11
S. Africa	2403	2.32
Malaysia	1957	0.87
Brazil	1933	0.57
Mexico	1800	0.28
Jordan	1632	0.46
Chile	1614	0.67
Turkey	1209	0.19
Colombia	1172	0.11
Thailand	930	0.18
Zimbabwe	655	0.28
Indonesia	430	0.03
India	322	0.16
Pakistan	313	0.14
Nigeria	292	0.12

italization to the liquid liabilities of financial intermediaries. While a very imperfect indicator of financial structure, RELATIVE SIZE provides some potentially useful comparisons. As illustrated, the United States and United Kingdom have relatively big markets, which is consistent with their being classified as market-based. Similarly, Germany and (to a lesser degree) Japan have stock markets that are small relative to the size of their banking systems. This is consistent with the classification of Germany and Japan as bank-based. It is also interesting to note that countries with larger values of RELATIVE SIZE—values greater than 0.80—are overwhelmingly countries with English (common law) legal origins, which are legal systems that tend to emphasize the rights of minority shareholders.

Turning to the determinants of financial structure, Table 8 (source: Demirgüç-Kunt and Levine 1998) presents correlations between RELATIVE SIZE and some potential determinants of market structure, including indicators of legal codes, legal enforcement, accounting regulations, and tax issues. Countries that provide greater

protection to shareholders tend to have market-based systems (big RELATIVE SIZE). It is also interesting to note that countries with greater protection of minority shareholders also tend to have lower bank interest-rate spreads. Furthermore, legal system efficiency in terms of contract enforcement is also particularly important for the development of market-based systems.

Finally, I conducted a preliminary analysis of the growth implications of market structure. Specifically, I examined the partial correlation between RELATIVE SIZE and long-run economic growth in a cross-section of countries after controlling for other country characteristics. Thus, I followed the same procedures discussed above for examining the link between measures of financial intermediary development and long-run growth. Basically, I could not get RELATIVE SIZE to be significant (with either a positive or negative coefficient). Using this simple measure of the size of the domestic equity markets relative to the size of the banking sector, I could not find a significant link between financial structure and growth.

TABLE 8

Correlations of Financial Structure with Legal, Accounting, Regulatory, and Tax Factors

Common Law is a dummy variable that takes the value 1 for common law countries and the value 0 for others. Shareholder rights is an index that ranges from 0 to 5 and aggregates shareholder rights and creditor rights is an index that ranges from 0 to 4.5 and aggregates creditor rights as explained in La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998). Law and order indicator reflects the degree to which the citizens of a country are willing to accept the established institutions to make and implement laws and adjudicate disputes. It is scored 0 to 6 with higher scores indicating sound political institutions and a strong court system. Legal efficiency indicator is an assessment of the efficiency and integrity of the legal environment as it affects business, particularly foreign firms. It is scored 0 to 10 with lower scores for lower efficiency levels. Quality of accounting standards is an index created by examining and rating company annual reports on the basis of their inclusion or omission of 90 key accounting items. Restrictions on banking is a dummy variable that takes the value 1 if banking activities in securities is restricted and 0 otherwise. Deposit insurance is a dummy variable that takes the value 1 if the country has an explicit insurance scheme and the value 0 otherwise. The tax variables are the relative tax advantage of debt with respect to dividends and capital gains. All variables, when available, were averaged over 1980–1990 so that each country has one observation. Correlations reported are Pearson Correlation Coefficients. P-values are given in italics. Number of observations are reported under respective p-values.

FINANCIAL STRUCTURE	LEGAL CODES			LEGAL ENFORCEMENT			ACCOUNTING AND REGULATION		TAX TREATMENT	
	COMMON LAW	SHAREHOLDER RIGHTS INDEX	CREDITOR RIGHTS INDEX	LAW AND ORDER INDICATOR	LEGAL EFFICIENCY INDICATOR	QUALITY OF ACCOUNTING STANDARDS	RESTRICTIONS ON BANKING	DEPOSIT INSURANCE	TAX ADV. OF DEBT VS. DIVIDENDS	TAX ADV. OF DEBT VS. CAPITAL GAINS
Relative	0.463	0.490	0.171	-0.014	0.328	0.504	0.053	-0.357	-0.578	-0.141
Size	0.011 29	0.007 29	0.385 28	0.943 29	0.039 40	0.009 26	0.811 23	0.058 29	0.001 28	0.476 28
Banking	-0.377	-0.451	-0.339	-0.130	-0.205	-0.354	-0.188	0.224	0.068	-0.302
Spread	0.052 27	0.018 27	0.090 26	0.519 27	0.230 36	0.083 25	0.401 22	0.261 27	0.735 27	0.125 27

Source: Demirgüç-Kunt and Levine (1998)

D. Conclusions: Banks and Markets

Here, I want to make two points. First, there are good reasons for believing that the issue is not banks or stock markets, but that both banks and stock markets provide complementary services to the economy that promote economic progress. Second, although there exists considerable debate about the relationship between financial structure and economic growth, there is insufficient evidence to arrive at a confident conclusion concerning bank-based and market-based systems.

1. Complementarities between Banks and Markets

Traditionally, development specialists have focused on banks and viewed stock markets as unimportant sideshows. They note that much more corporate capital is raised from banks than from equity issues. Similarly, traditional finance theory, strongly influenced by Modigliani-Miller, views debt and equity—and through this prism, banks and equity markets—as substitute sources of finance. These traditional views, therefore, either give little role to markets or view banks and markets as competing components of the financial system.

This traditional view, however, ignores an important point: Stock markets may provide different financial services from banks. Put differently, stock markets may positively affect economic development even though not much capital is raised through them. For instance, stock markets may play a prominent role in facilitating custom-made risk-management services and boosting liquidity. In addition, stock markets may complement banks. For instance, by spurring competition for corporate control and by offering alternative means of financing investment, securities markets may reduce the potentially harmful effects of excessive bank power.

While the theoretical literature is making progress in modeling the co-evolution of banks and markets (Boyd and Smith 1996; Huybeus and Smith 1998; Allen and Gale 1997), there is already some empirical evidence. For instance, Levine and Zervos (1998) show that greater stock market liquidity implies faster economic growth no matter what the level of banking development. Similarly, greater banking development implies faster growth regardless of the level of stock market liquidity. Moreover, even after controlling for other country characteristics, such as initial income, schooling, political stability, and monetary, fiscal, trade, and exchange-rate policies, the data still indicate that both banking development and stock market develop-

ment exert a positive influence on growth. Using firm-level data, Demirgüç-Kunt and Maksimovic (1996b) show that increases in stock market development actually tend to increase the use of bank finance in developing countries. Thus, these two components of the financial system may act as complements during the development process. While still in need of additional research, the scattered pieces of evidence that currently exist suggest that we may not want to view bank-based and market-based systems as representing a trade-off. Policy-makers may instead want to focus on providing a legal and regulatory environment that allows both banks and markets to flourish without tipping the playing field in favor of either banks or markets.

2. Insufficient Evidence

There is very little empirical evidence supporting—or refuting—any particular claim about the benefits of bank-based or market-based financial systems in economic growth. There have been insightful studies of bank-based versus market-based financial structures in a few industrial countries, mainly Germany, Japan, the United Kingdom, and the United States. These studies, however, have a fundamental weakness. These four countries are at about the same level of GDP per capita. Therefore, over a sufficiently long time horizon, they had similar rates of economic growth. Thus, it is virtually impossible to reliably link differences in financial structure to differences in economic growth because there are very little differences in economic growth. To resolve this problem, it is important to study a wider range of countries. Moreover, there are not recent cross-country studies of financial structure and economic development involving developing countries. Given the importance of this issue for economic growth, it is time to fill this research gap.

References

- Allen, Franklin, and Douglas Gale (1995). "A Welfare Comparison of the German and U.S. Financial Systems." *European Economics Review*, 39, pp. 179–209.
- Allen, Franklin, and Douglas Gale (1997). "Financial Markets, Intermediaries, and Intertemporal Smoothing." *Journal of Political Economy*, 105, pp. 523–46.
- Alonso-Borrego, C., and Manuel Arellano (1996). "Symmetrically Normalised Instrumental Variable Estimation Using Panel Data." CEMFI Working Paper No. 9612, September.
- Amihud, Yakov, and Haim Mendelson (1989). "The Effects of Beta, Bid-Ask Spread, Residual Risk and Size on Stock Returns." *Journal of Finance*, 44, pp. 479–86.

- Arellano, Manuel, and Stephen Bond (1991). "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies*, 58, pp. 277–97.
- Arellano, Manuel, and Olympia Bover (1995). "Another Look at the Instrumental-Variable Estimation of Error-Components Models." *Journal of Econometrics*, 68, pp. 29–52.
- Arrow, Kenneth J. (1964) "The Role of Securities in the Optimal Allocation of Risk Bearing." *Review of Economic Studies*, April, 31(2), pp. 91–96.
- Atje, Raymond, and Boyan Jovanovic (1993). "Stock Markets and Development." *European Economic Review*, April, 37(2/3), pp. 632–40.
- Bagehot, Walter (1873). *Lombard Street*. Homewood, IL: Richard D. Irwin (1962 Edition).
- Barth, James R., Daniel E. Nolle, and Tara N. Rice (1996). "Commercial Banking Structure, Regulation, and Performance: An International Comparison." Economic and Policy Analysis Working Paper, Office of the Comptroller of the Currency, United States. September.
- Barth, James R., Gerard Caprio Jr., and Ross Levine (1998). "Financial Regulation and Performance: Cross-Country Evidence." In *Banking, Financial Integration and Macroeconomic Stability*, Leonardo Hernandez and Klaus Schmidt-Hebbel, eds. Central Bank of Chile, forthcoming.
- Beck, Thorsten, Ross Levine, and Norman Loayza (1998). "Finance and the Sources of Growth." World Bank mimeo, July.
- Bencivenga, Valerie R., and Bruce D. Smith (1991). "Financial Intermediation and Endogenous Growth." *Review of Economics Studies*, April, 58(2), pp. 195–209.
- Bencivenga, Valerie R., and Bruce D. Smith (1992). "Deficits, Inflation and the Banking System in Developing Countries: The Optimal Degree of Financial Repression." *Oxford Economic Papers*, October, 44(4), pp. 767–90.
- Bencivenga, Valerie R., Bruce D. Smith, and Ross M. Starr (1995). "Transactions Costs, Technological Choice, and Endogenous Growth." *Journal of Economic Theory*, October, 67(1), pp. 53–177.
- Berger, Allen N., and Gregory F. Udell (1995). "Relationship Lending and Lines of Credit in Small Firm Finance." *Journal of Business*, July, 68(3), pp. 357–81.
- Berman, Harold J. (1997). *Law and Revolution: The Formation of the Western Legal Tradition*. Cambridge, MA: Harvard University Press.
- Bhide, Amar (1993). "The Hidden Costs of Stock Market Liquidity." *Journal of Financial Economics*, August, 34(2), pp. 31–51.
- BIS (1997). "Core Principles for Effective Banking Supervision," No. 30. Basle Committee on Bank Supervision.
- Black, Stanley W., and Mathias Moersch (1998). "Financial Structure, Investment, and Economic Growth in OECD Countries." In *Competition and Convergence in Financial Markets: The German and Anglo-American Models*, Stanley Black and Mathias Moersch, eds. New York: Elsevier. pp. 157–74.
- Blundell, Richard, and Stephen Bond (1997). "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." University College London Discussion Paper 97-07.
- Bolton, Patrick and Ernst-Ludwig von Thadden (1998). "Blacks, Liquidity, and Corporate Control." *Journal of Finance*, February, 53(1), pp. 1–26.
- Boot, Arnoud W. A., and Anjan V. Thakor (1997). "Financial System Architecture." *The Review of Financial Studies*, Fall, 10(3), pp. 693–733.
- Boyd, John H., and Edward C. Prescott (1986). "Financial Intermediary-Coalitions." *Journal of Economics Theory*, April, 38(2), pp. 211–32.
- Boyd, John H., and Bruce D. Smith (1996). "The Co-Evolution of the Real and Financial Sectors in the Growth Process." *World Bank Economic Review*, May, 10(2), pp. 371–96.
- Brock, Philip L. (ed.) (1992). *If Texas Were Chile: A Primer on Banking Reform*. San Francisco, CA: ICS Press.
- Calomiris, Charles W. (1989). "Deposit Insurance: Lessons from the Record." *Economic Perspectives*, Federal Reserve Bank of Chicago, May/June.
- Calomiris, Charles W. (1995). "The Costs of Rejecting Universal Banking: American Finance in the German Mirror, 1870–1914." In *Coordination and Information: Historical Perspectives on the Organization of Enterprise*, Naomi R. Lamoreaux and Daniel M. G. Raff, eds. Chicago: National Bureau of Economic Research, University of Chicago, pp. 257–321.
- Calomiris, Charles W., and Gary Gorton (1991). "The Origins of Banking Panics: Models, Facts, and Bank Regulation." In *Financial Markets and Financial Crises*, R. Glenn Hubbard, ed. Chicago: University of Chicago Press, pp. 109–74.
- Cameron, Rondo (1967). "Scotland, 1750–1845." In *Banking in the Early Stages of Industrialization: A Study in Comparative Economic History*, Rondo Cameron, Olga Crisp, Hugh T. Patrick, and Richard Tilly, eds. New York: Oxford University Press, pp. 60–99.
- Caprio Jr., Gerard, Izak Atiyas, James A. Hanson, and associates (1994). *Financial Reform: Theory and Practice*. New York: Cambridge University Press.
- Carosso, Vincent (1970). *Investment Banking in America*. Cambridge, MA: Harvard University Press.
- Charkham, Jonathan (1994). *Keeping Good Company: A Study of Corporate Governance in Five Countries*. Oxford: Clarendon Press.
- Checkland, Sydney G. (1975). *Scottish Banking: A History, 1695–1973*. Glasgow: Collins.
- De Long, J. Bradford (1991). "Did Morgan's Men Add Value? An Economist's Perspective on Finance Capitalism." In *Inside the Business Enterprise: Historical Perspectives on the Use of Information*, Peter Temin, ed. Chicago: University of Chicago Press, pp. 205–36.
- Debreu, Gerard (1959). *Theory of Value*. New York: Wiley.
- Demirgüç-Kunt, Asli, and Enrica Detragiache (1997). "The Determinants of Banking Crises: Evidence from Developed and Developing Countries." World Bank Policy Research Group Working Paper, No. 1828.
- Demirgüç-Kunt, Asli, and Ross Levine (1996a). "Stock Market Development and Financial Intermediaries: Stylized Facts." *World Bank Economic Review*, May, 10(2), 291–322.

- Demirgüç-Kunt, Asli, and Ross Levine (1996b). "Stock Markets, Corporate Finance, and Economic Growth: An Overview." *World Bank Economic Review*, May, 19(2), 223–40.
- Demirgüç-Kunt, Asli, and Ross Levine (1998). "Financial Structure and Economic Development: Stylized Facts." World Bank mimeo, July.
- Demirgüç-Kunt, Asli, and Vojislav Maksimovic (1996a). "Stock Market Development and Firm Financing Choices." *World Bank Economic Review*, May, 10(2), pp. 341–70.
- Demirgüç-Kunt, Asli, and Vojislav Maksimovic (1996b). "Financial Constraints, Uses of Funds, and Firm Growth: An International Comparison." World Bank mimeo.
- Devereux, Michael B., and Gregor W. Smith (1994). "International Risk Sharing and Economic Growth." *International Economic Review*, August, 35(4), pp. 535–50.
- Diamond, Douglas W., and Robert E. Verrecchia (1982). "Optimal Managerial Contracts and Equilibrium Security Prices." *Journal of Finance*, May, 37, pp. 275–87.
- Diamond, Douglas W., and Philip H. Dybvig (1983). "Bank Runs, Deposit Insurance, and Liquidity." *Journal of Political Economy*, June, 91(3), pp. 401–19.
- Diamond, Douglas W. (1984). "Financial Intermediation and Delegated Monitoring." *Review of Economic Studies*, July, 51(3), pp. 393–414.
- Easterly, William, and Sergio Rebelo (1993). "Fiscal Policy and Economic Growth: an Empirical Investigation." *Journal of Monetary Economics* December, 32(3), pp. 417–57.
- Easterly, William, and Ross Levine (1997). "Africa's Growth Tragedy: Policies and Ethnic Divisions." *Quarterly Journal of Economics*, November.
- Engerman, Stanley L., and Kenneth L. Sokoloff (1996). "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States." In *How Latin America Fell Behind*, Stephen Haber, ed. Stanford, CA: Stanford University Press, pp. 260–304.
- Fazzari, Steven M., R. Glen Hubbard, and Bruce C. Petersen (1988). "Financing Constraints, and Investment." *Brookings Papers on Economic Activity*, August, 1, pp. 141–206.
- Fischer, Stanley (1993). "The Role of Macroeconomic Factors in Growth." *Journal of Monetary Economics*, December, 32(3), pp. 485–511.
- Gale, Douglas, and Martin Hellwig (1985). "Incentive-Compatible Debt Contracts: The One-Period Problem." *Review of Economic Studies*, 52, pp. 647–63.
- Gerschenkron, Alexander (1962). *Economic Backwardness in Historical Perspective—A Book of Essays*. Cambridge: Harvard University Press.
- Gerschenkron, Alexander (1968). *Continuity in History and Other Essays*. Cambridge, Massachusetts, Harvard University Press.
- Gertler, Mark (1988). "Financial Structure and Aggregate Economic Activity: An Overview." *Journal of Money, Credit, Banking*, August, 20(3, Part 2), pp. 559–88.
- Gilson, Stuart, Kose John, and Larry Lang (1990). "Troubled Debt Restructurings: An Empirical Study of Private Reorganization of Firms in Default." *Journal of Financial Economics*.
- Glendon, Mary Ann, Michael Gordon, and Christopher Osakwe (1982). *Comparative Legal Tradition in a Nutshell*. St. Paul: West Publishing Co.
- Goldsmith, Raymond W. (1969) *Financial Structure and Development*. New Haven, CT: Yale University Press.
- Greenwood, Jeremy, and Boyan Jovanovic (1990). "Financial Development, Growth, and the Distribution of Income." *Journal of Political Economy*, October, 98(5, Part 1), pp. 1076–1107.
- Greenwood, Jeremy, and Bruce Smith (1997). "Financial Markets in Development, and the Development of Financial Markets." *Journal of Economic Dynamics and Control*, January, 21(1), pp. 145–86.
- Grossman, Sanford J., and Joseph Stiglitz (1980). "On the Impossibility of Informationally Efficient Markets." *American Economic Review*, June, 70(3), pp. 393–408.
- Grossman, Sanford J., and Merton H. Miller (1988). "Liquidity and Market Structure." *Journal of Finance*, July, 43(3), pp. 617–33.
- Gurley, John G., and Edward S. Shaw (1955). "Financial Aspects of Economic Development." *American Economic Review*, September, 45(4), pp. 515–38.
- Haber, Stephen H. (1991). "Industrial Concentration and the Capital Markets: A Comparative Study of Brazil, Mexico, and the United States, 1830–1930." *Journal of Economic History*, September, 51(3), 559–80.
- Haber, Stephen H. (1996). "Capital Immobilities and Industrial Development: A Comparative Study of Brazil, Mexico, and the United States, 1840–1930." Stanford University mimeo.
- Hicks, John (1969). *A Theory of Economic History*. Oxford: Clarendon Press.
- Holmstrom, Bengt, and Jean Tirole (1993). "Market Liquidity and Performance Monitoring." *Journal of Political Economy*, August, 101(4), pp. 678–709.
- Holtz-Eakin, D., W. Newey, and H. Rosen (1990). "Estimating Vector Autoregressions with Panel Data." *Econometrica*, 56(6), pp. 1371–95.
- Hoshi, Takeo; Anil Kashyap; and David Scharfstein (1990). "Bank Monitoring and Investment: Evidence from the Changing Structure of Japanese Corporate Banking Relationships." In *Asymmetric Information, Corporate Finance and Investment*, R. Glenn Hubbard, ed. Chicago: University of Chicago Press, pp. 105–26.
- Hubbard, R. Glenn (1998). "Capital-Market Imperfections and Investment." *Journal of Economic Literature*, March, 36(1), pp. 193–238.
- Huybeus, Elisabeth, and Bruce Smith (1998). "Inflation, Financial Markets, and Long-Run Real Activity." *Journal of Monetary Economics*, forthcoming.
- International Finance Corporation (various years). *Emerging Markets Data Base*. Washington, D.C.
- Jacklin, Charles (1987). "Demand Deposits, Trading Restrictions, and Risk Sharing." In *Contractual Arrangements for Intertemporal Trade*, Edward D. Prescott and Neil Wallace, eds. Minneapolis: University of Minnesota Press, pp. 26–47.
- James, Christopher (1987). "Some Evidence on the Uniqueness of Bank Loans." *Journal of Financial Economics*, December, 19(2), pp. 217–36.

- James, Christopher, and Peggy Wier (1990). "Borrowing Relationships, Intermediation, and the Cost of Issuing Public Securities." *Journal of Financial Economics*, November–December, 28(1/2), pp. 149–71.
- Jappelli, Tullio, and Marco Pagano (1994). "Saving, Growth, and Liquidity Constraints." *Quarterly Journal of Economics*, February, 109(1), pp. 83–109.
- Jayaratne, Jith, and Philip E. Strahan (1995). "The Finance-Growth Nexus: Evidence from Bank Branch Deregulation." Federal Reserve Bank of New York Research Paper No. 9513.
- Jensen, M.C. (1991). "Corporate Control and the Politics of Finance." *Journal of Applied Corporate Finance*, pp. 13–33.
- Jensen, Michael, and William R. Meckling (1976). "Theory of the Firm, Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics*, October, 3(4), pp. 305–60.
- Jensen, Michael, and Kevin Murphy (1990). "Performance Pay and Top-Management Incentives." *Journal of Political Economy*, 98, pp. 225–64.
- Kadlec, Gregory B., and John J. McConnell (1994). "The Effect of Market Segmentation and Illiquidity on Asset Prices: Evidence from Exchange Listings." *Journal of Finance*, June, 49(2), pp. 611–36.
- Kahn, Charles, and Andrew Winton (1998). "Ownership Structure, Speculation, and Shareholder Intervention." *Journal of Finance*, February, 53(1), pp. 99–130.
- Kane, Edward J. (1985). *The Gathering Crisis in Federal Deposit Insurance*. Cambridge: MIT Press.
- Kane, Edward J. (1989). "How Incentive-Incompatible Deposit-Insurance Funds Fail." National Bureau of Economic Research Working Paper No. 2836.
- Kaplan, Steven (1989). "The Effects of Management Buyouts on Operating Performance and Value." *Journal of Financial Economics*, 24, pp. 581–618.
- Kaplan, Steven (1994). "Top Executive Rewards and Firm Performance: A Comparison of Japan and the United States." *Journal of Political Economy*, 102, pp. 510–46.
- King, Robert G., and Ross Levine (1993a). "Finance and Growth: Schumpeter Might Be Right." *Quarterly Journal of Economics*, August, 108(3), pp. 717–38.
- King, Robert G., and Ross Levine (1993b). "Finance, Entrepreneurship, and Growth: Theory and Evidence." *Journal of Monetary Economics*, December, 32(3), pp. 513–42.
- Knack, Stephen, and Philip Keefer (1995). "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures." *Economics and Politics*, 7, pp. 207–27.
- Krasa, Stefan, and Villamil, Anne P. (1992). "Monitoring the Monitor: An Incentive Structure for a Financial Intermediary." *Journal of Economic Theory*, June, 57(1), pp. 197–221.
- Kroszner, Randall S., and Raghuram G. Rajan (1994). "Is the Glass-Steagall Act Justified? A Study of the U.S. Experience with Universal Banking before 1933." *American Economic Review*, 84(4), September, pp. 810–32.
- Kroszner, Randall S., and Philip E. Strahan (1996). "Regulatory Incentives and the Thrift Crisis: Dividends, Mutual-to-Stock Conversions, and Financial Distress." *Journal of Finance*, 51(3), September, pp. 1285–1320.
- Krueger, Anne O. (1997). "Trade Policy and Economic Development: How We Learn." *American Economic Review*, March, 87(1), pp. 1–22.
- Kyle, Albert S. (1984). "Market Structure, Information, Futures Markets, and Price Formation." In *International Agricultural Trade: Advanced Readings in Price Formation, Market Structure, and Price Instability*, Gary G. Storey, Andrew Schmitz, and Alexander H. Sarris, eds. Boulder, CO: Westview.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1997). "Legal Determinants of External Finance." *Journal of Finance*, July, 52(3), pp. 1131–50.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1998). "Law and Finance." *Journal of Political Economy*, forthcoming.
- Lamoreaux, Naomi (1995). *Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England*. New York: Cambridge University Press.
- Levine, Ross (1991). "Stock Markets, Growth, and Tax Policy." *Journal of Finance*, September, 46(4), pp. 1445–65.
- Levine, Ross (1997a). "Financial Development and Economic Growth: Views and Agenda." *Journal of Economic Literature*, June, 35(2), pp. 688–726.
- Levine, Ross (1997b). "Napoleon, Bourses, and Growth in Latin America." University of Virginia mimeo, October.
- Levine, Ross (1998a). "The Legal Environment, Banks, and Long-Run Economic Growth." *Journal of Money, Credit, and Banking*, August.
- Levine, Ross (1998b). "Law, Finance, and Economic Growth." *Journal of Financial Intermediation*, forthcoming.
- Levine, Ross, and David Renelt (1992). "A Sensitivity Analysis of Cross-Country Growth Regressions." *American Economic Review*, September, 82(4), pp. 942–63.
- Levine, Ross, Norman Loayza, Thorsten Beck (1998). "Financial Intermediation and Growth: Causality and Causes." World Bank mimeo, May.
- Levine, Ross, and Sara Zervos (1998). "Stock Markets, Banks, and Economic Growth." *American Economic Review*, June.
- Lummer, Scott, and John McConnell (1989). "Further Evidence on the Bank Lending Process and the Reaction of the Capital Market to Bank Loan Agreements." *Journal of Financial Economics*, November, 25(1), pp. 99–122.
- Maug, Ernst (1998). "Large Shareholders and Monitors: Is There a Trade-Off between Liquidity and Control?" *Journal of Finance*, February, 53(1), pp. 65–98.
- Mayer, Colin (1988). "New Issues in Corporate Finance." *European Economic Review*, June, 32(5), 1167–88.
- McKinnon, Ronald I. (1973). *Money and Capital in Economic Development*. Washington, DC: Brookings Institution.
- Merton, Robert C. (1992). "Financial Innovation and Economic Performance." *Journal of Applied Corporate Finance*, Winter, 4(4), pp. 12–22.
- Merton, Robert C., and Zvi Bodie (1995). "A Conceptual Framework for Analyzing the Financial Environment." In *The Global*

- Financial System: A Functional Perspective*, Dwight B. Crane, et al., eds. Boston, MA: Harvard Business School Press, pp. 3–31.
- Morck, Randal, Andrei Shleifer, and Robert W. Vishny (1990). "Do Managerial Objectives Drive Bad Acquisitions?" *Journal of Finance*, March, 45(1), pp. 31–48.
- Myers, Stewart C., and Nicholas Majluf (1984). "Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have." *Journal of Financial Economics*, June, 13(2), pp. 187–221.
- Myers, Stewart (1997). "Determinants of Corporate Borrowing." *Journal of Financial Economics*, 5.
- Neusser, Klaus, and Maurice Kugler (1998). "Manufacturing Growth and Financial Development: Evidence from OECD Countries." *Review of Economics and Statistics*, forthcoming.
- North, Douglass C. (1981). *Structure and Change in Economic History*. New York: Norton.
- Obstfeld, Maurice (1994). "Risk-Taking, Global Diversification, and Growth." *American Economic Review*, December, 84(5), pp. 1310–29.
- Patrick, Hugh (1966). "Financial Development and Economic Growth in Underdeveloped Countries." *Economic Development Cultural Change*, January, 14(2), pp. 174–89.
- Petersen, M.A., and Raghuram G. Rajan (1994). "The Benefits of Lending Relationships: Evidence from Small Business Data." *Journal of Finance*, March, 49(1), pp. 3–37.
- Pollard, Sidney, and Dieter Ziegler (1992). "Banking and Industrialization: Rondo Cameron Twenty Years On." In *Finance and Financiers in European History 1880–1960*, Youssef Cassis, ed. New York: Cambridge University Press, pp. 17–38.
- Rajan, Raghuram G. (1992). "Insiders and Outsiders: The Choice Between Informed and Armslength Debt." *Journal of Finance*, September, 47(4), pp. 1367–1400.
- Rajan, Raghuram G., and Luigi Zingales (1998). "Financial Dependence and Growth." *American Economic Review*, June.
- Robinson, Joan (1952). "The Generalization of the General Theory." In *The Rate of Interest and Other Essays*. London: MacMillan.
- Roe, M. J. (1990). "Politics and Legal Restraints on Ownership and Control of Public Companies," *Journal of Financial Economics*, 27, pp. 7–41.
- Rousseau, Peter L., and Paul Wachtel (1998). "Financial Intermediation and Economic Performance: Historical Evidence from Five Industrial Countries." *Journal of Money, Credit, and Banking*, forthcoming.
- Scharfstein, David (1988). "The Disciplinary Role of Takeovers." *Review of Economic Studies*, April, 55(2), pp. 185–99.
- Schiantarelli, Fabio (1995). "Financial Constraints and Investment: A Critical Review of Methodological Issues and International Evidence." In *Is Bank Lending Important for the Transmission of Monetary Policy?* J. Peek and E. S. Rosengren, eds. Boston: Federal Reserve Bank of Boston Conference Series No. 39, June, pp. 177–214.
- Schiantarelli, Fabio, and Alessandro Sembenelli (1996). "Form of Ownership and Financial Constraints: Panel Data Evidence From Leverage and Investment Equations." World Bank Policy Research Working Paper No. 1629.
- Schumpeter, Joseph A. (1912). *Theorie der Wirtschaftlichen Entwicklung*. Leipzig: Dunker & Humblot. (*The Theory of Economic Development*, 1912, translated by Redvers Opie. Cambridge, MA: Harvard University Press, 1934.)
- Sharpe, Steven A. (1990). "Asymmetric Information, Bank Lending, and Implicit Contracts: A Stylized Model of Customer Relationships." *Journal of Finance*, September, 45(4), pp. 1069–87.
- Shleifer, Andrei, and Lawrence Summers (1988). "Breach of Trust in Hostile Takeovers." In *Corporate Takeovers: Causes and Consequences*, A. Auerbach, ed. Chicago: University of Chicago Press, pp. 33–56.
- Shleifer, Andrei, and Robert W. Vishy (1986). "Large Shareholders and Corporate Control." *Journal of Political Economy*, June, 96(3), pp. 461–88.
- Shleifer, Andrei, and Robert W. Vishy (1997). "A Survey of Corporate Governance." *Journal of Finance*, 52, pp. 737–83.
- Sirri, Erik R., and Peter Tufano (1995). "The Economics of Pooling." in *The Global Financial System: A Functional Approach*, Dwight B. Crane, et al., eds. Boston, MA: Harvard Business School Press, pp. 81–128.
- Slovin, Myron B., Marie E. Sushka, and John A. Polonchek (1993). "The Value of Bank Durability: Borrowers as Bank Stakeholders." *Journal of Finance*, March, 48(1), pp. 247–66.
- Smith, Adam (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: W. Stahan & T. Cadell.
- Stein, Jeremy C. (1988). "Takeover Threats and Managerial Myopia." *Journal of Political Economy*, February, 96, pp. 61–80.
- Stiglitz, Joseph E. (1985). "Credit Markets and the Control of Capital." *Journal of Money, Credit and Banking*, May, 17(2), pp. 133–52.
- Szewczyk, S. H., and G.P. Tsetsekos (1992). "State Intervention in the Market for Corporate Control," *Journal of Financial Economics*, pp. 415–52.
- Von Thadden, Ernst-Ludwig (1995). "Long-Term Contracts, Short-Term Investment and Monitoring." *Review of Economic Studies*, 62, pp. 557–75.
- Wachtel, Paul, and Peter Rousseau (1995). "Financial Intermediation and Economic Growth: A Historical Comparison of the U.S., U.K., and Canada." In *Anglo-American Finance: Financial Markets and Institutions in 20th-Century North America and the United Kingdom*, Michael D. Bordo and Richard Sylla, eds. Homewood IL: Business One Irwin.
- Weinstein, David E., and Yishay Yafeh (1998). "On the Costs of a Bank-Centered Financial System: Evidence from the Changing Main Bank Relations in Japan." *Journal of Finance*, 53(2), pp. 635–72.
- Wenger, Ekkehard, and Christoph Kaserer (1998). "The German System of Corporate Governance — A Model Which Should Not Be Imitated." In *Competition and Convergence in Financial Markets: The German and Anglo-American Modes*, S. W. Black and U. Moersch, eds. New York: Elsevier, pp. 41–78.
- Williamson, Stephen D. (1986). "Costly Monitoring, Financial Intermediation, and Equilibrium Credit Rationing." *Journal of Monetary Economics*, September, 18(2), pp. 159–79.

Williamson, Stephen D. (1987a). "Costly Monitoring, Loan Contracts, and Equilibrium Credit Rationing." *Quarterly Journal of Economics*, February, 102(1), pp. 135–45.

Williamson, Stephen D. (1987b). "Financial Intermediation, Business Failures, and Real Business Cycles." *Journal of Political Economics*, December, 95(6), pp. 1196–1216.

Endnotes

1. For evidence, see James (1987), Lummer and McConnell (1989), James and Wier (1990), and Slovin, Sushka, and Polonchek (1993).

2. Also, see the review by Schiantarelli (1995) and Hubbard (1998).

3. Allen and Gale (1997) also note that when there are market frictions, the introduction of markets can hinder the ability of intermediaries to provide this intertemporal risk-sharing. Jacklin (1987) also shows that the introduction of markets can hinder efficient risk-pooling by intermediaries.

4. Some of this section is taken verbatim from Levine, Loayza, and Beck (1998).

5. Glendon, et al. (1982) and Berman (1997) describe how Roman law was compiled under the direction of Byzantine Emperor Justinian in the sixth century. Over subsequent centuries, the law was interpreted and adapted throughout Europe. Eventually, individual countries formalized legal codes. The Scandinavian countries developed their Civil Codes in the 17th and 18th centuries. These countries have remained relatively unaffected from the far-reaching influences of the English, German, and French legal traditions. The English legal tradition is not a civil law heritage, where laws are heavily shaped by legal scholars. Instead, in the English—common law—legal tradition, laws are heavily influenced by judges trying to resolve particular cases. The French Civil Code was written in 1804 under the direc-

tion of Napoleon, who saw the permanence of the Code as more important than the fleeting nature of his military conquests. He had the Code adopted in all conquered territories, including Italy, Poland, the low countries, and the Hapsburg Empire. Through conquest and colonization, France extended its legal influence to parts of the Near East, Northern and Sub-Saharan Africa, Indochina, Oceania, French Guiana, and the French Caribbean islands during the colonial era. Furthermore, because the French Civil Code exerted a major influence on the Portuguese and Spanish legal systems, this helped spread the French legal tradition to Central and South America. After the unification of Germany under Bismarck in 1871, the German Civil Code was completed in 1896. The German Code exerted a big influence on Austria and Switzerland, as well as China, Czechoslovakia, Greece, Hungary, Italy, and Yugoslavia. Also, the German Civil Code heavily influenced the Japanese Civil Code, which helped spread the German legal tradition to Korea.

6. Some of this section is taken verbatim from Levine (1998b).

7. For a discussion of results using other measures of stock market development, see Levine and Zervos (1998) and Levine (1997b).

8. The variable descriptions that follow are taken directly from LLSV.

9. Recall that the strong link between long-run growth and stock market development runs primarily through market liquidity, which highlights the important of comprehensive and comparable data in facilitating stock market activity.

10. Furthermore, the data do not reject the orthogonality conditions in any of the 12 regressions; the data do not reject the over-identifying restrictions, which gives great confidence in the instrumental variables. Thus, the results are consistent with the statement that the shareholder rights (SRIGHTS) and information (ACCOUNT) indicators influence growth only through their impact on stock market development.

Comment

EDUARDO BORENSTEIN

THIS IS A VERY WELL-THOUGHT OUT, WELL-ROUNDED PAPER, AND THERE IS A REASON FOR that: Ross has been working in this field for a number of years. In fact, he started the field of looking at the effects of financial development on growth on a cross-section of countries a few years back in his papers with Robert King.

And it shows in a number of ways. The paper adds a number of insights that are very good. However, this is the year of the Asian financial crisis, and, as such, I think this literature does not tell the whole story about what a good financial system is and what the possible implications of financial development for growth are. I think Ross had a little bit of a premonition in his talk when he mentioned the IMF and banking crises. I think there is an obvious problem with just looking at measures of financial sector development and relating that to economic growth.

By those measures, again, the countries of Asia may look very good, and one might conclude that the financial sector was making an important contribution to the economic growth in those economies. However, one has to look in more detail and look for indicators of how well the banking system is allocating resources, the quality of the loans, the quality of the loan making process, and the effects of different forms of government intervention that may not be so obvious. I think this paper goes part of the way in

this direction, but I think that especially in view of recent developments, one should focus more in this direction.

Moreover, one of the questions the paper asks is, What would be the best system for a developing country—a system based on banks or a system based on stock markets? The most interesting way of looking at this question is from the perspective of what system could be more resilient to instability, what system could absorb negative shocks in a better way. I think it would be an interesting way of framing that question, at least giving one important dimension in looking at financial system development.

This paper effectively shows three things: First, it shows empirically that banks are good for growth; the development of financial systems based on banks has had possibly

large impact on economic growth. Second, it shows that the development of stock markets has also had positive large impact on economic growth. And third, the paper starts to explore the question of which system is best, and it concludes that, well, there is not necessarily a contradiction—one could foster the institutions that would allow both types of financial markets to develop side by side.

Now, let me go first into the issue of what are the effects of financing by banks on economic growth. I think one of the nice features of this paper is the way it treats the problem that while banking development affects growth, it is also the case that growth creates banking development. This fact is a real concern for anybody trying to do empirical work and trying to measure accurately the effect of the

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financial system on growth. The paper takes advantage of a clever approach in this respect by looking at the legal tradition of different countries and legal institutions. These are obviously exogenous variables. They predate this sample by centuries, and we cannot say that legal traditions are the consequences of the economic growth in the past two decades.

Despite the econometric soundness of this approach, I still think that one should make an effort to look at measures of the quality of financial development in more detail. I think that the paper tries to do this to some extent by focusing only on private credit, which means credit from private institutions to private enterprises, under the assumption that this is a more market-based decision than other forms of credit that flow through the banking system.

While this is true, there may be problems of relatively invisible government intervention. Here, again, the case of Asia comes to mind. There are problems of credit that gets allocated to very large firms under the assumption that those firms are too large to fail, so banks decide to lend to them regardless of the quality of the investment project that these firms may be proposing.

Not that I have a precise idea of how to implement a measure of quality of banking (and this should be in the next paper Ross writes), but I would like to see something that gets closer to the quality of the loan-decision process—the quality of the services that banks are providing. For example, interest-rate spreads can give an idea of the efficiency and competition in the banking system—variables that might get a little closer to the quality, rather than just the volume, of banking activity.

I think the more innovative and interesting question that this paper starts to analyze is the question of what kind of financial markets would be more appropriate for a developing country to base its development: a bank-based

system or a stock-market based system. Theories are certainly not a lot of help here, and even the presentation this morning by Mr. Stiglitz gave arguments for and against each alternative. But I am going to add another perspective—again, the perspective of the resistance of a particular financial system to bad shocks—namely, when something goes wrong in the economy, which system is less likely to compound the problem?

I think that, from this point of view, one would give the advantage to the stock-market based system, or at least a system in which debt-equity ratios are sufficiently low. Why? Because what we observe typically is that bank-based systems result in high debt-equity ratios, and, when a bad shock hits the economy, the level of non-performing loans increases, and banks are in a difficult situation because they have fixed liabilities and the quality of their assets is deteriorating. So, banks are reluctant to make new loans; in fact, they start to recall loans, we have a credit crunch, and the economy gets worse. Moreover, this situation may lead policy-makers to make the wrong choices, such as to keep interest rates down and not to defend the exchange rate in situations when they should.

Moreover, from the point of view of international capital flows, one could think that if those inflows are intermediated through securities, such as in a stock market, the economy may also be less vulnerable when a negative shock hits the economy, because the value of the stock market may go down, which means that the value of those claims that foreigners are holding on the domestic economy is automatically smaller. And that is a desirable feature. If it were purely a debt flow, of course, the value of the debt in dollar terms would stay the same after the negative shock, but the value of the debt in terms of domestic resources probably would go up, because the country would go through a devaluation and there might be a debt overhang problem.

Comment

M I C H A E L B A R T H

DISTINGUISHED GUESTS, AND LADIES AND GENTLEMEN, FIRST, I WOULD LIKE TO EXPLAIN to you that also I will not be speaking to you in Spanish. I had wanted to speak to you in my native language, which is Dutch, but I understand there are legal injunctions against cruel and unusual punishment.

{Laughter.}

The topics we are discussing here today are very important, and different perspectives have to be explored. In case you think that, in considering contributions of banks and markets, I am naturally biased in favor of the latter because I am the director of the Capital Markets Development Department in the World Bank, you can be assured that I will try to be as neutral as I possibly can be. In this respect, it is interesting to quote Mr. George Soros. When he was asked about the “perfection” of markets, he answered that he had a healthy respect for markets but ultimately they represented no more than the present value of future expectations of a group of buyers and sellers.

After this quick aside, let me start my comments on Mr. Levine’s paper with the most important point: As someone with a practitioner’s perspective, I not only agree with the paper’s basic premises and conclusions, but I also believe that Mr. Levine’s concentrated, disciplined focus on a balance in financial sec-

tor development is, in and of itself, very valuable. Too many observers—including, I might add, some development economists—still limit their analysis to banks, because they are still dominant in the financial sector of many developing countries, because they are better understood, because they are more easily regulated, because they are in crisis, because they are perceived to have immutable claims on savings, or because they are recognized as important providers of basic payment functions.

Indeed, as the very theme of this conference suggests, both banks and markets can make substantive and complementary contributions. Having said this, I would like to suggest that trying to find the proper balance between them is an elusive goal and that historical paradigms have

only limited applicability for the future. In this connection, I would like to suggest some ways in which the analysis in the paper might be updated and expanded.

First, one cannot help but question today the binary representation of banks and equity markets in a global environment where the difference between banks and financial markets is becoming more blurred every day. As a result of different legal systems and various other historical developments, there has, indeed, come to be a difference—a different balance, that is—between banking and markets in different countries. But with a big bang in Japan, the elimination of Glass-Steagall barriers in the United States, market promotion in Germany, and similar developments in a number of key emerging markets, we are also witness-

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ing a substantive measure of convergence around the world to a model where the distinctions simply matter less.

In this general context, it is also worth quickly recalling some well-known developments that have begun to change the very way in which banks and markets operate. Financial integration has gone hand in hand with the steady disintermediation of traditional financial institutions. One could add that there is a basic shift in paradigm away from traditional delineation in terms of products and institutions. Today one could ask some important, basic questions: Is Bankers Trust a bank or a diversified risk-management institution? What will the steady mergers between retail banking institutions, insurance firms, and asset-management firms do to the financial landscape? And is that in the next few years? In looking at these questions one might naturally assume a lag in developing countries, but the period of this lag is becoming shorter and shorter, especially with the emergence of global players. All of this serves to emphasize that a holistic view of the financial sector is essential, covering banks, non-banks, equity markets, and also debt markets.

Moving back to the analysis in the paper, we must ask ourselves, are banks really by definition better at risk-sharing and lowering transaction costs? Are they consistently better at making long-term investments more attractive through pooling of savings and engaging in liquidity transformation? The strong emergence of the asset-management industry, alone, not just in OECD countries but also, for example, in Latin America after pension reform, would give some reason to question this.

Similarly, one can question banks' natural advantages in terms of information provision, corporate governance, risk mitigation, etc. Of course, as Mr. Levine in his comments and then Mr. Borenstein in his comments suggested, the question depends a lot on the qualitative aspects of that. This was certainly brought home by the crisis in Asia. In fact, recent understandings about financial sector weaknesses in Asia also have a very substantial impact on the discussion of financial systems' infrastructure today. Let me give you some examples. We have a much better understanding of the dangers of domination of the financial sector by banks in terms of systemic risk. This then again brings us back to the argument that both banks and markets have their place in financial systems and adds more urgency to the objective of balanced financial sector growth.

Second, there is a renewed appreciation for the contribution of strong domestic bond markets in terms of improved risk pricing, and risk management. More broadly, there is a better understanding of capital markets' potential contributions in terms of transparency, corporate governance, and providing useful mechanisms for privatization, pension reform, housing finance, corporate restructuring, and access to foreign capital. This recognition, by the way, presents even countries who have grown their equity markets in the '80s and '90s with a very challenging second-generation agenda of market-development issues that go to the very microstructure of these markets and also to the interplay of market forces.

Here I would like to briefly give an example of the Korean bond market—not an equity market, but a bond market. If you had asked a number of observers to tick off what ingredients of a Korean bond market were present a year ago or even half a year ago, they would have ticked off a lot of the elements that have traditionally been defined as needing to be ticked off to define substance of a market. What you would have found, in fact, was that this was a market that had all the notes but not the music. As you questioned the quality of all these individual ingredients related to the “hard” infrastructure, the “soft” infrastructure, the clearance and settlement and trading systems, the regulatory environment, etc., you would have found out that when it comes to the true appreciation of market interplay and of risk culture, this was very much absent. And today we find that what was billed as “the second biggest bond market in Asia” (in Korea) has very little substance and will merit several years of very careful market-building to establish it.

There is today a much broader and deeper knowledge on how effective banks are and how they can become more effective. The events of the Asia crisis now also demand much more fundamental work on how effective existing capital markets have been in developing countries and how they can be made more effective. Some basic questions quickly come to mind. How much of the growth in emerging markets was due to asset appreciation, how much to capital mobilization? What has been the detailed composition of capital flows, and what part of these flows were really speculative and what parts were not?

I am against the automatic lumping of capital flows into the volatile category and lumping bank lending into the non-volatile category simply because capital flows can

move more easily than bank lending. When you look, in fact, at the ups and downs over recent years, you see an enormous amount of volatility in bank lending. It sort of goes all the way up and then completely down. And in some parts of capital flows, especially on the equity side, there are amazingly long-term orientations.

How effective have emerging markets been in sending proper signals on resource mobilization and allocation? How effective have they been at exerting market discipline? What role should foreign investment play? What contributions does foreign investment make, not only on

the monetary side but also on the non-monetary side? I was thinking here of Mr. Stiglitz's comment this morning juxtaposing foreign direct investment in explaining the non-monetary benefits. I would submit that portfolio investment can have very important non-monetary benefits also.

To wrap up, answering some of these questions—not only on the banking side but also on the market side—could truly add a great deal of substance to the current fundamental debate on financial infrastructure. I expect that these meetings here in San Salvador will make an important contribution to this discussion.

Comment

G U N T H E R H E L D

I WOULD FIRST LIKE TO THANK THE ORGANIZERS FOR INVITING ME TO SERVE AS A PANELIST AT this important seminar. Mr. Levine's paper turns on three main arguments: First, empirical evidence would suggest that banks play a major role in mobilizing and investing funds; in this connection the author believes it is important that banking operations be subject to appropriate regulations and monitoring procedures. Second, the author takes a less categorical and more cautious approach to the role of capital markets and stock markets in financial intermediation. Third, the paucity of information concerning the relative performance of bank-based—or institution-driven—financial systems as compared with market-based—or capital- or stock-driven—financial systems makes it difficult to recommend one of these avenues for financial growth over the other.

A distinctive role of financial systems is to attract funds held by savers (agents with excess resources) and then channel the funds to investors (agents with insufficient resources). It is useful, therefore, to examine the three arguments mentioned above in terms of the financial contribution that a given financial system can make to real investment or capital formation.

A review of the sources of investment-financing in industrialized countries shows that their financial systems play a much smaller role in that regard than would appear at first glance. In the United States and

the United Kingdom, more than 90 percent of corporate investments during the period 1970–1994 came from the companies' own resources (retained earnings and reserves for depreciation). In Germany and Japan, retained earnings financed approximately 80 percent and 70 percent, respectively, of company investments during the same period (Bond and Jenkinson 1996). Between 1986 and 1995, retained earnings or own resources reportedly accounted for an even higher proportion of corporate investments in Argentina, Chile, Colombia, Mexico, and Venezuela (Rojas-Suarez and Weisbrod 1997). This is consistent with the relatively slower growth of their financial markets compared with the situation in industrialized countries.

The fact that retained earnings or own resources constitute the main source of corporate investment financing underscores the importance, for purposes of stimulating corporate investment, of the relationship between earnings and capital formation and of policies promoting the retention of earnings in countries with less-developed financial markets. This is true regardless of the role of bank lending and new stock issues.

Bank lending occupies a distant second place among the sources of corporate investment financing in the industrialized world. In Germany, the United Kingdom, and the United States it accounted for between 10 percent and 15 percent of such investments during 1970–1994. Only in Japan did bank lending account for an average of as much

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as about 25 percent of investments during this period, although the figure has been declining in recent years (Bond and Jenkinson 1996). The significance of own resources in the countries of Latin America and the Caribbean mentioned above suggests that bank lending probably also played a secondary role in financing corporate investment in this region as well.

The important role that Mr. Levine's paper assigns to banks contrasts with their modest role in corporate investment financing. However, if banks are not very involved in such financing, it would be interesting to know both the types of loans they are asked to make and their duration. One type, which source- and use-of-funds statements may ignore, are short-term bank loans taken out by companies choosing not to tap retained earnings or own resources. To the extent that those statements fail to include such funds, the role of banks in financing corporate investments can easily be underestimated (Sussman 1994).

Equally surprising is the limited role played by the placement of stock issues as a source of corporate investment financing in industrialized countries. In the United States and the United Kingdom, the role of stock issues during 1970–1994 was insignificant, given the many company mergers that occurred and the fact that firms can purchase their own stocks. In Germany and Japan stock issues accounted for only a small percentage of corporate investment financing. Bond issues also play a very small role in such financing in industrialized countries, except in the United States, where it accounted for 15 percent of corporate investment financing during the same period.

The foregoing confirms Mr. Levine's note of caution regarding the role securities markets are able to play as financial intermediaries. Such caution is all the more appropriate in Latin America and the Caribbean, where so many businesses are family-owned, ownership is concentrated, and control is highly valued. This would appear to

be a major reason for the modest increase in the number of corporations whose stock is traded on regional markets. The number of such businesses rose from 1500 in 1983 to 1750 in 1995, an increase of slightly more than 1 percent annually (Weitz and Lijane 1998).

An alternative approach to financial system development—namely, the generic preference for a bank-based system or a capital- or securities-market-based system discussed in Mr. Levine's paper—is relevant in this discussion of investment financing. When companies make fixed-capital investments—in real estate, infrastructure, and other assets—they must consider the specific requirements governing each type of asset, in terms of institutional development and the financial instruments available. These factors reflect the degree of sophistication of the credit and capital markets of the country in question and enable firms to assess risks, profitability, and liquidity, all factors that make it possible to mobilize funds from savers. Close scrutiny of the institutions and instruments that bring savings providers and real investors together can enable firms to identify possible problems and then formulate proposals to facilitate mobilization and intermediation of funds for various types of real investment.

References

- Bond, S., and T. Jenkinson (1996). "The Assessment: Investment Performance and Policy." *Oxford Review of Economic Policy*, Vol. 12, No. 2. Oxford: Oxford University Press.
- Rojas-Suarez, V., and S. Weisbrod (1997). "Financial Markets and the Behaviour of Private Savings." In *Promoting Savings in Latin America*, R. Hausmann and H. Reisen, eds., Paris: Inter-American Development Bank/OECD Development Centre.
- Sussman, O. (1994). "Investment Banking: Some International Comparisons." *Oxford Review of Economic Policy*, Vol. 10, No. 4. Oxford: Oxford University Press.
- Weitz, A., and L. Lijane (1998). "External Resource Flow to Developing Countries." UNDP Office of Development Studies, Working Paper Series No. 3.

PART 2:
ROLE OF BANKS IN
THE FUNCTIONING
AND DEVELOPMENT
OF CAPITAL
MARKETS

The Role of Banks in Capital Markets: Structural Changes, Functioning, and Prospects for the 21st Century

H A N S J . B L O M M E S T E I N

BECAUSE OF THE RENEWED INTEREST OF RECENT YEARS IN EXAMINING THE ROLE OF FINANCIAL institutions in economic growth (see Appendix A), it is important to recognize the institutional requirements of efficient financial intermediation. The first priority for financial reform must be the development of a sound banking system, based on well-designed prudential regulations and effective supervision. The rest of the financial infrastructure, including markets for equity and debt securities and non-bank financial intermediaries, relies extensively on the availability of liquidity support and payment services of the banking system. In the absence of sound financial fundamentals, the benefits of financial sector development on economic growth may be lost.

A key challenge for policy-makers lies in the feedback relationship between instability in the financial sector and in the macroeconomy. An efficient banking sector can make an important contribution to macroeconomic control—markets for government debt provide a source of non-inflationary finance, while markets for short-term obligations provide mechanisms for indirect monetary policy—but a weak financial system can exacerbate underlying macroeconomic instability. Moreover, macroeconomic instability itself can exacerbate adverse incentives and moral hazard problems in the banking system, obscure price signals, and increase the probability of financial crises. Hence, financial reforms are more likely to succeed in a stable

macroeconomic environment; yet a stable macroeconomic environment is more easily achieved in a more liberal financial system (see Appendix B).

This paper is structured as follows. Section I summarizes key analytical considerations concerning the relationship between banks and securities markets. Section II discusses institutional preconditions to sound capital markets—highlighting the need for adequate regulation and supervision of banks. Section III analyzes the “stages” of financial development. Section IV concerns the relation

between the structure of the banking system and the development of capital markets. Section V outlines the prospects of the role of banks in capital markets. And the final section presents conclusions and key financial policy issues.

I. Banks and Capital Markets: Key Analytical Considerations

Capital markets and banks are sometimes viewed as competing institutions. Both financial institutions supply liq-

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liquidity to investors by providing short-term access to their capital. Either capital-market transactions or bank contracts that offer an option to withdraw are needed to provide liquidity without investing primarily in short-term assets. Bank intermediation between a borrower and a lender makes the loan market more liquid. A bank—being part of a mutually supporting network of banks tied together by a central bank—provides liquidity by investing deposits that it collects in loans. Securities are less liquid than cash or bank deposits because their value in terms of the unit of account is uncertain.

Investors have to pay for the provision of liquidity, so financial market participants are constantly searching for ways to reduce or avoid the cost of obtaining liquidity while retaining liquidity's benefits (Garber and Weisbrod 1992). There is demand for liquidity because investors are uncertain about the date on which they need their funds (Bryant 1980; Diamond and Dybvig 1983), but liquidity is costly because short-term, self-liquidating real assets have a lower rate of return than long-term assets.

Diamond (1997) investigates the benchmark situation in which there are no banks. Demand for liquidity is met by selling assets in the capital market. Clearly, those investors who do not need immediate liquidity have no need to participate in the capital market. Limited participation in capital markets will depress the selling price and depress investment in long-term assets that mature after an investor might need liquidity. This results in excess investment in short-term assets that are valued for their ability to self-liquidate.

Banks can help overcome or reduce this illiquidity via superior asset- and liability-management of liquidity. The asset-management capability is based on the superior ability of a bank—as part of a mutually supporting network tied together by a central bank that provides good funds—to anticipate liquidity needs. Superior liability management of banks is based on their having better access to information than capital markets. Thus, a sound banking system is a *sine qua non* for cheaper access to liquidity, which in turn increases the liquidity of capital markets (Diamond 1997; Garber and Weisbrod 1992; Blommestein and Spencer 1994).

Garber and Weisbrod (1992) demonstrate why a banking system that is subject to reserve requirements has a *raison d'être*, although all financial market participants have an incentive to avoid the cost of reserves. Their analysis shows that reserves (i.e., liabilities of the central bank) can

be considered the most liquid instruments of all and that the existence of this instrument makes credible the promise of liquidity to other (less liquid) securities.

The banking sector is the ultimate market-maker in cash. The expansion of the banking industry and an increase in the efficiency of banks (i.e., by reducing intermediation costs) make the supply of liquidity cheaper, and this in turn will boost the development of capital markets.

Well-functioning (i.e., liquid) capital markets, for their part, are important for banks because they allow them to supply additional liquidity at lower cost. For example, they allow banks to sell excess securities at short notice and with low transactions costs.¹

This paper focuses on the *evolving* role of banks in capital markets. An attractive dynamic analytical framework for studying changes in financial systems has been developed by Bodie and Merton (1995). Their framework makes a distinction between the **function** of the financial system and the **institutions** that constitute its structure. The reason for doing so is that functions are relatively stable over time while institutions may change dramatically. Indeed, financial innovations, the increase in importance of institutional investors, financial liberalization, and information technology are among the key forces that have changed the institutions that shape the structure of the financial system while preserving the core functions—that is, to provide ways for (1) transferring resources; (2) managing risk; (3) clearing and settling payments; (4) dealing with incentive problems; (5) providing price information; and (6) pooling resources and subdividing shares in enterprises (Bodie and Merton 1995).

Against this analytical backdrop, the next section focuses on the institutional preconditions for developing capital markets.

II. Institutional Preconditions to Sound Capital Markets

Absent from much of the theoretical literature are the very practical and analytical considerations of the relationships between banks and securities markets and of how to ensure that the financial system intermediates funds as efficiently as possible, accepting that informational asymmetries cannot—indeed, should not—be eliminated. As an antidote to the argument that banks and securities markets can be developed independently—so that, for example, if the banking system is rife with problems, securities markets

can be developed to replace banks as a source of capital (e.g., McKinnon 1992b)—it should be noted that securities markets generally depend upon banks to provide key services (Blommestein and Spencer 1994, 1996). In addition to intermediating between savers and borrowers, banks are the key providers of payment services and provide liquidity to money and capital markets. The importance of banks as intermediaries in the payment system is obviously more general than that of facilitating trade in securities. A well-functioning payment system greatly expands the possibilities for trade; and the security of payments made through the system is directly dependent on the ability of the settling banks to manage the risks inherent in the system. Moreover, their participation in the wholesale payment system gives banks privileged access to “good funds” from the central bank. This allows banks to provide liquidity to other financial and non-financial institutions at short notice.

Banks are also often directly and indirectly involved in securities markets. In the primary markets banks in some countries are permitted to underwrite security issues either directly or through subsidiaries. Even where this is not permitted, underwriters will often turn to banks for credit in order to finance their activities. In the secondary market similar considerations apply. Brokers will, on occasion, need to accumulate large amounts of stock in order to satisfy a block purchase, or sell off large blocks in a piecemeal fashion, for which they may need short-term credit. In addition, where margin trading is permitted, brokers will often finance their loans to investors by drawing on a line of credit with a bank. Dealers demand credit in order to finance their proprietary positions and to facilitate the buying and selling required of them in their role as market makers. Both groups of intermediaries will also need access to bank lines of credit to manage settlement delays or failures. In addition to the demand for credit arising from trading activities, members of securities exchanges will need access to credit lines in order to finance margin requirements and to ensure daily settlement. The exchange clearinghouses themselves will need to maintain borrowing rights to protect the market against defaults by one or more members of the exchange. In many countries, banks or their subsidiaries act as brokers or dealers in which case the link between securities firms and banks is more direct.

Clearly, the development of securities markets cannot be considered in isolation of the health of the banking sector.

In the extreme, the introduction of securities markets and the necessary creation of lines of immediate credit will greatly increase systemic risk if the banks providing these credit lines are themselves undercapitalized and illiquid.

The emphasis, therefore, turns to the requirements for ensuring safety and soundness in the banking system. Efficient regulation is not easy; however, delaying the introduction of a well-designed and comprehensive regulatory framework for the financial sector carries the danger that in this field, where the preservation of general confidence is of utmost importance, regulatory and supervisory gaps will rapidly emerge. A fundamental problem concerns the financial fragility of the banking sector caused by the legacy of bad assets and the concentration of risk with relatively few large borrowers on the one hand and the low level of bank capital on the other. This situation may worsen as long as the causes of moral hazard (i.e., implicit or explicit deposit insurance, and asymmetric information) are not eliminated, while inadequate supervision may enable the banks (and their customers) to exploit the existence of moral hazard.

Major factors hampering the effectiveness of banking supervision include the lack of reliable information about the financial condition of enterprises and banks due to inadequate accounting systems, limited experience in risk-analysis of potential borrowers by banks, inadequate tax regimes for making loan-loss provisions, lack of experienced supervisors and auditors, and inadequate prudential regulations. While ineffective banking supervision may be an additional cause of financial fragility, the weak balance sheets of the banks in turn narrow the scope for proper enforcement of prudential regulations. Thus, the re-capitalization of the banking sector and the restructuring of inherited substandard loans are key elements of the reform of the financial sector.

A distressed banking system, characterized by the presence of insolvent banks with an overhang of bad loans, entails significant macroeconomic costs. The overhang of so-called “bad assets” makes it difficult or impossible for the banks to start operating as market-oriented entities following sound banking practices. At the same time, viable enterprises may be crowded out from access to funds because distress lending moves the cost of external funds to an unacceptably high level. The promising investment projects of the viable enterprises might, therefore, be crowded out. The result would be lower profits or higher

losses and a detrimental impact on real growth and wealth creation.

Other factors that are crucial for the development of liquid capital markets include macroeconomic stability (Appendix B) and a proper market infrastructure, which entails:

- an adequate legal framework;
- efficient and reliable clearing and settlement systems;
- an adequate accounting system;
- an efficient microstructure for trading securities;
- a proper regulatory and supervisory framework;
- the proper market-based framework (legislation, supervision, a professional asset management industry, etc.) for institutional investors.

In addition to a sound banking sector, these factors are crucial for the proper development of securities markets, which requires in part an active role by governments. The experience in the OECD area is instructive. OECD countries played an important role in the development of capital markets by taking a broad range of actions to facilitate the modernization and internationalization of their capital markets (Blommestein 1995). OECD governments deregulated domestic markets and abolished exchange controls. In addition, most governments took the following measures:

- reforms of government securities markets in order to deepen money and bond markets and provide for a full yield curve of liquid instruments;
- development of money markets by removing restrictions on money-market instruments like money-market mutual funds, commercial paper, and certificates of deposits;
- modernization of the brokerage profession, securities trading systems, and the organization of secondary markets;
- introduction of legislation to permit the formation of financial groups that offer both banking and securities services;
- introduction of legislation for the creation of futures and options markets;
- modernization of supervisory and regulatory regimes for securities markets;
- agreements among supervisors of securities and derivatives markets to facilitate cross-border trading while coordinating supervisory surveillance over trading and intermediaries.

These measures had an important impact on the institutions of financial markets, while their core functions remained fairly stable. However, some of these core functions are being carried out more efficiently than before. It is less clear though, whether systemic risk in OECD financial markets has changed. Some analysts argue that systemic risk has increased and that, therefore, the financial authorities should take further actions to strengthen the financial systems, both at the national and international levels.

III. "Stages" of Financial Development

In industrial countries, financing patterns appear to have followed a fairly regular progression from an emphasis on internal financing through firms' own capital and retained earnings, to bank financing, and only relatively recently to direct financing through capital markets. An important question for financial policy-makers, however, is whether it is necessary for developing countries to follow the same progression. On both theoretical and institutional grounds, the answer probably is yes: An emphasis on first developing an efficient banking sector as a source of external funds and then concentrating on securities markets is appropriate.

The dominance of bank intermediation as a source of external finance in the history of the now-industrialized countries and in developing countries is well-documented (Mayer 1989; Singh and Hamid 1992; and Blommestein 1995). The theoretical literature on corporate financing anticipates this pattern of finance. From the work of Townsend (1983) and Diamond (1984) that emphasized the costs of verifying the outcome of investments and showed how banks economize on these costs, financial theory has concentrated on the challenges posed by information asymmetries between borrowers and lenders as the driving force in financial organization.

The theory of financing under asymmetric information has yielded a rich literature on corporate financing patterns and optimal financial contracts, which this paper will make no effort to review. Two branches of this literature, while not directly targeted at elucidating the impact of financial sector development on growth, yield relevant insights.

The first is the "financial accelerator" model of Bernanke and Gertler (1989). In this model, the agency costs of financial intermediation drive a wedge between the internal cost of funds and the cost of external (monitored)

financing. Single-period exogenous shocks, by increasing these agency costs, can lead to declines in investment and therefore in future output. Smith (1995) combined the Bernanke-Gertler model with a model of spatial competition. This model clarifies the policy implication from the Bernanke-Gertler model—that an increase in the capacity of the banking system will reduce the growth costs of information asymmetry—by adding that welfare may be lower if the banking system is not competitive.

A second relevant strand of literature is that initiated by Stiglitz and Weiss (1981). Here, asymmetries of information between the investors and the banks that finance them result in equilibrium credit rationing as an optimal response by banks to the problems of adverse selection and moral hazard on the part of potential borrowers. While banks and other lenders use detailed covenants governing the behavior of borrowers to address these difficulties, they will limit credit rationing but do not overcome it (Stiglitz and Weiss 1986). Here again, information asymmetries between borrowers and lenders inhibit growth. It is important to note that these information asymmetries are present also with equity finance and are representative of broader principal-agent problems. Equity gives rise to serious adverse selection and moral hazard problems (Stiglitz 1998). Debt or equity alone cannot provide the optimal incentive structure to minimize agency costs. Hence, the optimal financing pattern will likely involve some combination of equity and debt.

Recent papers have expanded upon the “stages” of external finance. Repullo and Suarez (1995) develop a model that emphasizes the incentives that project managers have to appropriate the returns from the investment for their own private use. In their model, entrepreneurs with large amounts of collateral relative to the size of their project will get direct bond financing, those with medium amounts of wealth will receive monitored bank financing, while those with the least amount of initial wealth will be unable to obtain any external funding.

Smith’s (1995) model emphasizes the monitoring costs of external funding and the greater efficiency of banks in providing monitoring. In his model, too, investors with lower equity relative to project size receive bank financing (because banks are more efficient in monitoring the project than a large number of individual lenders would be). Likewise, those with large initial equity relative to the project size receive direct funding from the private loan market,

while those with very low initial equity receive no external funding.

Another important perspective on financial development is the role of financial instruments in completing financial markets. Merton (1992) argues that financial innovations can be considered as steps in completing markets by allowing for insurance against the risks of a larger set of states of nature than could be insured against before their introduction. Seen from this perspective, the “earlier” stages of financial development can be characterized as one with relatively incomplete financial markets. In such a situation of underdeveloped financial markets, investors can insure themselves against the risks of a relatively small number of events.

IV. Universal Banks and Capital Markets

Universal Banks with Significant Equity Stakes

Many authors have argued that the universal banking system such as that of many continental European countries (particularly Germany) should be established in the emerging financial markets.² In fact, many emerging market economies have already passed legislation providing for the creation of universal banks. In such a system banks provide both commercial banking services and investment banking services such as underwriting the issuance of securities and participating in secondary markets, although the latter may be relegated to subsidiaries. Most important for present consideration, universal banks are often permitted to hold significant amounts of equity in the firms to which they lend and to represent themselves and perhaps shareholders whose shares they hold in trust on the boards of directors of these firms.

The central argument in favor of such an arrangement is that by internalizing the debt/equity conflict identified above, universal banking allows a more efficient allocation of financial resources and allows firms to concentrate on longer-term objectives. In a universal banking system banks are in a position to monitor closely and to influence the decisions taken by managers. They therefore can discipline poor managers in two ways: by pressing for their removal by the board of directors and by withholding credit. Moreover, the combination of commercial banking and investment banking activities is thought to allow universal banks to capture scale and scope economies and therefore to provide both kinds of services at reduced costs.

Kindleberger (1984) has argued that the role of banks as “engines of growth” in Europe has been overplayed. Moreover, it does not necessarily follow that a structure that was appropriate in 19th century Europe, for example, is appropriate for the emerging markets of today; in fact there are reasons why such a model might be particularly inappropriate for these countries in the *initial* stages of financial development.

The first stems from the fact that the universal banking model gives significant equity stakes to commercial banks. In the Czech and Slovak Republics and in Poland such investments can reach 25 percent of a bank’s capital, and in Hungary they may reach 15 percent, without requiring central bank approval. In particular in transition economies, bank assets will be composed of shares in newly privatized firms. But these shares are extremely difficult to value, and market determinations of this value are likely to fluctuate widely. Moreover, the dominant source of uncertainty in transition and other emerging market economies will be systemic in nature. Therefore, diversification of banks’ portfolios will not necessarily eliminate much of this variability. The monetary authorities may, therefore, want to enforce strict compliance with prudential regulations that set broad limits on bank ownership of non-financial enterprises and on equity position of core capital (see Appendix C).

Second, commercial bank participation in the management of a large number of enterprises threatens to dilute already scarce human capital in financial management. Securities market activities require similar expertise to that employed in commercial banking: evaluating potential risks and returns to investments; being able to price financial assets. If these skills are not well-developed, then both banking and securities operations will suffer. Because bank lending will likely contribute more to corporate growth than securities, it is desirable to concentrate whatever financial expertise there is in the bank’s core lending activities. Moreover, there is no reason to believe that bankers would make good managers or directors, and thrusting them into this role may divert their attention from the activity in which they presumably have a comparative advantage.

There is also an important managerial issue. Banks in emerging financial markets have limited experience with risk and credit management skills in a liberalized financial environment. They need, therefore, to establish strict

internal guidelines that ensure that loans are based on sound credit analysis. If they are allowed to hold significant equity stakes in firms to which they also lend, they may face the same perverse incentive to continue lending to insolvent, or at least unprofitable, enterprises as under the previous regime. This incentive can be controlled by the maintenance of “fire walls” between the investment banking and credit operations of the bank, but such controls can be difficult to erect and monitor (see Appendix C).

A similar consideration is that the supervision and regulation of universal banks are much more difficult than they are for narrower commercial banks or investment banks. As a simple prescription, banks should not be allowed to engage in activities that regulators cannot be certain they can monitor. If bank supervision and regulation is weak, which is the case in many emerging market economies, then the full range of universal banking activities—in particular, holding significant equity stakes in enterprises—should not be permitted in the *initial* stages of financial development. The recent Russian financial turmoil starting in August 1998 demonstrates this point.³ It is easier to allow commercial banks to broaden their activities and become universal banks at a later stage, if that is the desired path of financial development, than to force universal banks that have run into difficulties to shed their securities market-related activities as well as to eliminate or reduce their equity holdings. If banks are eventually allowed to have a direct role in securities markets, these activities should be confined to separately capitalized subsidiaries in order to ensure that the failure of the securities business does not affect the capital that supports the commercial banking activities.

Finally, Steinherr and Huvencers (1990, 1992) and Muldur (1992) find no evidence of economies or scale or scope in universal banking, and they warn that such a system leads to excessive cartelization in the financial sector and underdevelopment of securities markets. They also raise the possibility that banks will become captive to the firms in which they hold significant equity stakes and may not fully exercise their corporate governance role. Thus, in emerging market economies, and in transition economies in particular, universal banking may simply add to the riskiness of banks’ portfolios without significantly improving their corporate governance role, their own profits, or the allocation of capital. These considerations argue in favor at least of delaying the establishment of universal

banking institutions until the supervisory and regulatory authorities have developed the capability to enforce “fire walls” and prudential regulations (see Appendix C), economic uncertainty relating to the transformation process has diminished significantly, and bank managers have established successful track records.

Impact of the Banking Structure on the Development of Capital Markets

The analysis above argues in favor of the introduction of a banking structure based on a relatively narrow range of securities-related banking activities and tight limits on equity holdings at the early stage of financial development. This analysis also embodies the implicit view that the resulting sound banking structure at the earlier stage of financial development is also best suited for the promotion of a sound capital market in emerging market economies. Based on the analytical considerations from Section I this would mean that this narrow banking structure should be in a better position to provide liquidity to nascent capital markets than universal banking systems. Indeed, it can be argued that in universal banking systems

in which banks are allowed to hold significant equity stakes, banks’ capacity to supply liquidity to the capital market is reduced.

The experience in OECD countries seems to support this reasoning. The U.S. financial system has a narrow banking system with highly developed capital markets. By contrast, the European Union (except the United Kingdom, Sweden, and the Netherlands), and to a lesser extent Japan, had less-developed securities markets (see Table 1).

The EU and Japanese financial systems are dominated by banks that can engage in a wider range of securities-related active banking activities than U.S. banks. More recently, though, a convergence of banking structures is taking place in the OECD area (see Section V).

V. Prospects for the Role of Banks in Capital Markets

The best way to discuss the role of banks *in* capital markets is, first, to focus on the forces shaping future trends in banks and capital markets separately, and then to bring these prospective developments together.

TABLE 1
International Comparison of Bond and Share Market Capitalization (End of 1997)

COUNTRY/ GROUP OF COUNTRIES	BOND MARKET ^A		SHARE MARKET ^D	
	AS % OF GDP ^B	ANNUAL GROWTH IN THE '90S ^C IN %	AS % OF GDP ^B	ANNUAL GROWTH IN THE '90S ^E IN %
Austria	53	9	15	6
Belgium	121	6	57	8
Denmark	88	5	51	12
Finland	37	13	54	16
France	42	7	42	9
Germany	81	12	39	11
Ireland	32	4	65	45
Italy	87	13	27	14
Netherlands	48	7	111	16
Portugal	39	13	33	61
Spain	41	19	54	16
Sweden	95	8	115	14
United Kingdom	35	10	155	12
EU-11 ^F	66	..	44	..
Japan	90	6	48	10
United States ^G	117	8	129	18

A. Nominal value of domestic bonds outstanding at the end of September 1997, excluding international issues.

B. Nominal GDP in 1997; partly estimated.

C. Covering the period from the end of 1989 to the third quarter of 1997.

D. Market value of the shares of domestic listed companies at the end of 1997.

E. Covering the period from the end of 1989 to the end of 1997; Ireland and Portugal from 1990 to 1997.

F. European Union excluding Denmark, Greece, Sweden, and United Kingdom.

G. NYSE Composite and Nasdaq.

Source: BIS, FIBV

Structural Changes and Prospects in OECD Capital Markets

In the past two decades OECD capital markets have changed beyond recognition. Volumes of new securities issues and trading increased rapidly, and financial intermediation through the securities markets gained in importance in all OECD countries. Domestic deregulation and external liberalization resulted in major changes in competitive conditions. Advances in communications and information systems enhanced the capacity of financial market participants to use the opportunities offered by the liberalized environment, including the use of sophisticated financial and mathematical concepts for the development of new products.

The rapid development of securities-related activity is likely to continue in the 21st century. Innovations and structural changes are also expected to continue, although the pace and direction of these developments is inherently much more difficult to predict. In all probability, institutional investors (investment funds, pension funds, insurance companies, and others) will increasingly dominate financial sector activities. This class of professional investors will take a sophisticated approach to investing, utilizing advanced conceptual and technological tools and market instruments to attain the best possible risk and return combinations (Blommestein 1998a).

The demand of investors for a broad range of assets with different risk-return characteristics may well lead to a marked acceleration in the creation of asset-backed and mortgage-backed securities; this trend would also be strengthened by the desire of banks to bring under better control the size of their balance sheets. At present, this technique is widely used in only a handful of OECD countries, and, therefore, there is a vast potential for an expansion of securitization throughout the OECD area.

The markets in derivative products are likely to expand at least as fast as the underlying cash markets. Derivative instruments are major tools for the management of risk by market participants, in particular the larger professional investors. These markets will continue to be both an indispensable complement to and a substitute for cash markets.

In both cash and derivative markets, the traditional exchanges are likely to be challenged by alternative systems for trading, including the over-the-counter (OTC) markets. Competition among trading systems will intensify because of advances in information and communica-

tion technology, and also because of the aggressive policies of institutional investors to direct orders to the cheapest trading systems. This trend has put additional pressure on the profitability of the brokerage business. As a result of these trends, the major intermediaries are likely to de-emphasize secondary-market brokerage activities. Instead, they seem to focus more attention on proprietary trading in both cash and derivative markets, by temporarily taking large net positions using the institution's own capital. In pursuing this strategy, the intermediaries are in many cases opting to deal in the lower-cost, less regulated environment of OTC markets rather than trading on the exchanges.

The Future of Banking

Since the essence of banking has been on-balance sheet intermediation, the future of traditional banking (i.e., relationship banking) is linked to the prospects for the prevailing pattern of intermediation in OECD countries. I have noted before that there are three natural stages of development in a country's financial system: (a) internal finance; (b) the intermediation of finance; and (c) securitization. It is important to note, however, that in most countries, internal finance, financial intermediation, and securities markets coexist, although one does see a shift of, or change in, the dominant emphasis. Many bank analysts argue that bank lending is inherently more expensive than securitization. For this reason, many bank analysts predict a further decline of (traditional) banking. Competition from the capital market as well as interbank competition are likely to affect both relationship lending and transaction lending. Boot and Thakor (1998) argue that the degree of competition is a key determinant in choosing relationship lending or transaction lending. At low levels of competition from other banks or capital market financing, banks would be interested mainly in transaction lending such as credit card loans, mortgages, and some types of syndicated commercial and industrial loans. At moderate levels of competition, banks would predominantly provide relationship loans such as revolving lines of credit secured by receivables and loans to small- and medium-sized enterprises.

The reason is that relationship banking requires investing in relation-specific expertise in order to provide qualitative assets transformation services that help enhance the borrowers' pay-offs over longer periods of time. These investments and the resulting expertise act as a deterrent

for entry by potential competitors. However, at still higher levels of competition from other banks and the capital market, traditional banking is likely to decline. On both the deposit side and the banking lending side, a structural decline can be observed. Table 2 gives an overview of structural changes in the German banking industry. The share of bank lending in the total liabilities of the non-financial sectors decreased from 59 percent in 1980 to 53 percent in 1996, while bank deposits as a share of the total financial assets of domestic non-financial sectors declined from 50 percent in 1980 to 38 percent in 1996.

Although disintermediation is likely to continue, banks will probably continue to play an important financial market role, albeit in a much-changed shape (Blommestein and Spencer 1996). Banks are still key institutions for mobilizing savings. They are essential participants in the payment system. Banks routinely perform credit analysis and are the major source of information concerning small- and medium-sized enterprises. Banks are involved in providing back-up lines of credit to capital market participants. More generally, the scope of banking activities is being broadened by technology and deregulation. For example, banks participated in the development of new products, such as the origination and servicing of securitized assets and derivatives, and improved the efficiency with which they distribute old ones. More of banking's revenues will come from fee-based services. Some banks are

specializing in areas where they have a clear comparative advantage and that are more profitable than lending to corporations such as investment banking or risk arbitrage. Other banks are using lending relationships as a means to sell other, more profitable products (e.g., advice on mergers and acquisitions, underwriting of equity issues, cash management, foreign-exchange transactions, and financial advisory services in general). Thus, on the whole, the OECD banking industry has maintained its position within the overall financial system. Another notable trend is that more and more banks are stressing risk management and the more efficient use of capital. Finally, at times of financial crises, the banks act as the intermediate lender of last resort, standing between a systemic financial collapse and the intervention of central banks.

The changing nature of banking means that much of the commentary about the "declining role of banks" is basically misplaced. What is actually occurring is not a contraction in banking per se, but a switch of banks from on-balance-sheet to off-balance-sheet activities and an increasing involvement of banks in the capital markets, including the rapid growth of asset-management services (Blommestein 1998a). Indeed, recent studies show that the banking sector is not shrinking when banking activities are properly measured (Ettin 1995). Moreover, banking systems in OECD countries seem to converge in a common model whereby almost all banks are getting increasingly

TABLE 2

Structural Changes in the German Banking Industry

YEAR	FUNDS ^A PLACED WITH BANKS		BANK LENDING ^B	
	BY DOMESTIC NON-FINANCIAL SECTORS	BY HOUSEHOLDS	TO DOMESTIC NON-FINANCIAL SECTORS	TO ENTERPRISES
	PERCENTAGE SHARE OF FINANCIAL ASSETS ^C	PERCENTAGE SHARE OF FINANCIAL ASSETS ^C	PERCENTAGE SHARE OF FINANCIAL ASSETS ^D	PERCENTAGE SHARE OF TOTAL LIABILITIES ^D
1980	50.2	52.4	59.1	54.9
1985	44.3	46.1	53.5	51.1
1990 ^E	41.8	44.5	54.9	54.5
1991	40.7	43.1	55.3	55.3
1992	40.9	43.0	54.7	56.4
1993	41.2	42.5	53.6	56.3
1994	40.5	41.5	54.6	57.2
1995	37.9	39.9	52.8	56.2
1996	37.9	39.2	52.8	55.9

A. Bank deposits excluding bank bonds.

B. Excluding lending against securities.

C. In relation to the financial assets of the respective sector, including securities at market prices.

D. In relation to all external financial resources of the respective sector, including securities at market prices.

E. From 1990 Germany as a whole.

Source: Deutsche Bundesbank

involved in fee-based business based on the full range of financial services as well as a greater role by banks in capital market transactions (see Table 3).

Convergence of Banking Systems

OECD countries have very different starting points (see Appendix D for examples). However, as a result of the liberalization of financial markets and common structural underlying trends in banking, there seems to be significant convergence of banking systems. In a number of countries the norm has become for financial institutions to form large groups that offer the full range of financial services (i.e., banking, securities, leasing, etc.); usually each of these activities is performed in a separate subsidiary. Countries now having such an institutional structure include the United Kingdom, France, Italy, and Spain. Japan has authorized banks and securities houses to expand into each other's primary line of business. Although the United States continues to maintain legal separation of banking and securities, banks and securities firms are active in offering close substitutes for each other's products, and banks' securities powers have been extended significantly. Although the structure of the universal banking system appears to be essentially intact in its home markets, institutions from these countries appear to be moving toward international practices when they operate globally. Thus, in offshore centers, banks from Germany offer essentially the same products as other institutions, while some major German corporations are modifying disclosure practices to conform to international practice. In general, the latter developments imply greater reliance by banks on capital market activities than in the past. Thus, interestingly

enough, banks from all financial systems are becoming more universal in the sense they are increasingly offering the whole range of financial services (insurance, loans, capital market products, retirement products, asset management services)—even in countries with a legal separation of banking and securities businesses. At the same time, universal banks from bank-based economies (even in Germany and Japan) are reducing their equity stakes in non-financial companies.

Many analysts have acknowledged that deregulation, internationalization, and increased competition have narrowed differences among systems. However, views conflict as to how serious remaining differences are, which systems tend to promote innovation, and whether systems are converging toward a uniform model. There is also disagreement about whether innovation and competition have come as more of a shock in regimes with universal banking than in regimes with greater separation between banking and securities. It has been argued that under universal banking, a small number of institutions control the great bulk of domestic assets, dominate all facets of intermediation, and often oppose the introduction of new products. In segmented systems, by contrast, competition is an inherent element of the system because different categories of institutions constantly seek to innovate in order to attract business from competitors. Even when a new product (for example, money-market funds, commercial paper, or financial futures) is introduced in universal banking regimes, such innovation frequently begins in foreign markets and appears only at a comparatively late stage in the domestic market of the universal banking country. The introduction of innovative techniques then takes the form of new products being offered by the same universal banking institutions rather than in a "competitive process" among different categories of institutions. Thus, change is absorbed into the existing institutional framework, giving rise to less market competition.

Others have contested this entire line of argument by noting that the process of internalizing new products can be interpreted to mean that the universal banking system had considerable capacity to accept innovation without excessive disturbance. Countries with universal banking regimes have shown themselves adaptable to, and resilient in the face of, both temporary and permanent shifts in patterns of lending and refinancing. It has also been argued that the universal banking system is more flexible, inas-

TABLE 3

Non-Interest Income as Percentage of Gross Income in Commercial Banks in Selected OECD Countries

	1980	1985	1994	1995	1996
Canada	na	23.7	34.6	34.7	36.8
France	na	na	48.0	55.2	55.7
Germany					
(All banks)	20.4	20.6	19.2	21.0	21.0
Netherlands					
(All banks)	25.8	25.7	28.7	33.3	35.9
Switzerland					
(All banks)	48.0	47.3	54.0	56.7	59.6
United Kingdom	na	34.5	43.2	42.9	38.5
United States	22.1	26.7	34.4	35.3	37.1

Source: *Bank Profitability—Financial Statements of Banks*, OECD, 1998.

much as it permits but does not require banks to engage in all activities; some institutions under universal regimes may choose to specialize in only a few activities if they so wish. Thus, the actual operative structure of the financial system is basically determined by the preferences and strategies of financial intermediaries rather than the authorities' view of the merits of segmentation.

The question of whether any particular regime would come to be dominant seems irrelevant, in the sense that change and adaptation is already in process within each type of system and what will emerge in the end will be essentially market-determined. This market-based process has already resulted in a significant involvement of banks in capital market activities, whereby their income is increasingly coming from non-interest income sources (see Figure 1).

VI. Conclusions and Financial Policy Issues

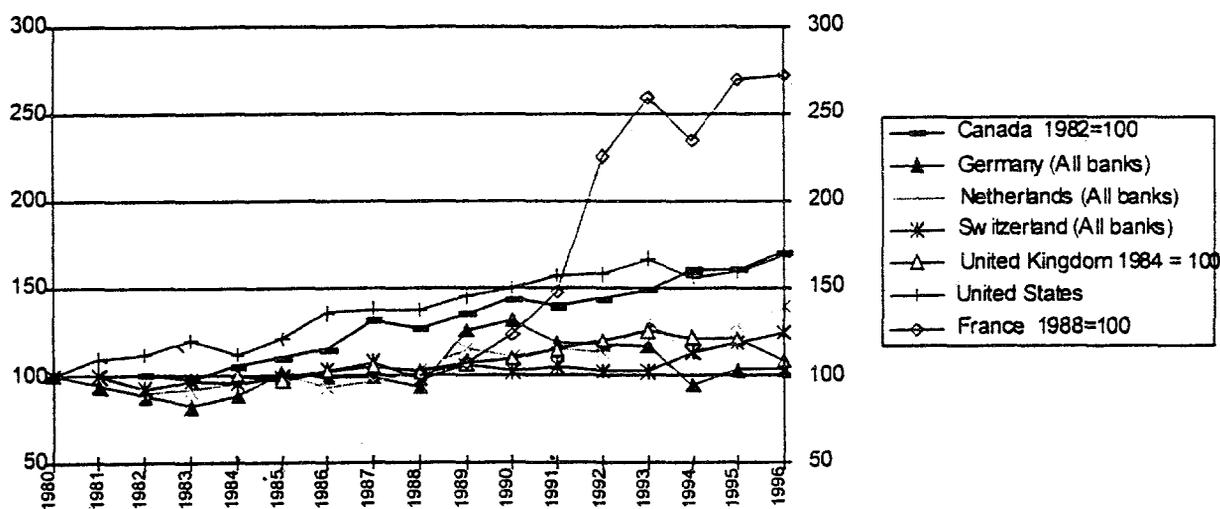
There is now more than adequate evidence that financial sector development is a key contributor to the growth process and that both equity and credit from the banking sector are important. The paper by Blommestein and Spencer (1996) studies the relationship between finance

and growth by focusing on the institutional environment for financial intermediation, while drawing on the analytical insights of the corporate finance literature. That line of research also promises to yield insights into why some financial systems are more vulnerable than others.

This paper reinforces the conclusion of Blommestein and Spencer (1994, 1996) that a healthy banking sector is a key institutional *precondition* for the development of capital markets. Moreover, as noted in Section I, liquid capital markets in turn strengthen the key function of banks to supply liquidity. Thus, capital markets and banks are *not* competing institutions. Instead, their joint development constitutes a virtuous cycle. Although *traditional* banking is likely to decline further, banks will continue to play an important role in capital markets. In fact, their capital market business will become more important. Ongoing domestic deregulation and external liberalization means that this process of change increasingly resembles a market-driven process converging to a common model. Thus, across the globe, the financial systems of the 21st century are likely to exhibit more commonalities than the ones from the last 50 years or so.

FIGURE 1

Non-interest income as % of Gross Income in Commercial Banks (1980 = 100)



Source: Bank Profitability—Financial Statements of Banks, OECD 1998

Ongoing financial liberalization provided greater incentives for individuals to save, a more efficient allocation of financial resources, and better possibilities to manage risks. As the volume of financial intermediation increased, output increased. In contrast, financial repression can be expected to inhibit growth. Even “mild repression”—as advocated by some (see Murdoch and Stiglitz 1993)—is unlikely to boost growth. The case in favor of “mild repression” is based on the expectation that deposit-rate controls and limitations of competition in the financial sector may be beneficial to growth because they will create rents within the financial sector. However, this static view of the financial sector ignores the fact that in a dynamic world characterized by financial innovations and new business opportunities, banks and other financial institutions have ample opportunities to increase their net franchises after controls and limitations on competition are lifted, although the franchise value of traditional activities (e.g. relationship lending by banks) may decrease. A second difficulty is that the implementation of “mild repression” policies is difficult from an operational point of view: Different policy-makers may interpret “mild” in very different ways; what some consider “mild” others will see as “major.” A third problem is the risk of entrenchment of “mild” repressive regulations because of the pressure by interest groups on the authorities to preserve the associated economic rents. A fourth problem is that limitations on competition may perversely reduce the pressure to strengthen the financial infrastructure—both by reducing the incentives to do so by market participants (e.g., by not introducing modern risk-control techniques) and by officials (e.g., by not upgrading regulatory and supervisory mechanisms). A fifth problem is that official restrictions may become a source of income for officials in the form of bribes and other illicit transactions to circumvent financial controls.

These problems with “mild repression” should make policy-makers skeptical about its alleged beneficial effects. Until recently, the “East Asian Miracle” was sometimes explained by pointing to “mild repression” or “financial restraint” policies as one of the success factors (see, for example, Stiglitz and Uy 1996). The recent crisis in that region has demonstrated, however, that the financial infrastructure was weak and that policies of financial restraint, such as directed and “cheap” credit, may have contributed to the severity of the financial turmoil.

The trends and structural changes in financial markets present major financial policy challenges. The key area of attention concerns improvements in the financial infrastructure so as to increase the efficiency of the allocation of savings and risks, while at the same time promoting robust financial systems. This involves policy actions and measures to promote the adoption of sound financial policy principles and measures, in particular by strengthening legal frameworks, accounting standards, payment systems, and other institutional structures that support the operation of financial markets, such as an efficient microstructure for trading securities.

Building a strong legal infrastructure entails measures to increase legal security and to reduce uncertainty about the interpretation and enforceability of contracts, including changing systems of corporate law and corporate governance, contract enforcement, and bankruptcy arrangements. It also involves the establishment of a solid legal framework that protects the rights of creditors and minority shareholders (La Porta and Lopez-de-Silanes 1998).

Lack of transparency and reliability of information on financial performance should be urgently addressed. Important issues concern the treatment of non-performing loans, loan valuation and loss recognition, write-offs, provisioning, and off-balance-sheet exposures.

The implementation of effective banking and securities regulatory and supervisory arrangements are key for strengthening financial systems, but they may have to be adapted to structural changes in the financial sector. Investor protection systems have usually been designed to protect investors by requiring adequate disclosure of information and specific rules for market operations. However, there are many indications that some of the beneficiaries of these traditional investor-protection schemes, such as institutional investors and major intermediaries, prefer to deal outside the established markets and that they consider existing regulatory schemes to be of declining value. Moreover, the internationalization of the securities and banking business could render traditional regulatory schemes less effective.

The need for banking regulation to protect depositors is greatest when relationship banking dominates banking activities. In that situation, where interbank competition is relatively moderate, there is likely to be the greatest demand by banks to fund their opaque relationship-lending portfolios with insured core deposits. Deregulation,

globalization, spectacular technological advances in communications and information systems, and new financial instruments have led to a strong increase in competition among financial institutions, in particular banks (Blommestein 1995). In response, banks have switched from relationship lending to transaction lending and capital market activities that generate non-interest revenue fees in the form of fees and trading income.

In that situation, where interbank competition and competition from the capital markets is very high, the demand for insured deposits as a funding source will decline. Bank regulation can be reduced in tandem with the decrease in deposit insurance. The challenge for regulators is (1) to strike a new balance between official involvement and market discipline, and (2) to exchange information between banking, securities, and insurance supervisors and to adopt consolidated methods of supervision (Borio and Filosa 1995).

Pension reform in many countries has put the spotlight on the financial system. A well-functioning funded pension system requires a stable and efficient financial market infrastructure. The financial infrastructure consists of the legal framework; the financial accounting system; the regulatory and supervisory framework; clearing and settlement systems; and the micro-structure for trading securities.

Securities clearance and settlement systems are an essential part of the operational infrastructure of efficient financial markets. Improvements in the efficiency and robustness of payments are there at the core of a more sophisticated financial infrastructure. Policy-makers in OECD countries have played an important role in the development of more efficient settlement systems via the implementation of “real-time gross settlement” payment systems, the shift to delivery-versus-payments, or DVP systems in securities markets, and the elimination of reduction of settlement lags in foreign-exchange markets. Also, the regulations and supervision to ensure the safety and soundness of settlement systems for payments and securities constitute another main public policy issue (Summers 1995).

A fundamental part of the infrastructure that will require significant changes to accommodate (future) financial innovations is the financial accounting system. Traditionally, accounting focuses on value allocations. For this purpose it is generally effective. It is not necessary to distinguish here between book or market valuation, because

the point is that the accounting system basically looks only at value allocations. It is therefore an ineffective structure for identifying risk allocations.⁴

Much is written and said today about the large and varied exposures that are “off the balance sheet” of financial institutions. It is even suggested that firms that use those swaps or other off-balance-sheet contractual arrangements do so to hide information from outsiders. At times, and for some firms, disguise may be a primary motive, but the more frequent and widespread reason that these “zero-value” contractals are off the balance sheet is simply that the accounting system does not have a place to put them.

Although contracts like interest-rate swaps and futures contracts have no initial value, they can have an immediate and significant impact on the risk exposure of the various assets and liabilities that are on the balance sheet. It is precisely in this sense that accounting can be said to do a good job at valuation but that it is totally inadequate to deal with risk allocation.

Major changes in accounting structure and methodology are required to address this inadequacy. In particular, financial accounting needs fundamental revisions to develop a specialized new branch called “risk accounting.” The prospect for such development is not just prospective and theoretical. Pressed by the reality of need, financial firms that deal extensively in complex securities have already developed risk-accounting protocols as part of their internal management systems. With the benefits of real-world experience, these protocols could serve as prototypes for standardized risk accounting.

Another regulatory challenge is the appropriate regulatory response to the expansion of the institutional sector (pension funds, life insurance companies, and mutual funds). On the one hand, institutional investors are playing an increasingly important role in the capital and banking market. Population aging and pension reforms are key forces driving this development (Blommestein 1998b, 1998c; Blommestein, Hicks, and Vanston 1998). Regulators of the institutional sector, therefore, need to understand better what is required for the efficient and safe regulation of institutional investors as participants in the financial market. On the other hand, financial regulators need better to take into account the growing influence of the institutional sector on the functioning of the financial sector—banks and capital markets (Blommestein 1998a, 1998b).

The role of *public policy* in supporting the infrastructure of the financial system is fundamental. It includes establishing and enforcing property rights and other laws affecting contracts as well as regulating financial markets and intermediaries. An important (permanent) challenge for financial policy-makers is how to respond to financial product and financial infrastructure innovations. Government regulatory actions can do much either to mitigate or to aggravate the dysfunctional aspects of financial innovations. For example, the government can promote adequate disclosure standards for over-the-counter derivatives by demanding changes in the financial accounting system. Another important example is the role of regulators or supervisors in setting standards for risk management by pension funds and other institutional investors.

The "correct" public policy responses to financial innovations are likely to enhance financial stability without hampering the entrepreneurial activities of financial market participants. The design of the proper financial infrastructure to accommodate the structural changes and prospects discussed in this paper is, therefore, a key policy issue (see Blommestein and Bilotto 1995).

More generally, with a fast changing, dynamic financial landscape, there is a continuous challenge for financial policy-makers to maintain or enhance market discipline, surveillance, and corporate governance.

References

- Barro, R. (1995). "Inflation and Economic Growth." Cambridge, MA: National Bureau of Economic Research Working Paper No. 5326. October.
- Bencivenga, R. V., and B. D. Smith (1989). "Financial Intermediation and Endogenous Growth." *Review of Economic Studies*, 58 (2 April), pp. 195–209.
- Bernanke, B., and M. Gertler (1989). "Agency Costs, Net Worth and Business Fluctuations." *American Economic Review*, 79 (1 March), pp. 14–31.
- Blommestein, H. J. (1995). "Structural Changes in Financial Markets: Overview of Trends and Prospects." In *The New Financial Landscape*, H. J. Blommestein and K. Bilotto, eds., pp. 9–47. Paris: OECD.
- Blommestein, H. J. (1998a). "The Impact of Institutional Investors on OECD Financial Markets." In *Institutional Investors in the New Financial Landscape*, H. J. Blommestein and N. Funke, eds. Paris: OECD.
- Blommestein, H. J. (1998b). "Aging, Private Pensions, and Financial Markets." In *The Macroeconomic and Financial Implications of Ageing Population*. Paris, Washington, and Basle: Group of Ten.
- Blommestein, H. J. (1998c). "Pension Funds and Financial Markets." *OECD Observer*. June/July 1998.
- Blommestein, H. J. (1998d). "The New Financial Landscape and Its Impact on Corporate Governance." In *Corporate Governance, Financial Markets, and Global Governance*, M. Malling, et al., eds. Boston: Kluwer Academic Publishers.
- Blommestein, H. J., and K. Bilotto (1995). "Trends, Structural Changes, and Prospects in OECD Capital Markets." In *The New Financial Landscape*. Paris: OECD.
- Blommestein, H. J., P. Hicks, and N. Vanston (1998). *Maintaining Prosperity in an Aging Society*. Paris: OECD.
- Blommestein, H. J., and M. G. Spencer (1994). "The Role of Financial Institutions in the Transition to a Market Economy." In *Building Sound Finance in Emerging Market Economies*, G. Caprio, D. Folkerts-Landau, and T. Lane, eds., pp. 139–89. Washington, DC: International Monetary Fund.
- Blommestein, H. J., and M. G. Spencer (1996). "Sound Finance and the Wealth of Nations." *North American Journal of Economics and Finance*, 7(2). JAI Press.
- Bodie, Z., and R. C. Merton (1995). "A Conceptual Framework for Analyzing the Financial Environment." In *The Global Financial System: A Functional Perspective*, D.B. Crane, et al., eds. Boston: Harvard Business School Press.
- Boot, A. W., and A. V. Thakor (1998). "Can Relationship Banking Survive Competition?" *Financial Stability Review*. London: Bank of England.
- Borio, C., and R. Filosa (1995). "The Changing Borders of Banking: Trends and Implications." In *The New Financial Landscape*, H. J. Blommestein and K. Bilotto, eds. Paris: OECD.
- Bruno, M. (1995). "Inflation Growth and Monetary Control: Non-linear Lessons from Crisis and Recovery." *Paolo Baffi Lectures on Money and Finance*. Rome: Edizioni Dell'Elefante.
- Bryant, J. (1980). "A Model of Reserves, Bank Runs, and Deposit Insurance." *Journal of Banking and Finance* 4 (December), pp. 335–44.
- Cameron, Rondo (1991). "Introduction." In *International Banking: 1870–1914*, Rondo Cameron and V. I. Bovykin, eds., pp. 3–21. New York: Oxford University Press.
- Corbett, Jenny, and Colin Mayer (1991). *Financial Reform in Eastern Europe: Progress with the Wrong Model*. London: CEPR Center for Economic Policy Research Discussion Paper No. 603.
- DeGregorio, J., and P. Guidotti (1995). "Financial Development and Economic Growth." *World Development* 23(3), March, pp. 433–48.
- De Gregorio, J., and F. Sturzenegger (1994). "Financial Markets and Inflation under Imperfect Information." Washington, D.C.: International Monetary Fund Working Paper WP/94/63.
- Diamond, D. W. (1984). "Financial Intermediation and Delegated Monitoring." *Review of Economic Studies*, 51 (3 July), pp. 393–414.
- Diamond, D. W. (1997). "Liquidity, Banks and Markets." *Journal of Political Economy*, 105 Vol. 5, pp. 928–56.
- Diamond, D. W., and Philip H. Dybvig (1983). "Bank Runs, Deposit Insurance and Liquidity." *Journal of Political Economy*, 91 (June), pp. 401–19.
- Ettin, E. (1995). "The Evolution of the North American Banking System." In *The New Financial Landscape*, H. J. Blommestein and K. Bilotto, eds. Paris: OECD.

- Garber, P. M., and S. R. Weisbrod (1992). *The Economics of Banking, Liquidity, and Money*. Massachusetts: D. C. Heath.
- Gavin, M., and R. Hausmann (1995). "The Roots of Banking Crises: The Macroeconomic Context." Unpublished Paper. Washington, DC: Inter-American Development Bank.
- Gerschenkron, Alexander (1962). *Economic Backwardness in Historical Perspective*. Cambridge, MA: Harvard University Press.
- Goldsmith, R. W. (1969). *Financial Structure and Development*. New Haven, CT: Yale University Press.
- Greenwood, J., and B. Jovanovic (1990). "Financial Development, Growth, and the Distribution of Income." *Journal of Political Economy*, 98 (5 October), pp. 1076–07.
- Inter-American Development Bank (IDB) (1995). "Special Report: Overcoming Volatility." In *Economic and Social Progress in Latin America*, edited by IDB, pp. 185–256. Washington, DC: IDB.
- Johnston, B. R. (1991). "Sequencing Financial Reform." In *The Evolving Role of Central Banks*, P. Downes and R. Vaez-Zadeh, eds., pp. 295–306. Washington, DC: International Monetary Fund.
- Johnston, B. R., and Ceyla Pazarbasioglu (1995). "Linkages Between Financial Variables, Financial Sector Reform, and Economic Growth and Efficiency." Working Paper WP/95/103. Washington, DC: International Monetary Fund.
- Kaminsky, G. L., and C. M. Reinhart (1996). "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems." *International Finance Discussion Paper No. 544*. Washington, DC: Board of Governors of the Federal Reserve System.
- Kindleberger, Charles P. (1984). *A Financial History of Western Europe*. Boston: Allen and Unwin.
- King, R. G., and R. Levine (1992). "Financial Indicators and Growth in a Cross-Section of Countries." Working Paper WPS 819. Washington, DC: World Bank.
- King, R. G., and R. Levine (1993a). "Finance and Growth: Schumpeter Might Be Right." Working Paper WPS 1083. Washington, DC: World Bank.
- King, R. G., and R. Levine (1993b). "Financial Intermediation and Economic Development." In *Capital Markets and Financial Intermediation*, C. Mayer and X. Vives, eds., pp. 156–89. Cambridge, England: Cambridge University Press.
- La Porta, R., and F. Lopez-de Silanes (1998). "Capital Markets and Legal Institutions." Paper presented at the Fourth Annual World Bank Conference on Development in Latin America and The Caribbean, San Salvador, El Salvador, June 28–30, 1998.
- Levine, R., and S. Zervos (1995). "Stock Markets and Banks: Reviving the Engines of Growth." Unpublished Paper. Washington, DC: World Bank.
- Mathieson, Donald J., and Richard D. Haas (1994). "Establishing Monetary Control in Financial Systems with Insolvent Institutions." Paper on Policy Analysis and Assessment PPAA/94/10. Washington, DC: International Monetary Fund.
- Mayer, C. (1989). "Myths of the West: Lessons from Developed Countries for Development Finance." Working Paper WPS 301. Washington, DC: World Bank.
- McKinnon, R. I. (1973). *Money and Capital in Economic Development*. Washington, DC: Brookings Institution.
- McKinnon, R. I. (1992a). *The Order of Economic Liberalization*. Baltimore, MD: The Johns Hopkins University Press.
- McKinnon, R. I. (1992b). "Taxation, Money and Credit in a Liberalizing Socialist Economy." In *The Emergence of Market Economies in Eastern Europe*, C. Clague and G. C. Rausser, eds., pp. 109–28. Cambridge, England: Basil Blackwell.
- Merton, R. C. (1989). "On the Application of the Continuous-Time Theory of Finance to Financial Intermediation and Insurance." In *The Geneva Papers on Risk and Insurance*. Vol. 4. No. 52. July.
- Merton, R. C. (1992). *Continuous-Time Finance*. Oxford, England: Basil Blackwell.
- Muldur, Ugur (1992). "Economies of Scale and Scope in National and Global Banking Markets." In *The New European Financial Marketplace*, Alfred Steinherr, ed., pp. 31–48. London: Longman.
- Murdoch, K., and J. E. Stiglitz (1993). "The Effect of Financial Repression in an Economy with Positive Real Rates." Background Paper for World Bank-East Asian Miracle. Washington, DC: World Bank.
- Ogaki, M., J. Ostry, and C. Reinhart (1995). "Saving Behavior in Low- and Middle-Income Developing Countries: A Comparison." Working Paper WP/95/3. Washington, DC: International Monetary Fund.
- Repullo, R., and J. Suarez (1995). "Credit Markets and Real Economic Activity: A Model of Financial Intermediation." Unpublished Paper. London: London School of Economics.
- Saunders, Anthony, and Ingo Walter (1992). "The Reconfiguration of Banking and Capital Markets in Eastern Europe." In *The Transformation of Socialist Economies*, Horst Siebert, ed., pp. 101–30. Tübingen: J. C. B. Mohr.
- Shaw, E. S. (1973). *Financial Deepening in Economic Development*. New York: Oxford University Press.
- Singh, A., and J. Hamid (1992). "Corporate Financial Structures in Developing Countries." Technical Paper No. 1. Washington, DC: International Monetary Fund.
- Smith, R. T. (1995). "Banking Competition and Macroeconomic Performances." Unpublished Paper. May. Washington, DC: International Monetary Fund.
- Steinherr, Alfred, and Christian Huvencers (1990). "Universal Banks: The Prototype of Successful Banks in the Integrated European Market? A View Inspired by German Experience." Research Report No. 2. Center for European Policy Studies Financial Markets Unit. Brussels: Center for European Policy Studies.
- Steinherr, Alfred, and Christian Huvencers (1992). "Universal Banking in the Integrated European Marketplace." In *The New European Financial Marketplace*, Alfred Steinherr, ed., pp. 49–67. London: Longman.
- Stiglitz, J. E. (1998). "The Role of the Financial System in Development." Paper presented at the Fourth Annual World Bank Conference on Development in Latin America and the Caribbean, San Salvador, El Salvador, June 28–30.
- Stiglitz, J. E., and M. Uy (1996). "Financial Markets, Public Policy, and the East Asian Miracle." *Research Observer*, Vol. 11, No. 2, August. Washington, DC: World Bank.

- Stiglitz, J. E., and A. Weiss (1981). "Credit Rationing in Markets with Imperfect Information." *American Economic Review*, 71 (3 June), pp. 393–412.
- Stiglitz, J. E., and A. Weiss (1986). "Credit Rationing and Collateral." In *Recent Developments in Corporate Finance*, J. Edwards, et al., eds. New York: Cambridge University Press.
- Summers, B. (1995). "Risk Management in National Payment Systems." In *The New Financial Landscape*, H. J. Blommestein and K. Bilotto, eds. Paris: OECD.
- Townsend, R. M. (1983). "Financial Structure and Economic Activity." *American Economic Review*, 73 (5 December), pp. 895–911.

Endnotes

1. I owe this point to Lars-Eric Thunholm, former CEO of SE Banken in Stockholm.
2. See, for example, Saunders and Walter (1992) and Corbett and Mayer (1991). Gerschenkron (1962) and Cameron (1991) have argued that universal banking played a key role in the development of continental Europe.

3. The advice of analysts for Russian banks to become involved in the restructuring of industry was essentially flawed.

4. To illustrate this point, suppose a hypothetical savings bank has fixed-rate mortgages as assets, floating-rate deposit liabilities, and equity. The accounting system indicates the value of assets (the fixed-rate mortgages) on the left-hand side, and on the right-hand side it tells us the value of deposits as well as the value of the bank's equity.

Suppose that this bank now enters into a swap in which it agrees to receive the floating interest rate and pay the fixed rate. What is the impact of this transaction? The objective, of course, is to match the risk of interest-rate exposure of its assets and liabilities by transforming floating-rate financing into fixed-rate financing, or equivalently in this case by transforming fixed-rate returns into floating-rate returns.

But where does that drastic change in the risk exposure of the equity appear in the balance sheet? The current financial accounting structure with its focus on valuation has no place for it. The reason is that the value of a swap is typically zero when the institution enters into it. Thus, it can neither be listed as a liability, nor can it be listed as an asset.

Appendix A. Financial Development and Growth

The contribution of the financial sector to economic growth was largely ignored in the early development literature. Financial intermediation was viewed as an outgrowth of the expansion of economic activity rather than a source of this growth. This view began to change with the seminal work of Goldsmith (1969), McKinnon (1973), and Shaw (1973). McKinnon and Shaw argued that government policies that resulted in financial repression inhibited growth. Financial liberalization that allowed real interest rates to rise—particularly the elimination of interest rate controls—provided greater incentives for individuals to save. As the volume of financial intermediation increased, output increased. Goldsmith (1969) had earlier emphasized that the greatest impact of financial sector development was not so much on the volume of investment, but on its efficiency: The organized financial sector was more efficient at collecting savings and choosing the most productive investments than the individuals themselves or the unorganized or informal (curb) financial sector. He identified a strong positive relationship across countries between the size of the organized financial sector and income per capita.

The McKinnon-Shaw hypothesis has been extensively tested, with mixed results. The relationship between savings and real interest rates is weak at best, and is weakest

in particular for the relatively poorest countries (Ogaki, Ostry, and Reinhart 1995). There are, however, shortcomings with the McKinnon-Shaw approach, not least the simplified view that their models implied that higher real interest rates would always be beneficial, which is clearly untenable in cases where real interest rates rise sharply to very high levels. The second weakness is that in the context of a neo-classical growth model, increases in savings rates cannot easily explain the observed cross-country differences in growth rates (King and Levine 1993b).

Moreover, the impetus for the development of the financial sector itself is not modeled. Financial intermediaries already exist; they just benefit from an increase in demand for their services. This external impetus for financial intermediation finds an echo in the model of Townsend (1983), for example, in which an increase in financial intermediation increases the efficiency of investment and results in more rapid growth, but is caused by an exogenous increase in the degree of concentration of the population.

More recent models improve on these shortcomings by incorporating financial sectors in endogenous growth models, although the mechanisms through which the financial sector impacts on growth are different. For example, Greenwood and Jovanovic (1990) focus on the role of finan-

cial intermediaries in economizing on monitoring cost, while Bencivenga and Smith (1989) highlight the liquidity banks provide to individual investments.

This branch of literature, too, has spawned a large number of empirical papers, although there is often little in the design of these tests that is specific to the underlying model. These papers, including those of King and Levine (1992, 1993a, 1993b), DeGregorio and Guidotti (1995), and Johnston and Pazarbasioglu (1995), typically run cross-sectional linear regressions of growth rates on a number of explanatory variables, including some that are proxies for financial intermediation. The results indicate that an expansion in the financial sector is correlated with an increase in economic growth over long time periods, thereby reaffirming the evidence provided by Goldsmith (1969), and in fact appears to lead economic growth.

In many of these papers there is nothing particularly special about the financial sector that is modeled. While the empirical work almost invariably interprets this as the banking sector, in fact all that is usually modeled is financial intermediation of a general sort. This oversight was corrected in a recent paper by Levine and Zervos (1995) who found significant independent contributions of both the banking sector and equity market variables to GDP growth, and again found evidence that these financial sector variables were not only contemporaneously correlated with growth, but had significant predictive content as well.

Appendix B. Macroeconomic Stability and Reform of the Financial System

The evidence summarized in Appendix A indicates that there may be significantly positive growth effects of financial reform and that delays in implementing reforms may reduce the potential growth rate due to the absence of an efficient system of financial intermediation. However, the process of reform itself presents difficult challenges that, if not managed well, can have negative effects.

The existence of an efficient financial sector can contribute importantly to macroeconomic control by, for example, supporting non-inflationary government finance through bond issues and providing markets through which indirect monetary policy can be implemented. Hence, a certain level of financial development is a necessary precondition to these instruments of finance and monetary management. Equally important, the quality of the financial system impacts on macroeconomic policy. For exam-

Two recent papers have explored the interrelationships between the financial sector and growth by looking not only across countries, but also across time. Johnston and Pazarbasioglu (1995) compare the relationship between the level of financial intermediation activity and GDP growth in the periods before financial reform, during the reform period and subsequently. While this relationship is weak in the pre-reform period and during the reforms, there is a strong positive relationship between an expansion in the financial sector and economic growth among those countries that avoided financial crises in the post-reform period. Their results also show that there is a significantly positive relationship between real interest rates and growth. Moreover, they demonstrate the crucial importance of having a sound, well-regulated financial system in order to foster growth. The negative growth effects of financial crises, in countries where they occurred, eliminated any benefits of earlier financial development. The Latin American experience in the 1970s and 1980s, examined in DeGregorio and Guidotti (1995), shows how devastating financial liberalization can be if it is not accompanied by a strengthening of financial market institutions, including adequate supervision and regulation. While there was a strong expansion in intermediation activity, it was poorly targeted, often corrupt, and ultimately led to the demise of the financial systems in some countries.

ple, the presence of insolvent financial institutions can bias the outcome of monetary policy operations (Mathieson and Haas 1994). More generally, weak financial institutions may have an incentive to overexpand or to increase the level of risk in their portfolios in order to "earn their way out" of problems even at the risk of higher probability of failure. As a result, the allocation of credit may be skewed to less efficient uses, including in many cases to highly speculative sectors such as real estate, which can fuel asset price bubbles.

Even in the absence of incentive problems, the financial reform process can have a major impact on the behavior of monetary and credit aggregates, which may complicate significantly monetary management. For example, in many countries financial liberalization has been followed by a surge in credit far in excess of the growth in deposits. This

contributed to macroeconomic instability in the form of asset price inflation, pressure on the balance of payments, and, in several cases, loss of monetary control.

Conversely, macroeconomic stabilization can be an essential precondition to the successful implementation of financial liberalization programs. When price-level instability is pronounced, financial liberalization may result in a financial sector crisis, especially when the supervisory regime is not able to evaluate banks' exposures or to prevent the build-up of a large stock of bad assets. Macroeconomic instability in the form of significant and unpredictable changes in, for example, the price level or the real exchange rate, may exacerbate moral hazard in the privately owned banks and lead to adverse selection among non-bank borrowers (McKinnon 1992a). In addition, in an environment of severe macroeconomic uncertainty, the risk-reduction benefits of portfolio diversification may be outweighed by a much greater undiversifiable risk. Also, high and variable inflation rates can obscure relative price signals, exacerbating the banks' search for the most efficient uses of funds (DeGregorio and Sturzenegger 1994). Hence, banks' loan portfolios may become inherently more risky.

Even in the post-reform, liberalized financial system, macroeconomic instability in the form of rapidly changing inflation rates and real exchange rates, and shocks to money demand and capital flows may pose a serious threat to the stability of the liberalized financial sector. The reason is that in many countries, interest rates can become unduly high in real terms, increasing adverse risk selection incentives among non-bank borrowers and moral hazard among the banks (McKinnon 1992a).

Moreover, in many countries the real interest cost of foreign borrowing has fallen below those in domestic markets. This in turn has triggered huge capital inflows—inflated by volatile short-term movements—and forced a sharp real appreciation of the currency. If inflation (and exchange-rate depreciation) sharply decelerate, it may lead to an increase in domestic deposits. Both the inflow of capital (intermediated in part by domestic banks) and the expansion of the deposit base may trigger lending booms (Gavin and Hausmann 1995). Lending booms are likely to result in an overhang of bad bank assets, although the extent of the deterioration of loan portfolios usually

remains hidden from bankers and supervisors until the repayment capacity of borrowers is put to the test.

There is, therefore, a real risk that the process of financial liberalization can fall into a downward spiral in which macroeconomic instability exacerbates the weakness of the financial system, which makes the macroeconomic environment even worse. The negative impact of macroeconomic instability on growth has been well-documented. Volatility in terms of instability of the rate of growth of output, prices, and the real exchange rate has a significant negative influence on investment and growth (IDB 1995). Bruno (1995) demonstrates that the growth cost of inflation is non-linearly related to the rate of inflation: At very low rates of inflation the growth costs seem to be low, but with accelerating inflation the growth costs rise at an increasingly rapid rate. It has been shown that macroeconomic volatility is significantly reduced in economies with sound financial systems (IDB 1995). In contrast, unstable or fragile financial systems can magnify volatility shocks, or even be an important source of macro-economic instability. McKinnon (1992a) shows that the pace of financial liberalization needs to be geared to the government's success in achieving overall macroeconomic stability. Without price stability, unpredictable volatility in real interest rates and real exchange rates would make bank lending and unrestricted domestic borrowing very risky.

Thus, a key challenge for the authorities is to maintain macroeconomic stability during the period of financial reform. A rapid liberalization of the financial sector without having in place effective instruments of macroeconomic control and other conditions for sound finance (in particular effective banking supervision and adequate regulations), may result in a financial crisis and recession. Experience with financial liberalization suggests that a gradual approach may have a greater chance of success than a shock treatment where in a very short time all interest rates are freed, all restrictions on domestic borrowing are being abolished, and all transactions on the capital account are being liberalized (McKinnon 1992a, Johnston 1991). Although an efficient system of financial intermediation is an important factor in supporting high-growth strategies, a too hastily executed financial liberalization program is likely to result in a financial sector crisis and macroeconomic instability followed by a growth collapse.

Appendix C. Schematic Overview of Situations and Activities that Give Rise to Conflicts of Interest in Banking Operations

Type of Conflict	Potential Offending Activity (<i>impacts/concerns</i>)		Remedies/Sanctions
A. RESULTING FROM OWNERSHIP LINKAGES			
Principal/Principal	SELF-DEALING:	<i>Legal and Regulatory</i>	<i>Self-imposed</i>
Ownership of banks by commercial companies—so called “captive” FIs.	Owners obtaining loans on preferential, “non-arm’s length” terms from FI.	Limitations on ownership (Canada: 10% of commercial enterprise equity).	
Ownership of commercial companies by banks.	<i>Resource misallocation, solvency concerns.</i> FI-owner arranges securities issue for financially weak subsidiary without full disclosure of weaknesses. <i>Extensive, large-scale bank equity stakes in commercial companies may transfer commercial risk to deposit insurance system via banking affiliation—raises moral hazard and solvency issues.</i>	(Japan: not more than 5% of other company’s equity). (Total equity holdings in relation to bank capital: most OECD countries) Prohibition of certain types of transactions (Canada: aggregate of loans to companies whose significant shareholders are on FI board may not exceed 50% of FI equity).	Definitions of what constitutes non-arms-length persons. Special board approval procedures: — quorum of independent directors.
Bank ownership of other financial institutions. — financial conglomerates	<i>More widely permitted, partly as supervision is exercised on consolidated basis.</i>		
B. RESULTING FROM COMBINED FINANCIAL ACTIVITIES			
Agent/Agent	FI acting as agent for two clients with conflicting interests (issues of securities, fund management client). FI acts as project finance advisors and potential lender to bidders on same project. FI acts as advisor to both sides of a mergers and acquisition transaction. FI boosts own role as underwriter of securities issues by being able to place its stakes in fund management clients’ portfolios handled by affiliated operation.	<i>Legal and Regulatory</i>	<i>Self-imposed</i> <i>Internal controls</i> Audit Committee Conduct Review Committee
Combined securities distribution-investment advisory activities.	FI underwrites securities of company and advises clients to buy issue.	Chinese Walls (compulsory in many OECD countries)	(only limited number of officers and executives of bank and its affiliates can be among members of such committee, e.g., Canada: 15%). Codes of conduct (Central watch list) Disclosure/transparency

Type of Conflict	Potential Offending Activity (<i>impacts/concerns</i>)	Remedies/Sanctions (<i>legal, regulatory and self-imposed</i>)	
Principal/Agent		<i>Legal and Regulatory</i>	<i>Self-imposed</i>
FI acting on its own behalf in capacity of lender (or borrower) and on behalf of client as issuer of securities or placer of funds.	FI underwrites and markets security issue for financially weak borrower in order to ensure repayment of its own loans. FI invests clients' trust funds in securities in which FI has long position. FI issues its own deposit instruments and invests client's trust funds in these instruments via affiliated operation.	Separation of commercial and investment banking activities - Glass Steagall type legislation (US, Japan). Monitoring of proceedings by Conduct Review Committee (OFSI, Canada).	Codes of Conduct (Watch List)
INSIDER INFORMATION		<i>Legal and Regulatory</i>	<i>Self-imposed</i>
Dealing on basis of information which, if publicly available, could affect prices of securities (or of a transaction in general).	The taking of a position in securities (by employees on own behalf or on behalf of FI) prior to a take-over, new issue or otherwise.	Operational and physical separation of flows of information among internal departments of FIs. Most OECD countries have legal sanctions against use of insider information, but obtaining proof is usually problematic.	Internal conduct rules usually included in employee contracts. Statistical watch on trading (by FI or by supervisor/self-regulator).

Appendix D. Patterns of Financing and Corporate Governance in the OECD Area

Concerning patterns of financing the following stylized facts emerge:

1) In most (if not all) OECD countries, retained earnings are the most important source of finance. However, there are quantitative differences. For example, companies in the United Kingdom pay out a larger part of their earnings in dividends to their shareholders than do German enterprises, which gives German firms access to a relatively larger share of the internally generated funds.

2) Banks are the primary external sources of finances, although there are differences across OECD countries. For example, over the last decades, Japanese banks have been contributing a dominant proportion of Japanese corporations' total sources of financing. In many other OECD countries, banks have been contributing a more modest proportion.

3) Stock markets are relatively minor sources of finance in most OECD countries. Stock-market financing typically amounts to less than 10 percent of *gross* sources in most countries and in many countries substantially less than that. On a *net basis*, aggregate stock-market sources of finance have at times been negative, reflecting an excess of

repurchases of shares over new issues. Interestingly, financial market analysts have been unable to detect a consistent relationship between the sizes of stock markets and their significance in raising finance for industrial enterprises.

4) Bond markets are relatively minor sources of finance. For example, German and Japanese companies have been important issuers of corporate bonds on the international markets.

5) Banks are the dominant source of external finance for small companies in all countries. Financing patterns of medium-sized enterprises diverge across OECD countries. Banks continue to play an important role in project finance.

Differences in **corporate governance structures** in OECD countries are much more pronounced than differences in the financing of corporations (Blommestein 1998d). The following criteria can be used for evaluating differences in ownership and control of enterprises: the number of listed companies; the liquidity of capital markets and the frequency with which ownership and control rights are traded; the extent of inter-corporate equity holdings; and the depth of the domestic investor community.

The nature of cross-shareholdings among companies is also important for a characterization and assessment of corporate governance systems.

In some OECD countries (e.g., the United States, Japan, the Netherlands, and the United Kingdom) there are a large number of listed companies that are frequently traded in liquid capital markets, while other OECD countries have a relatively smaller number of listed companies that are less frequently traded in less liquid capital markets. Cross-holdings among companies with long-term relationships are much more common in France, Germany, and Japan than in the United States and the United Kingdom. The majority of shares of Japanese and German companies is held by either industrial companies or by financial institutions such as banks and insurance companies with long-term relationships. Most Japanese and German companies have close relationships with a bank (or a few banks) for lending and other services—called a “main bank” (Japan) or a “hausbank” (Germany). The Japanese main banks often hold significant equity stakes and sometimes send a director to the board of the company. German “hausbanks” hold 9 percent (and insurance companies 11 percent) of all domestically listed shares of German companies. However, German banks also act as custodians of bearer shares of investors, and they can vote using the shares held in deposit. As a result, nearly half of listed shares are broadly under the control of German banks. Consequently, the role of German and Japanese banks in corporate governance is large in comparison with banks in the United States and the United Kingdom. Recently, however, the role of banks—although still dominant—has started to decline in

Europe and Japan. The greater emphasis on return on capital and the greater attention by bank management for shareholder value have encouraged the reduction in equity stakes in industrial companies by some of the bigger banks. The expected expansion of the European bond market after the introduction of the euro will reduce the role of bank finance in Europe. The weaknesses in the Japanese banking sector and the associated credit squeeze are stimulating capital market financing.

Also, the growth of a dynamic institutional sector may contribute to a stronger role of capital market intermediation in so-called bank-based financial systems (e.g., Germany, Japan, the Netherlands). In particular, pension funds that are investing significant parts of their portfolios in equities would pressure for changes in laws and regulations of companies that usually can be found in “bank-dominated” financial systems. In addition to a modernization of the capital market infrastructure, pension funds can be expected to push for a move to laws and practices that would better protect the interests of equity holders. These include takeover codes, insider information restrictions, limits on dual classes of shares, which seek to protect minority shareholders, as well as equal treatment of creditors in bankruptcy to protect their holdings of corporate bonds.

The liberalization and internationalization of financial markets have highlighted differences in the financial market structure of OECD countries, including differences in the corporate governance role of banks. This in turn may encourage further convergence of OECD financial systems, including the corporate governance role of banks and other financial institutions.

Comment

FRANCISCO DE PAULA GUTIÉRREZ

THE WORK OF HANS BLOMMESTEIN ON THE DEVELOPMENT, FUNCTIONING, AND PROSPECTS of the banking sector in the 21st century provides a comprehensive analysis of the subject, covering a number of its general aspects and examining some special issues of interest, from the viewpoint of the challenges these will present in the future. In my comments I will be backing up some of the points that Hans makes and will focus on the role of banks and their relationship to capital markets in small developing economies such as the Central American countries.

I have to begin by stating the obvious: The development of a financial system is central to the overall development process in Latin American countries. I think Joseph Stiglitz's remarks in the opening session were very clear, and therefore there is no need to dwell on this matter. So, given the importance of the financial system, what should be the main issues of concern to Latin American countries—or, more specifically, to the small Central American economies? In a world where financial systems are rapidly globalizing, can these economies follow the pattern of development set by the financial systems in the developed countries, which strengthened their banking systems first, followed by their capital markets? Or can they learn from experience and make qualitative leaps in the process of financial development?

I believe that in the current context of the Central American economies, strengthening the banking sector continues to be a priority for the development of financial systems. In these economies banking has not yet developed to any great extent. Banking services cover a comparatively small fraction of the economy, and there is still a large segment of the population that does not actively share in those services, either by depositing or borrowing.

In contrast to the way the banking sector has evolved in other societies, in Central America it is obliged to develop at a time when conventional banking activities are facing considerable competition, both from foreign banks, with the opening up of the balance of payments capital accounts, and

from other developments in domestic financial markets. This increased competition is reflected not only in the positive impact it has on the sector's modernization process, but also in the resulting pressure to remain profitable in a more competitive environment, which can lead to increases in the banks' average portfolio risk. Consequently, banks in small developing countries face a double challenge: They must find ways of achieving progress and becoming stronger in the midst of high competitive pressure, while simultaneously avoiding any temptation to jeopardize their financial portfolios in an attempt to obtain high returns.

The banks have an important role to play in the process of financial intermediation in the developing countries,

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such as those in Central America. Most economic agents are still unsophisticated. Conventional products—i.e., lending and deposits—are the main vehicles for financial intermediation. The scale and degree of development of enterprises mean that their opportunities for raising money on capital markets are very limited, and the limited liquidity available on these markets, combined with the reluctance of enterprises to open up their capital ownership, mean that most transactions in such markets are concerned with debt instruments rather than shares.

Costa Rica provides an interesting example of the problems affecting the introduction of new products on the financial market, given the fragmentation of markets and the reticence of economic agents when it comes to acquiring new instruments or following new procedures. The Ministry of Finance and the Central Bank established a joint auction mechanism for placing debt securities. The mechanism required bids to be channeled through exchange seats, the purpose being to centralize the process of receiving bids and to facilitate the establishment of a securities market. Nevertheless, many economic agents found the system too complicated, and this allowed state banks to capture savings for periods similar to those of the securities being auctioned, but at substantially lower interest rates.

The need to strengthen banking brings us to a second question: What type of banks do we need, and what type of banks should we develop?

On this issue, I agree with Hans Blommestein that, while the region's financial system is still at the development stage, we must focus on establishing banks that have more limited functions, rather than moving toward all-purpose banks. In economies where the financial systems are not highly developed (especially from the viewpoint of regulation and prudential supervision), there is a considerable risk that a close relationship will form between the banking sector and the capital market—especially because of the participation of certain economic interests and the concentration of wealth that characterizes the region. There is a great possibility that conflicts of interest will arise as a result of banks' acting both as lenders and as shareholders of enterprises, thus increasing the risk to the financial system. I think this is borne out by the experience of a number of Southern Cone countries during the financial liberalization process of the 1980s.

Focusing on establishing banks with a limited number of functions must not hinder the development of a capital

market; in fact, the various components of the financial system should develop in parallel, and not sequentially, through a strengthening both of the banking sector and of the foundations that must be provided for the efficient development of a capital market. It must be stated and restated that it is impossible to establish a sound capital market without having a properly developed banking sector that can provide it with basic services, particularly liquidity. Moreover, a thriving capital market will induce increased competition and pressure in the banking system, forcing it to be innovative with regard to prices, products, and processes.

However, what must we do to promote the development of the banking sector in our respective countries?

There are two points that I would like to emphasize in connection with this question. The first—which, although obvious, must be stated—is the importance of macroeconomic stability, especially in a process of financial liberalization. Macroeconomic instability increases real and nominal interest rates, and thus creates problems of adverse selection, shortsightedness, and moral hazard in banking. High real interest rates resulting from fiscal imbalances not only increase portfolio risk, but also lead to capital inflows that can bring about credit expansion, and this also increases the degree of risk in the system.

The second point I would like to mention is the need to “level the playing field” for the harmonious development of the banking sector. In many countries the rules of the game are not the same for the various market participants, and some of the ways in which this is reflected are the different types of insurance applied to deposits (both explicit and implicit), and the differing regulatory and taxation systems applied to local and foreign banks. For example, all deposits in state commercial banks in Costa Rica—regardless of the amount in question—are covered by government guarantees, whereas in private banks there is no system for insuring even small deposits.

The third aspect of the system that must be strengthened if banking is to be properly developed relates to regulatory mechanisms, prudential supervision, and the dissemination of information, together with the legal framework for intermediation, especially with respect to loan recovery. In this context, I would like to point out that, although supervisory and regulatory mechanisms are essential, it has to be remembered that supervision and regulation must serve to help, and not hinder, the develop-

ment of new banking initiatives. Consequently, I think it is important to have forms of supervision that are strict but flexible, and that open the way to innovation and creativity, thus promoting the development of new instruments and the strengthening of the local banking sector. In many of these countries, there is an obvious risk that supervisory and regulatory systems will be established that seek to control the activities of domestic enterprises, thus preventing them from developing the skills already possessed by the foreign enterprises that compete with them on domestic markets.

To conclude, I share the views of Hans Blommestein regarding the importance of developing the banking sector so that it can provide support for the efficient functioning

of capital markets. This is a key factor at the stage of development reached by many of the countries in the region, because *their banking systems have not yet developed sufficiently to support the emergence of strong capital markets. In particular, Central America has a long way to go in the process of reforming and consolidating its banking system, including—of course—the strengthening of supervision and regulation and the establishment of an appropriate legal and competitive framework.* In this connection, it would be most useful if Hans could prepare a second study analyzing in greater depth the interrelationship in developing countries between the development of the banking sector and the capital markets in the context of financial globalization.

Comment

C L E M E N T E D E L V A L L E

AS THE FINAL PANELIST, I WILL TRY TO BE VERY CONCRETE AND FOCUS MY COMMENTS ON some points that have not, in my view, been mentioned in the study. With respect to the document submitted by Mr. Blommestein, I have to point out the importance of having both systems, the banking system and the capital markets system, operating in harmony. In some countries we can see how easily this type of harmonization can be achieved. However, achieving this balance is actually one of the greatest challenges facing governments and those who guide economic policy.

Recent experiences in Asia and Mexico clearly show how easy it is to make the mistake of not ensuring this harmonization of policies. For example, in the case of Korea, the development of the financial system was structured so as to provide total support for banking deposits, as well as to use banks as the principal channel for financing the economy. This bias toward banking intermediation has had a very negative effect on the development of capital markets in Korea.

The case of Mexico is another example where the framework regulating the banking system's ownership of institutional vehicles such as mutual funds has led to abuses by the banks due to the absence of clear rules on how to manage conflicts of interest and on the adequate transparency that fund managers must

provide for their investors. These distortions have limited the development of mutual funds, as during the recent international financial crises these funds were seriously affected not only by external factors but also by the factors we have mentioned, leaving a bad taste in savers' mouths.

During the handling of past banking crises, great pressure has been placed on governments to take immediate measures to restore confidence in banking intermediation, which in many cases has affected the intermediation that is channeled through the capital markets. It is thus important for the government to adopt measures to offset the negative effect on other non-banking forms of intermediation, either through incentives or other policies that stimulate this activity.

In view of the above, an important aspect is to start to have a comprehensive view of the financial sector, which can be developed in different ways. For example, there are countries where the supervision of different methods of financial intermediation are beginning to be integrated due to the need to respond to the trends toward universal banking, eliminating the existing separation between activities that banks can carry out and the activities of capital-market institutions.

For this reason, I think the first thing that governments should be clear about is the importance of capital markets for better development of the financial sector and the productive sector in general. There have been some very good experiences in the developed countries in terms of the

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added value provided by the capital market, which the banking system cannot provide. Without going very far, its capacity to offer longer-term financing and fixed-rate financing is a very important contribution.

In addition, the experience of Asia shows how depending exclusively on a single system of intermediation, which in the case of banks is a vehicle with very limited transparency, can be very risky. Therefore, if we want to attack this type of systemic risk, we must develop a market parallel to the banking market, a market that provides competition in addition to supplementing the products that the banking system can offer. With this awareness, the development of capital markets becomes a fundamental and priority policy for governments.

However, developing capital markets requires proactive actions on the part of governments. On this point, I am somewhat in disagreement with the proposition of the Blommestein study that gives one to understand that the process of converting a traditional banking market into a capital market is a natural process. Taking another look at the experiences of countries like Korea, Indonesia, and Thailand—countries that have developed significantly over the last 20 years—this natural process did not occur. The government must assume a proactive role if it really wants to develop this market. There is no doubt whatsoever that government must provide the sustainable macroeconomic framework as a *sine qua non* for developing the capital market, particularly the fixed-rate and long-term markets. But perhaps the second and also very important recommendation that is drawn from these experiences is that one of the first actions that governments should conscientiously undertake is to review the regulation of the financial system, seeking to identify the existing biases between these two type of industries so as to correct them.

Another important aspect relating to the proactive role of the state in developing capital markets is specifically its role as issuer, as market agent. I believe that the experience of Europe during the 1980s, which Mr. Blommestein mentioned, is a very important reference in that it demonstrates the success of active government participation in these cases. These were countries that in the early 1980s did not have very developed capital markets, particularly in the case of the fixed-rate market (the primary substitute for the banks), and it has been in the last 15–18 years that there has been a great transformation along these lines. A common denominator in the development of these coun-

tries was the catalyzing role of the government debt market.

This is a valid lesson for many countries in Latin America, where the government is an important borrower and its actions as the issuer of securities to finance itself can thus have an enormous impact on the development of capital markets. In my view, there are few issuers with the ability to systematically and regularly issue a standardized product, and the government is perhaps, therefore, the only agent that has the great advantage of creating some reference rates that allow market agents to set prices and act more efficiently.

Another important aspect associated with the government's function as issuer relates to the role of banks in developing a network of market creators to provide liquidity for long-term financial instruments. However, for a better understanding of the importance of banks in the development of the capital market, let us recall what the function of the market creator is. The fundamental role of the market creator is to provide continuing and firm quotes for the purchase and sale of market securities, which provides liquidity and greater stability for the security in question. In economies that have experienced problems with hyperinflation and enormous macroeconomic instability, the subject of liquidity is fundamental. Liquidity—or the saver's perception of liquidity when offered a fixed-rate instrument over three or four years, in comparison with the possibility of saving in a deposit account with immediate liquidity—is one of the major obstacles in developing the mid- and long-term market.

However, the question is, Why can't this task be carried out by the securities houses? The truth is that if we look around the world, both in the developed and the developing countries, these houses are relatively small institutions with a limited capital base that doesn't allow them to take this predominant role in the case of fixed-rate securities. Thus it is very important to consider the role of the banks.

In such markets, the banks are institutions with a large capital base and with experience in taking their own positions. In addition, there is a natural tendency in various countries in the world to the effect that the treasuries of banks are not dedicated solely to funding their own needs but to being great providers of liquidity in the capital markets as well.

This more active participation of the banks is not necessarily an argument for the broad concept of universal bank-

ing, but rather for a more flexible framework where banks could be active participants in the intermediation of securities, providing liquidity and more active intermediation of such securities between the issuer and the final saver.

I hope that I have been able to contribute some new ideas for consideration. Thank you for inviting me to participate in this event.

PART 3:
KEYNOTE SPEECH

The Liberalization of Capital Movements and its Effects on Financial Systems

MANUEL GUITIÁN

EVENTS IN THE INTERNATIONAL ECONOMY AT THE TURN OF THE CENTURY CONFIRM WITH a vengeance the critical importance of sound, efficient banking and financial systems for sustained economic development and growth in a closely integrated economic setting. This fact, which holds true for a closed economy, acquires added relevance in an open one. This is the case both because of the adverse impacts of sudden **outflows** of capital that may occur, and because of the potential of **inflows** of funds for underwriting inadequate policies or masking institutional weaknesses in an economy.

Over the last few years, many—including the IMF, the World Bank, and other international institutions—have stressed more and more the need to pay attention to banking system conditions and prospects. Indeed, in a study published in 1996, the IMF noted that nearly three-fourths of the institution's membership had experienced "significant banking problems" in the preceding decade and a half.¹ Even when those problems had not evolved into full-blown crises, banking sector vulnerabilities had contributed to undermining macroeconomic performance and stability.

At present, as is typically done at times of difficulty, attention is being drawn to the fact that openness to capital flows will bring financial system problems to a head *more rapidly and more clearly than tends to occur in a closed economy*, where financial disturbances and imbalances are easier to conceal temporarily. I should say that the operative word here is **openness** in general, of which openness to capital movements is only a modality, albeit a critical one. If only for this reason of speed of transmission and transparency, it is clear that the state of the financial system is essential for the success and sustainability of capital account liberalization.

But there are other reasons, too: Capital flows can reach magnitudes that are large relative to the size of individual economies, or perhaps I should say relative to

the capacity of governments' economic policies to deal with them. As such, they entail risks for economies at large, and particularly for financial systems. An important consideration to keep in mind at turbulent times like these is that the opening of the capital account and domestic financial developments need not exhibit a negative relationship. On the contrary, capital account liberalization can make an important contribution to the development, the efficiency, and, consequently, the soundness of domestic financial systems. Actually, in terms of its potential benefits and risks, capital account liberalization is analogous to domestic financial liberalization, and the arguments made for and against it parallel closely those voiced for and against eliminating domestic financial repression.

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There can be no doubt that the risks associated with capital account opening can be potentially serious;² everybody agrees on this. The challenge, though, is to balance those risks (typically stressed by the domestic producers of financial services) against the corresponding benefits (those accruing to the domestic consumers of those services, normally a less vocal group). Here again, there is a parallel with the reactions that accompany the deregulation of domestic financial sectors.

A first consideration in the search for a proper risk/benefit balance relates to the **macroeconomic environment**. This environment exerts a powerful influence over the incentive structure that drives economic decisions in general and capital movements in particular. As such, it has much to do with why and how external liberalization will affect domestic financial systems.

In the last decade or two, a dramatic shift has taken place in the conception and implementation of macroeconomic management. In the areas of monetary and exchange policies, the shift has involved a move from direct regulatory control of the balance sheet of financial institutions and the price of financial intermediation services toward market-based methods of financial management. This evolution reflected awareness of the microeconomic benefits of deregulation, doubts about the effectiveness of controls, and, more broadly, questions about the efficacy of policies based on direct regulatory and administrative restrictions. In the process, governments came to the view that microeconomic management operated best when it worked *through* market forces, not *against* them.

This market trend in policy conception cannot be overlooked in discussions of capital account liberalization. If they are to work through market forces, economic policies will have to exhibit consistency and credibility. And from these two perspectives, capital controls collide with the very foundation of market-friendly policy management. In contrast, action to liberalize capital movements not only is consistent with the evolution of the policy setting, but it also makes clear that the policy setting is subject to the discipline exerted by the market.

This reasoning confirms the point I made earlier that capital controls are but a modality of financial restrictions. In that context, I believe it is fair to say that there is widespread agreement that domestic financial, and capital account, liberalizations are beneficial. Here I should note immediately, though, that views have emerged recently on

capital account opening that cast a doubt on how widespread the agreement really is; opinions differ on the scope, pace, and sequence of liberalization. But the notion that severe financial repression is inimical to growth is generally accepted. Within this broad acceptance, there is diversity of opinion on the degree of openness that is desirable, though. Besides the well-known case for a Tobin tax, there are arguments that a “mild” degree of financial repression vis-à-vis the outside world might be warranted. They sound much like earlier reasoning on another subject to the effect that a “mild” inflation might be beneficial for economic performance.

The problem with this line of reasoning, of course, is how to ensure that repression (or inflation, in the earlier arguments) does in fact remain mild. And there is evidence to show that such assurance is hard to attain. Banking and financial systems have often been described as the nerve center or the brain of the economic system, and indeed they are. Precisely because of that, a double outcome can be expected from even a mild financial repression: One, the corresponding distortions will be spread throughout the economy; and two, means of circumventing the restrictions will soon be found, thus rendering the controls ineffective, but in a setting in which distortions will continue to prevail.

Nevertheless, though, there must be awareness that capital account openness, as stressed earlier, carries with it risks that will call for proper management. This brings up a second consideration in the search for an appropriate balance of risks and benefits: **the importance of a sound framework of prudential regulation and official supervision**. The presence of such a framework will contribute to the robustness of the domestic financial system, which can be critical for orderly liberalization. It will also be needed to focus attention on new risk dimensions that reflect the ability to engage in cross-border capital transactions. An important point in this regard is to ensure neutrality to the liberalization process—that is, the provision of a level playing field for the various capital instruments, institutions, and markets. Preferential regulatory or other treatment to some at the expense of others will generate distortions that may undermine liberalization.³

In general, an orderly process of capital account opening, in the abstract, calls for a proper prudential regulation and effective supervision framework and a sound domestic financial sector. These, of course, are features that are required for efficient financial intermediation. They need

to be established for themselves, regardless of the capital account. But they become even more critical, if that can be the case, in the context of liberal capital movements.

A third set of considerations toward a proper risk/benefit balance revolves around the **pace and sequence of liberalization**. On this front, conventional wisdom leans toward advocacy of gradual opening as far as pace is concerned and of liberalizing equity, direct investment, and long-term capital flows first, leaving short-term capital movements for the final stages, in what pertains to matters of sequence. Although in principle such conventional wisdom is reasonable, it must be supplemented by awareness that in practice, it will not hold in *all* cases or in *all* circumstances. As an empirical matter, I doubt that a generally applicable formula exists concerning the pace or sequence of liberalization of capital (or any other) markets. This line of reasoning has direct implications for the other considerations I have already mentioned for balancing risks and benefits.

Conventional wisdom also argues for the appropriate macroeconomic settings and sound financial sectors and regulatory frameworks, to which I have already referred, to be in place before undertaking a liberalization of capital movements. Yet waiting for these requirements to materialize may actually delay liberalization indefinitely. Indeed, capital controls hardly provide an environment conducive to macroeconomic balance and financial soundness. On the contrary, proceeding with orderly liberalization in concert with supporting macroeconomic and regulatory action domestically will likely prove a more efficient route toward a sustained balance of opportunities and risks. As I argued elsewhere,⁴ there are synergies in the opening of an economy that will reinforce domestic macroeconomic management and contribute to financial efficiency. Conversely, proper macroeconomic policy and sound domestic financial intermediation will underpin an orderly and sustainable process of liberalization.

In my mind, the important judgment to make falls less on the perceived weaknesses in the macroeconomic situation or in the financial sector than on the willingness and ability of the government to confront those very weaknesses. Among the many judgments that need to be made in the search for balance between the risks and benefits of liberalization, the following facts must be kept in mind: Opening the capital account when sharp domestic imbalances and financial vulnerability prevail is a recipe for dis-

aster; on the other hand, waiting for perfect conditions to open it is equivalent to a recipe for inaction. The art of policy-making lies in correctly identifying where and when action should be undertaken between these two extremes.

Rather than an end-tail of a reform program, capital account liberalization needs to be seen as one of its critical and integral ingredients. Pace and sequence are clearly important subjects to keep in mind. But so are **internal consistency** and **incentive compatibility** for properly guiding the reform process. Because it encompasses so many issues of balance and judgment, the opening of capital accounts requires a framework of sufficient flexibility—but also of clarity of intent—to be implemented properly. The approach we envisage in the IMF is aimed in those directions.

The approach includes a provision for **transitional arrangements**, which will allow countries to maintain their capital control regimes until they are able and ready to liberalize them on a sustained basis. Thus, countries will decide on the pace and sequence of capital account opening in consultation with the IMF. Acceptance of **temporary resort to controls** is also contemplated, in response to balance of payments or macroeconomic difficulties; the acceptance will be predicated on the nature and magnitude of measures to be undertaken to render the controls unnecessary. Generally accepted **prudential norms**, even if they exhibit restrictive features, would be appropriate for members to adopt—as would restrictive measures needed to foster financial market and institutional evolution, until they become redundant through fundamental policy reform.

This approach has been tested, and it has served the IMF membership well in promoting current account convertibility. Its flexibility is particularly well-suited for capital account liberalization. It does make clear that the focus is on *orderly*, not unfettered, opening—an opening based on *commonly agreed upon norms and practices* to balance the various aims of integration, financial prudence, and sensitivity to country-specific circumstances and situations.

In conclusion, financial crises will continue to occur whether countries rely upon or eschew capital controls. Indeed, like viruses, crises mutate and develop new strains, and we perpetually must try to anticipate them, a difficult, and permanent, challenge for all policy-makers. There are two key points that warrant underscoring in this context: First, free play of market forces is not equivalent to “anarchic, unfettered” play; liberalization is not licentiousness.

Liberalization has to be accompanied and supported by proper, transparent norms on information, disclosure, prudential regulation, accounting, etc. Governments have much responsibility here, of course. The challenge is to delineate their role clearly, as has been well known for at least a century and a half, when John Stuart Mill wrote:

One of the most disputed questions both in political science and in practical statesmanship at this particular period relates to the proper limits of the functions and agency of governments.⁵

Second, discipline is required for economic policies, and such discipline is being progressively exerted by market forces. Indeed, this is one of the key arguments recently made against capital controls. Those arguments stress that markets exercise a much needed supervisory function over economic policies,⁶ and that controls aimed at circumventing it, besides being ineffective, run counter to efficiency.

The essential question to remember is that neither a totally unregulated market nor one where governments can impose controls arbitrarily is optimal. In common with traffic, markets that are guided by commonly agreed upon norms are far preferable. The development and general acceptance of an appropriate set of principles to guide and order international capital movements is one of the key

challenges facing all of us at the turn of the century. I trust that we will live up to it.

Endnotes

1. See Carl-Johan Lindgren, Gillian Garcia, and Matthew Saal, *Bank Soundness and Macroeconomic Policy* (Washington: International Monetary Fund, 1996). Earlier analysis of similar problems will be found in V. Sundararajan and Tomás Baliño, *Banking Crisis: Cases and Issues* (Washington: International Monetary Fund, 1991).

2. Much has been written on this subject, but I still find the analysis of John Maynard Keynes among the most incisive; see his *Treatise on Money* (London: MacMillan, 1930), in particular, Volume II, Chapter 36.

3. See Manuel Guitián, "The Challenge of Managing Capital Flows," *Finance and Development* (Washington: International Monetary Fund, June 1998).

4. See Manuel Guitián, "Capital Account Liberalization: Bringing Policy in Line with Reality," in Sebastian Edwards, editor, *Capital Controls, Exchange Rates and Monetary Policy in the World Economy* (Cambridge, Massachusetts: Cambridge University Press 1995).

5. See John Stuart Mill, *Principles of Political Economy* (1848), Reprints of Economic Classics (New York: Augustus M. Kelley, 1965, p. 795).

6. See Rudiger Dornbusch, "Capital Controls: An Idea Whose Time is Gone," mimeo (Cambridge, Massachusetts: Massachusetts Institute of Technology, 1998), for an insightful analysis of the subject.

II. Legal and Institutional Infrastructure for Financial Markets

Capital Markets and Legal Institutions

RAFAEL LA PORTA AND
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IN THIS PAPER WE FOCUS ON THE INSTITUTIONS REQUIRED TO SUPPORT LARGE CAPITAL MARKETS and survey the empirical evidence on the link between legal institutions and financial markets. Specifically, we are interested in providing an answer to why we observe such large differences in the size, breadth, and valuation of capital markets. Why, for example, are equity markets so much larger in South Africa than in Mexico or Peru? Why did many companies go public in India and Hong Kong in 1995, while no company went public in Brazil or Uruguay or Venezuela in the same year? Why do countries like New Zealand have large credit markets while Argentina and Colombia do not have them?

In a simple Modigliani-Miller framework (Modigliani and Miller 1958) the size of capital markets is determined only by the cash flows that accrue to investors. Therefore, roughly speaking, the size of capital markets should be proportional to GNP. To explain the large discrepancies in the size of financial markets across countries with similar GNP, we need to recognize that securities are more than the cash flows they represent, since they entitle investors to exercise certain rights. Shares entitle investors not only to dividend payments, but also to exercise control over management through the voting process. Similarly, debt entitles creditors not only to receive interest payments, but also to regain their collateral in the event of bankruptcy of the firm.

The separation between ownership and control can have a large effect on the size of capital markets once we depart from the M&M assumptions and allow for the existence of agency costs. To take an extreme view, outside equity would have no value if shareholders did not have control rights to force managers to pay out dividends. In the same vein, creditors would be unwilling to lend money at any interest rate if their control rights did not allow them to punish debtors who default on their financial obligations. Both financiers and management would benefit from the elimination of the agency conflict if they could write a complete contract that specified what the manager should do with the funds and how he would give them back to

investors in all states of the world. Of course, a complete contract cannot be implemented in practice, making it necessary for management to have a level of discretion (Grossman and Hart 1986). Management discretion, although a cost-effective way of dealing with the separation of ownership and control, can unfortunately be used to expropriate the assets of financiers through outright theft, transfer-pricing, or asset-stripping.

The agency model could, in principle, explain why some countries have much larger capital markets than others, since it is apparent that countries differ enormously in the extent to which they afford legal protection to investors. Not only does a shareholder in Mexico, for exam-

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ple, have a very different bundle of rights from one in the United States, but his recourse to redress is likely to be significantly weaker. The agency model predicts larger capital markets in countries where agency costs are reined in by the law and the institutions built to support their enforcement. La Porta et al. (1998a) systematically assess the rights of investors as well as the quality of their enforcement for 49 countries. La Porta et al. (1997, 1998a, and 1998b) relate legal institutions to the size and breadth of external capital markets as well as to corporate ownership concentration around the world.

In this paper, we review and summarize the cross-country evidence on the influence of institutions on capital markets development. The paper is divided in four sections after the introduction. Section I describes the differences in legal protection for shareholders and creditors in a cross-section of 49 countries. Because investor rights are not only determined by laws, Section II compares the quality of the legal enforcement and accounting standards across nations. The ultimate question is whether countries with poor investor protections actually do suffer. If laws and their enforcement matter, then countries that offer entrepreneurs better terms of external finance would have both higher-valued and broader capital markets. We also predict that countries that offer entrepreneurs better terms would have widely held corporations. Consequently, Section III compares external finance and ownership concentration across countries as a function of the origin of their laws, the quality of legal investor protections, and the quality of law enforcement. Section IV concludes the paper and discusses policy implications of the results.

I. Legal Protection to Investors

La Porta et al. (1998a) assembled data on legal rules pertaining to the rights of investors, and to the quality of enforcement of these rules, for 49 countries with publicly traded companies. Naturally, laws in different countries are typically not written from scratch, but rather transplanted—voluntarily or coincidentally—from a few legal families or traditions. In general, *commercial* laws come from two broad traditions: common law and civil law. Most English-speaking countries belong to the common-law tradition based on the British Company Act. The rest of the world belongs to the civil-law tradition, derivative of Roman law, which has three main families: the French family based on the Napoleonic Code of 1804, the German

family based on Bismarck's Code of 1896, and the Scandinavian family, which legal scholars describe as less derivative of Roman law and "distinct" from the other two civil families.

The common-law family includes former British colonies and other nations like Thailand and Israel that modeled their initial corporate laws on the laws of England. There are 18 common-law countries in the sample. The French legal family includes France, Spain, Portugal, and their colonies. There are 21 French legal origin countries in our sample, including nine in Latin America. The German tradition has had less influence, and we have only six countries in this family: Austria, Germany, Japan, South Korea, Switzerland, and Taiwan. Finally, the Scandinavian family includes four Nordic countries: Denmark, Finland, Norway, and Sweden.

There are numerous potentially measurable differences among countries in their company and bankruptcy laws. We focus exclusively on those basic rules that scholars (e.g., Paul Vishny 1994; White 1993; American Bar Association 1989 and 1993) and observers (e.g., Investor Responsibility Research Center 1994; Institutional Shareholder Services 1994) believe to be essential to corporate governance. Furthermore, we restrict our attention to those basic rules that easily can be interpretable as either pro-investor or pro-management.

A. Shareholder Rights

Shareholders have residual rights over the cash flows of the firm. The right to vote is the shareholders' main source of power. This right to vote in the general assembly for the election of directors and on major corporate decisions guarantees shareholders that management will disgorge the firm's cash flows to shareholders through the payment of dividends rather than divert the funds to pay themselves higher compensation or undertake poor acquisitions, for example. Therefore, voting rights and the rights that support voting mechanisms are the defining features of equity.

Table 1 provides a detailed description of all the variables that we use in this paper, and Table 2 presents the evidence on shareholder rights for the cross-section of 49 countries. A useful way to begin the discussion of shareholder rights is by first assuming the role of an investor in a U.K. firm and then switching identity to become an investor in a Mexican corporation. (We do this not to praise the United Kingdom, nor to single out Mexico for criti-

TABLE 1

The Variables

This table describes the variables collected for the 49 countries included in our study. The first column gives the name of the variable. The second column describes the variable and gives the range of possible values. The third column provides the sources from which the variable was collected.

VARIABLE	DESCRIPTION	SOURCES
Origin	Identifies the legal origin of the Company Law or Commercial Code of each country. Equals 1 if the origin is English Common Law; 2 if the origin is the French Commercial Code; and 3 if the origin is the German Commercial Code.	Foreign Law Encyclopedia Commercial Laws of the World
One share-one vote	Equals 1 if the Company Law or Commercial Code of the country requires that ordinary shares carry one vote per share, and 0 otherwise. Equivalently, this variable equals 1 when the law prohibits the existence of both multiple-voting and non-voting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and 0 otherwise.	Company Law or Commercial Code
Proxy by mail	Equals 1 if the Company Law or Commercial Code allows shareholders to mail their proxy vote to the firm, and 0 otherwise.	Company Law or Commercial Code
Shares not blocked	Equals 1 if the Company Law or Commercial Code does not allow firms to require that shareholders deposit their shares prior to a General Shareholders Meeting, thus preventing them from selling those shares for a number of days, and 0 otherwise.	Company Law or Commercial Code
Cumulative voting or proportional representation	Equals 1 if the Company Law or Commercial Code allows shareholders to cast all of their votes for one candidate standing for election to the board of directors (cumulative voting) or if the Company Law or Commercial Code allows a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board, and 0 otherwise.	Company Law or Commercial Code
Oppressed minorities mechanism	Equals 1 if the Company Law or Commercial Code grants minority shareholders either a judicial venue to challenge the decisions of management or of the assembly or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes, such as mergers, assets dispositions, and changes in the articles of incorporation. The variable equals 0 otherwise. Minority shareholders are defined as those shareholders who own 10 percent of share capital or less.	Company Law or Commercial Code
Preemptive rights	Equals 1 when the Company Law or Commercial Code grants shareholders the first opportunity to buy new issues of stock and this right can only be waived by a shareholders' vote, and 0 otherwise.	Company Law or Commercial Code
Percent capital to call an ESM	It is the minimum percentage of ownership of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting. It ranges from 1 to 33 percent.	Company Law or Commercial Code
Anti-director rights	An index aggregating the shareholder rights that we labeled as "anti-director rights." The index is formed by adding 1 when (1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10 percent (the sample median); or (6) shareholders have preemptive rights that can only be waived by a shareholders' vote. The index ranges from 0 to 6.	Company Law or Commercial Code
Restrictions for going into reorganization	Equals 1 if the reorganization procedure imposes restrictions, such as creditors' consent, to file for reorganization. It equals 0 if there are no such restrictions.	Bankruptcy and Reorganization Laws
No automatic stay on secured assets	Equals 1 if the reorganization procedure does not impose an automatic stay on the assets of the firm upon filing the reorganization petition. Automatic stay prevents secured creditors from gaining possession of their security. It equals 0 if such restriction does exist in the law.	Bankruptcy and Reorganization Laws
Secured creditors first	Equals 1 if secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. Equals 0 if non-secured creditors, such as the government and workers, are given absolute priority.	Bankruptcy and Reorganization Laws
Management does not stay	Equals 1 when an official appointed by the court, or by the creditors, is responsible for the operation of the business during reorganization. Equivalently, this variable equals 1 if the debtor does not keep the administration of its property pending the resolution of the reorganization process, and 0 otherwise.	Bankruptcy and Reorganization Laws

TABLE 1
Continued

VARIABLE	DESCRIPTION	SOURCES
Creditor rights	An index aggregating different creditor rights. The index is formed by adding 1 when (1) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from 0 to 4.	Bankruptcy and Reorganization Laws
Efficiency of judicial system	Assessment of the "efficiency and integrity of the legal environment as it affects business, particularly foreign firms," produced by the country-risk rating agency Business International Corporation. It "may be taken to represent investors' assessments of conditions in the country in question." Average between 1980-1983. Scale from 0 to 10, with lower scores for lower efficiency levels.	Business International Corporation
Rule of law	Assessment of the law-and-order tradition in the country produced by the country-risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for less tradition for law and order. (We changed the scale from its original range going from 0 to 6).	International Country Risk Guide
Corruption	ICR's assessment of the corruption in government. Lower scores indicate "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans." Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for higher levels of corruption. (We changed the scale from its original range going from 0 to 6).	International Country Risk Guide
Accounting standards	Index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items). A minimum of three companies in each country were studied. The companies represent a cross-section of various industry groups where industrial companies numbered 70 percent while financial companies represented the remaining 30 percent.	International Accounting and Auditing Trends, Center for International Financial Analysis & Research, Inc.
Ownership, 10 largest private firms	The average percentage of common shares owned by the three largest shareholders in the 10 largest non-financial, privately owned domestic firms in a given country. A firm is considered privately owned if the state is not a known shareholder in it.	Moodys International, CIFAR, EXTEL, WorldScope, 20-Fs, Price-Waterhouse, and various country sources
External Cap / GNP	The ratio of the stock market capitalization held by minorities to gross national product for 1994. The stock market capitalization held by minorities is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the 10 largest non-financial, privately owned domestic firms in a given country. A firm is considered privately owned if the state is not a known shareholder in it.	Moodys International, CIFAR, EXTEL, WorldScope, 20-Fs, Price Waterhouse, and various country sources
Domestic Firms / Population	Ratio of the number of domestic firms listed in a given country to its population (in millions) in 1994.	Emerging Market Factbook and World Development Report 1996
IPOs / Population	Ratio of the number of initial public offerings of equity in a given country to its population (in millions) for the period July 1995 to June 1996.	Securities Data Corporation, Asia-Money, LatinFinance, GT Guide to World Equity Markets, and World Development Report 1996
Debt / GNP	Ratio of the sum of bank debt of the private sector and outstanding non-financial bonds to GNP in 1994, or last available.	International Financial Statistics, World Bondmarket Factbook
GDP Growth	Average annual percent growth of per capita gross domestic product for the period 1970-1993.	World Development Report 1995
Log GNP	Logarithm of the gross national product in 1994.	World Development Report 1996

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cism, but rather merely to illustrate differences between a legal system based on English common law and one based on French civil law.)

The first column of Table 2 shows that not all UK shareholders have the right to vote. That is probably a bad thing, because when votes are tightly linked to dividends, it is more difficult to control a company by having a small fraction of the equity. Yet, as it turns out, one-share-one-vote rules are uncommon everywhere—including Mexico.

The next six columns of Table 2 provide different measures of how strongly the corporate law protects minority shareholders against expropriation of managers or dominant shareholders. We label these rights as “anti-director” rights. The first four anti-director rights measure how easy it is for an investor to exercise any voting rights that he may have. Shareholders in the United Kingdom will receive proxy statements two weeks in advance of the shareholders’ meeting with detailed information on the items that are going to be discussed at the meeting. Should they wish to vote, they do not need to show up in person at the meeting; they can mail their proxy vote instead. Investors who have indicated they will participate in the shareholders’ meeting are not limited in their actions in the days that surround the meeting. Their shares are not blocked. The freedom to trade shares around shareholders’ meetings is an important right for people who may want to form alliances to challenge management proposals. Directors are chosen one at a time through a majority vote, and thus shareholders are not entitled to have proportional representation or cumulative voting for directors. Our hypothetical investor may have a resolution that he would like to be considered by an extraordinary shareholders’ meeting (ESM). If that is the case, he has the right to call an ESM if he owns 10 percent of the share capital.

The next right in Table 2 measures the protection of minority shareholders against a particular type of expropriation: issuing shares at favorable prices to, for example, associates of the controlling shareholders. In the United Kingdom, shareholders have a preemptive right to buy new issues of stock of their holdings, and that right can be waived only by a shareholder vote. Finally, U.K. investors who feel they have been hurt by the decisions of the majority can seek redress through the courts. When the court believes that oppression has indeed taken place, it may order that the oppressed members’ shares be bought out at a fair price or that the firm remedy the matters at issue. More generally,

best-practice countries provide legal mechanisms for the protection of oppressed minorities. (To give just another example, a dissenting investor in Chile has the right to request—at the meeting—that the firm buy back his shares at the market price prevailing before the meeting.)

Suppose that the shareholders’ meeting took place not in London but in Mexico City. As in the United Kingdom, not all shares are endowed with the same right to vote. However, unlike in the United Kingdom, investors in Mexico will be notified of the forthcoming shareholders’ meeting but will not typically receive detailed information on the items to be discussed. Only by going to the meeting will they know what is discussed. In fact, attending the meeting—or designating someone to do so in their place—is the only way in which they can vote; proxy by mail is not allowed. Furthermore, announcing that they intend to vote their shares will cause them to be blocked, making it impossible for them to trade the shares in the days surrounding the meeting. At the meeting, shareholders vote on the slate of directors proposed by management and are not allowed proportional representation on the board. Investors in Mexican firms must have at least 33 percent of share capital to have a resolution considered by an ESM. Fortunately, investors in Mexico do have a preemptive right that prevents dilution. Regrettably, this is the only right (of those that we collect) that shareholders in Mexico have, since they do not have any legal recourse against the decisions of the majority. To summarize, Table 2 paints a very bleak picture of shareholder rights in Mexico.

A convenient way of summarizing shareholder rights is to aggregate anti-director rights into an index adding 1 if the corporate law protects minority shareholders, and a 0 otherwise. For the case of the percentage of share capital needed to call an ESM, we give a 1 to those countries where this percentage is at or below the world median of 10 percent. When we add up these six anti-director rights scores, the United Kingdom has a score of 5 while Mexico’s score is only 1.

The comparison between Mexico and the United Kingdom illustrates the broad findings of Table 2: Shareholder protection in common-law countries is significantly better than in French civil-law countries. While the incidence of one-share-one-vote rules, cumulative voting for directors, and preemptive rights are not statistically different across English and French legal origins, the remaining four measures show marked differences. Common-law countries

TABLE 2

Shareholder Rights around the World

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports the test of means for the different legal origins.

COUNTRY	ONE SHARE ONE VOTE	PROXY BY MAIL ALLOWED	CUMULATIVE		% CAPITAL TO CALL ESM	PREEMPTIVE RIGHTS	OPPRESSED MINORITY	ANTI- DIRECTOR RIGHTS
			VOTE / SHARES NOT BLOCKED	PRO- PORTIONAL REPRESENTATION				
<i>Panel A: Shareholder rights (1 = investor protection is in the law)</i>								
Australia	0	1	1	0	0.05 ^D	0	1	4
Canada	0	1	1	1	0.05	0	1	5
Hong Kong	0	1	1	0	0.10	1	1	5
India	0	0	1	1	0.10	1	1	5
Ireland	0	0	1	0	0.10	1	1	4
Israel	0	0	1	0	0.10	0	1	3
Kenya	0	0	1	0	0.10	0	1	3
Malaysia	1	0	1	0	0.10	1	1	4
New Zealand	0	1	1	0	0.05	0	1	4
Nigeria	0	0	1	0	0.10	0	1	3
Pakistan	1	0	1	1	0.10	1	1	5
Singapore	1	0	1	0	0.10	1	1	4
South Africa	0	1	1	0	0.05	1	1	5
Sri Lanka	0	0	1	0	0.10	0	1	3
Thailand	0	0	1	1	0.20 ^E	0	0	2
UK	0	1	1	0	0.10	1	1	5
US	0	1	1	1	0.10	0	1	5
Zimbabwe	0	0	1	0	0.05	0	1	3
English origin avg.	0.17	0.39	1.00	0.28	0.09	0.44	0.94	4.00
Argentina	0	0	0	1	0.05	1	1	4
Belgium	0	0	0	0	0.20	0	0	0
Brazil	1	0	1	0	0.05	0	1	3
Chile	1	0	1	1	0.10	1	1	5
Colombia	0	0	1	1	0.25	1	0	3
Ecuador	0	0	1	0	0.25	1	0	2
Egypt	0	0	1	0	0.10	0	0	2
France	0	1	0	0	0.10	1	0	3
Greece	1	0	0	0	0.05	1	0	2
Indonesia	0	0	1	0	0.10	0	0	2
Italy	0	0	0	0	0.20	1	0	1
Jordan	1	0	1	0	0.25	0	0	1
Mexico	0	0	0	0	0.33	1	0	1
Netherlands	0	0	0	0	0.10	1	0	2
Peru	1	0	1	1	0.20	1	0	3
Philippines	0	0	1	1	open	0	1	3
Portugal	0	0	1	0	0.05	1	0	3
Spain	0	0	0	1	0.05	1	1	4
Turkey	0	0	1	0	0.10	0	0	2
Uruguay	1	0	0	0	0.20	1	1	2
Venezuela	0	0	1	0	0.20	0	0	1
Latin American avg.	0.44	0.00	0.67	0.44	0.18	0.78	0.44	2.67
Rest of French origin avg.	0.17	0.08	0.50	0.17	0.12	0.50	0.17	2.08
French origin avg.	0.29	0.05	0.57	0.29	0.15	0.62	0.29	2.33
Austria	0	0	0	0	0.05	1	0	2
Germany	0	0	0	0	0.05	0	0	1
Japan	1	0	1	1	0.03	0	1	4
South Korea	1	0	0	0	0.05	0	1	2
Switzerland	0	0	0	0	0.10	1	0	2
Taiwan	0	0	0	1	0.03	0	1	3
German origin avg.	0.33	0.00	0.17	0.33	0.05	0.33	0.50	2.33

TABLE 2

Continued

COUNTRY	ONE SHARE ONE VOTE	PROXY BY MAIL ALLOWED	CUMULATIVE		% CAPITAL TO CALL ESM	PREEMPTIVE RIGHTS	OPPRESSED MINORITY	ANTI- DIRECTOR RIGHTS
			SHARES NOT BLOCKED	PRO- PORTIONAL REPRESENTATION				
Denmark	0	0	1	0	0.10	0	0	2
Finland	0	0	1	0	0.10	1	0	3
Norway	0	1	1	0	0.10	1	0	4
Sweden	0	0	1	0	0.10 ^E	1	0	3
Scandinavian origin avg.	0.00	0.25	1.00	0.00	0.10	0.75	0.00	3.00
Sample average	0.22	0.18	0.71	0.27	0.11	0.53	0.53	3.00
<i>Panel B: Tests of Means (t-statistics)</i>								
Common vs. civil law	0.72	3.03 ^A	4.97 ^A	0.15	1.48	0.91	5.59 ^A	5.00 ^A
English vs. French origin	0.87	2.82 ^A	3.87 ^A	0.05	2.53 ^B	1.08	5.45 ^A	4.73 ^A
English origin vs. Latin America	1.57	3.29 ^A	2.00 ^C	0.85	3.56 ^A	1.67	3.44 ^A	2.98 ^A
French vs. German origin	0.22	1.00	1.78 ^C	0.22	2.64 ^B	1.23	0.96	0.00
French vs. Scandinavian origin	2.83 ^B	1.37	-3.87 ^A	2.82 ^B	2.43 ^B	0.48	2.83	1.06
Rest of French origin vs. Latin America	1.39	1.00	0.74	1.39	1.71	1.29	1.39	1.11

Notes:

A. Significant at 1% level.

B. Significant at 5% level.

C. Significant at 10% level.

D. As a percentage of votes.

E. As a percentage of the number of shares.

more frequently allow shareholders to exercise their vote by mail than French-origin countries (39 percent vs. 5 percent). No common-law country blocks shares before shareholders' meetings, while 57 percent of French civil-law countries do. On average, 9 percent of the share capital is sufficient to call an ESM in common-law countries, whereas 15 percent of share capital is required in French civil-law nations. Finally, 94 percent of common-law countries have an oppressed-minority mechanism in place, while only 29 percent of French-origin countries do. The differences between English- and French-origin countries are captured in the anti-director's index, which has an average of 4.00 for common-law countries and only 2.33 for French civil-law nations (t-statistic of 4.73).

It is important to note that Mexico actually scores lower than the rest of Latin America when it comes to shareholder rights, so our choice of Mexico for this example does not mean that Mexico is typical of Latin America. In fact, Latin America generally scores a little higher than the average of the rest of the French-origin countries in many shareholder rights. Latin America has a higher incidence of one-share-one-vote (44 percent vs. 17 percent), is more likely to not block shares (67 percent vs. 50 percent), has a

higher incidence of proportional representation (44 percent vs. 17 percent), is more likely to grant preemptive rights (78 percent vs. 50 percent), and has a higher incidence of oppressed minority remedies (44 percent vs. 17 percent). On the other hand, Latin America never allows proxy by mail (vs. 8 percent for the rest of French origin) and requires a higher fraction of the share capital to call for an ESM (18 percent vs. 12 percent). With the exception of the percentage needed to call an ESM, these differences are not statistically significant when taken in isolation. Although not statistically significant, differences add up to marginally better shareholder rights in Latin America than in the rest of the French civil origin when rights are aggregated in the anti-director index (2.67 vs. 2.08). However, Latin America's anti-director rights index is statistically significantly lower than that of common-law countries.

German civil-law countries share French-origin countries' lack of protection of shareholder rights. Although German-origin countries have a significantly higher incidence of oppressed minority mechanisms, they block shares more often than French-origin countries do. The average anti-director scores for the German and French families are the same (2.33). Finally, Scandinavian-origin countries,

although clearly inferior to common-law countries in shareholder protection, are the best within the civil-law tradition. The average Scandinavian anti-director rights score is 3. In short, relative to the rest of the world, common-law countries have the package of laws most protective of shareholders.

B. Creditor Rights

In principle we would like to measure the ability of creditors to use the law to force companies to meet their credit commitments. In practice, creditor rights are difficult to assess for two main reasons. First, most countries have in place both reorganization and liquidation procedures that are used with varying frequency and may confer different levels of protections to creditors. Therefore, a country may be very protective of creditors if it offers, for example, strong rights in liquidation and weak protection in reorganization, provided that the reorganization procedure is seldom used. Second, creditors, unlike shareholders, do not have a homogeneous claim against the firm—i.e., they differ in the priority of their claim. As a result, it is possible that measures that favor some creditors (e.g., unsecured creditors) may hurt others (e.g., secured creditors).

To undertake a cross-country analysis of creditor rights, we score creditor rights in both reorganization and liquidation, and add up the scores to create a creditor rights index, in part because almost all countries rely to some extent on both procedures. In assessing creditor rights below, we also take the perspective of senior secured creditors, in part for concreteness and in part because much of the debt in the world has that character. Creditor rights for the cross-section of 49 countries in the sample can be found in Table 3. Once again, to illustrate differences between English common-law countries and French civil-law countries, we describe the data by comparing the rights of an investor who has a credit against a firm incorporated in the United Kingdom versus the rights of an investor with a credit against a firm incorporated in Mexico.

Suppose that a debtor to whom the creditor has lent money files a petition for reorganization in a London court. The court will then notify the creditor, who will have two weeks to oppose reorganization. A secured creditor who chooses to oppose a reorganization petition has the right to appoint a so-called *trustee* to decide what will happen to the firm. The important thing is that the debtor does not have the right to file for reorganization unilaterally.

Even if the borrower has his petition for reorganization accepted, there is not an “automatic stay” that prevents secured creditors from gaining access to their collateral. In addition, secured creditors who choose not to withdraw their collateral are paid first in the event that reorganization fails and liquidation ensues. Finally, the bargaining position of creditors is strengthened by the fact that pending the resolution of the bankruptcy procedure, the old management team will not continue to run the firm. Rather, a trustee appointed by the creditors would be in charge of the firm’s day-to-day operations.

Now suppose that a debtor to whom the creditor has lent money files a petition for reorganization in a Mexico City court. Creditors have no say in whether the firm’s reorganization petition is accepted or declined. And if the petition is accepted, secured creditors are not able to pull their collateral out of the firm; an “automatic stay” is triggered by the acceptance of the reorganization petition. Secured creditors have additional worries, because if liquidation takes place, they are not paid first. Rather the state and the firm’s employees take priority. The creditors’ predicament is aggravated by the fact that the debtor not only will write the reorganization proposal, but also will continue to run the firm pending the resolution of the bankruptcy procedure, which may take several years.

As with shareholders, one way to summarize the difference in creditor rights across countries is to create an index that adds 1 when the pro-investor right is granted by law, and 0 otherwise. This index is shown in the last column of Table 3 and takes a value of 4 for the United Kingdom and 0 for Mexico. Again, as with shareholder rights, the picture for creditor rights in Mexico is substantially bleaker than in the United Kingdom.

Although the Mexico-U.K. comparison is extreme, common-law countries in general offer creditors stronger legal protections against managers. Table 3 shows that all four measures of creditor rights are weaker for countries of French legal origin by an amount that is statistically significant. A total of 72 percent of common-law countries place restrictions on managers seeking court protection from creditors, while only 42 percent of French civil-law nations do. The incidence of having no automatic stay on assets is 72 percent in common-law countries versus only 26 percent in French civil-law nations. Relatively fewer countries of French legal origin (65 percent) ensure that secured creditors are paid first than do countries of English legal origin

TABLE 3

Creditor Rights around the World

This table classifies countries by legal origin. Definitions for each variable can be found in Table 1. Panel B reports tests of means for the different legal origins.

COUNTRY	RESTRICTIONS FOR REORGANIZATION	NO AUTOMATIC STAY ON ASSETS	SECURED CREDITOR PAID FIRST	MANAGEMENT	CREDITOR RIGHTS
				DOES NOT STAY IN REORGANIZATION	
<i>Panel A: Creditor Rights</i> (1 = creditor protection is in the law)					
Australia	0	0	1	0	1
Canada	0	0	1	0	1
Hong Kong	1	1	1	1	4
India	1	1	1	1	4
Ireland	0	0	1	0	1
Israel	1	1	1	1	4
Kenya	1	1	1	1	4
Malaysia	1	1	1	1	4
New Zealand	1	1	0	1	3
Nigeria	1	1	1	1	4
Pakistan	1	1	1	1	4
Singapore	1	1	1	1	4
South Africa	1	0	1	1	3
Sri Lanka	1	1	0	1	3
Thailand	0	1	1	1	3
UK	1	1	1	1	4
US	0	0	1	0	1
Zimbabwe	1	1	1	1	4
English origin avg.	0.72	0.72	0.89	0.78	3.11
Argentina	0	0	1	0	1
Belgium	0	1	1	0	2
Brazil	1	0	0	0	1
Chile	1	0	1	0	2
Colombia	0	0	0	0	0
Ecuador	1	1	1	1	4
Egypt	1	1	1	1	4
France	0	0	0	0	0
Greece	0	0	0	1	1
Indonesia	1	1	1	1	4
Italy	1	0	1	0	2
Jordan	na	na	na	na	na
Mexico	0	0	0	0	0
Netherlands	1	0	1	0	2
Peru	0	0	0	0	0
Philippines	0	0	0	0	0
Portugal	0	0	1	0	1
Spain	0	1	1	0	2
Turkey	1	0	1	0	2
Uruguay	0	0	1	1	2
Venezuela	na	na	1	na	na
Latin American avg.	0.38	0.13	0.56	0.25	1.25
Rest of French origin avg.	0.45	0.36	0.73	0.27	1.81
French origin avg.	0.42	0.26	0.65	0.26	1.58
Austria	1	1	1	0	3
Germany	1	1	1	0	3
Japan	0	0	1	1	2
South Korea	0	1	1	1	3
Switzerland	0	0	1	0	1
Taiwan	0	1	1	0	2
German origin avg.	0.33	0.67	1.00	0.33	2.33

TABLE 3

Continued

COUNTRY	RESTRICTIONS FOR REORGANIZATION	NO AUTOMATIC STAY ON ASSETS	SECURED CREDITOR PAID FIRST	MANAGEMENT DOES NOT STAY IN REORGANIZATION	CREDITOR RIGHTS
Denmark	1	1	1	0	3
Finland	0	0	1	0	1
Norway	1	0	1	0	2
Sweden	1	0	1	0	2
Scandinavian origin avg.	0.75	0.25	1.00	0.00	2.00
Sample average	0.55	0.49	0.81	0.45	2.30
<i>Panel B: Tests of means (t-statistics)</i>					
Common vs. civil law	1.86 ^C	2.65 ^A	1.04	4.13 ^A	3.61 ^A
English vs. French origin	1.89 ^C	3.06 ^A	1.75 ^B	3.55 ^A	3.61 ^A
English origin vs. Latin America	1.71 ^C	3.25 ^A	2.04 ^B	2.83 ^A	3.42 ^A
French vs. German origin	0.37	-1.85 ^C	-3.20 ^A	-0.32	-1.29
French vs. Scandinavian origin	1.18	0.05	-3.20 ^A	2.54 ^B	-0.60
Rest of French origin vs. Latin America	0.33	1.14	0.77	0.11	0.90

Notes:

A. Significant at 1% level.

B. Significant at 5% level.

C. Significant at 10% level.

(89 percent). Finally, only 26 percent of French civil-law countries remove managers in reorganization, compared with 78 percent of countries of the common-law family. In brief, the average aggregate creditor rights score is 3.11 for English origin and a mere 1.58 for French origin.

Unlike the case of shareholder rights, Latin America offers considerably *less* legal protection to creditors than the rest of the French civil-law countries. When compared with the other countries of French civil-law origin, countries in Latin America are less likely to place restrictions for going into reorganization (38 percent vs. 45 percent), have no-automatic-stay policies (13 percent vs. 36 percent), pay secured creditors first (56 percent vs. 73 percent), and prevent management from remaining in office (25 percent vs. 27 percent). However, these differences are not statistically significant even when aggregated in the creditor-rights index (1.25 vs. 1.81).

Latin America also scores lower than the other two civil-law families. German legal origin countries are relatively more pro-creditor than Latin American and French civil-law countries, averaging an aggregate score of 2.33. The differences between German- and French-origin countries are particularly significant in liquidation measures: 67 percent of German civil-law countries have no automatic stay and always pay secured creditors first.

Finally, countries of Scandinavian origin always pay secured creditors first, but always allow management to stay pending reorganization. In three out of four cases they impose an automatic stay on assets and place restrictions to go into reorganization. As a result, the aggregate creditor-rights index for countries of Scandinavian legal origin has a value of 2.00—a difference that is not statistically significant from the 1.58 value for countries of French legal origin.

To summarize the results thus far, bankruptcy laws differ a great deal across countries. In particular, they differ because they come from different legal families. Relatively speaking, common-law countries protect creditors the most, and French civil-law countries protect them the least. German and Scandinavian civil-law countries are in the middle. The one exception is the strong protections that German civil-law countries afford secured creditors.

II. Enforcement of Laws

Legal rules are only one element of investor protection; the enforcement of these rules may be equally or even more important. If good laws are not enforced, they cannot be effective. Likewise, investors may enjoy high levels of protection despite bad laws if an efficient judiciary system can redress expropriations by management. In this way, strong legal enforcement may serve as a substitute for weak rules.

Table 4 presents several proxies for the quality of enforcement of laws in different countries. These measures are collected by private credit-risk agencies for the use of foreign investors interested in doing business in the respective countries (Business International Corporation, Political Risk Services). We use three measures: efficiency of the judicial system, rule of law, and corruption. The first two of these proxies pertain to law enforcement, while the last one captures the government's general attitude toward business. In addition to these measures, we also collected data on the quality of accounting standards of publicly traded firms in different countries. Accounting is central to corporate governance, as it may be difficult to assess management performance without reliable accounting standards. More broadly, cash flows may be very difficult to verify in countries with

poor accounting standards; consequently, the menu of financial contracts available to investors may be substantially narrower in such countries. The index of accounting standards in Table 4 is provided by the Center for International Financial Analysis and Research based on examination of company reports of firms in each country. It is available for 41 of the 49 countries in our sample.

We can begin the discussion of these data by focusing on the Latin American average. Compared with the English-origin average, Latin America has very weak legal institutions and accounting standards. A corrupt or inefficient legal system coupled with poor disclosure standards could render legal rules ineffective.

While the Latin American average across all enforcement variables is below the French-origin average, it turns

TABLE 4

Enforcement of Laws

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports the tests of means for the different legal origins.

COUNTRY	Panel A ENFORCEMENT VARIABLES			ACCOUNTING	GNP PER CAPITA
	EFFICIENCY OF JUDICIAL SYSTEM	RULE OF LAW	CORRUPTION	RATING ON ACCOUNTING STANDARDS	(U.S.\$)
	<i>Panel A: Creditor Rights</i> (1 = creditor protection is in the law)				
English origin avg. ^A	8.15	6.46	7.06	69.62	9,353
French origin avg. ^B	6.56	6.05	5.84	51.17	7,102
Latin American avg.	6.47	5.18	5.22	46.25	3,077
Rest of French origin avg.	6.62	6.70	6.30	55.10	10,121
German origin avg. ^C	8.54	8.68	8.03	62.67	22,067
Scandinavian origin avg. ^D	10.00	10.00	10.00	74.00	24,185
Sample average	7.67	6.85	6.90	60.93	11,156

Notes:

A. Countries surveyed: Australia, Canada, Hong Kong, India, Ireland, Israel, Kenya, Malaysia, New Zealand, Nigeria, Pakistan, Singapore, South Africa, Sri Lanka, Thailand, United Kingdom, United States, Zimbabwe.

B. Countries surveyed: Argentina, Belgium, Brazil, Chile, Colombia, Ecuador, Egypt, France, Greece, Indonesia, Italy, Jordan, Mexico, Netherlands, Peru, Philippines, Portugal, Spain, Turkey, Uruguay, Venezuela.

C. Countries surveyed: Austria, Germany, Japan, South Korea, Switzerland, Taiwan.

D. Countries surveyed: Denmark, Finland, Norway, Sweden.

Panel B: Tests of means (t-statistics)

Common vs. civil law	1.27	-0.77	0.39	3.12 ^A	-0.94
English vs. French origin	2.65 ^A	0.51	1.79 ^C	4.66 ^A	0.85
English origin vs. Latin America	2.37 ^B	1.25	2.33 ^B	6.53 ^A	2.08 ^B
French vs. German origin	-2.53 ^A	-2.55 ^A	-2.49 ^A	-2.10 ^B	-3.79 ^A
French vs. Scandinavian origin	-9.34 ^A	-20.80 ^A	-9.77 ^A	-3.32 ^A	-4.28 ^A
Rest of French origin vs. Latin America	0.19	1.52	1.28	1.49	2.27 ^B

Notes:

A. Significant at 1% level.

B. Significant at 5% level.

C. Significant at 10% level.

out that the French civil-law family shares Latin America's weak legal-enforcement mechanisms. The French family has the weakest quality of legal enforcement and accounting standards. Scandinavian countries have the strongest enforcement mechanisms, with German civil-law and common-law countries close behind. Common-law countries, although behind Scandinavian nations, are still ahead of the French civil-law countries. Note that rule of law is the only measure where differences in means between common law and French legal origin are not statistically significant.

These results do not support the conclusion that the quality of law enforcement substitutes or compensates for the quality of laws. An investor in Latin America—and more generally in a French civil-law country—is poorly protected by both the laws and the system that enforces them. The converse is true for an investor in a common-law country, on average. Poor enforcement and accounting standards aggravate, rather than cure, the difficulties faced by investors in French civil-law countries.¹ The weak scores obtained by Latin America in shareholder and creditor rights may actually understate the severity of the corporate governance problem in the region.

III. External Finance and Legal Institutions

There are at least two reasons why legal institutions may have no effect on the pattern of external financing of firms. First, laws may not be necessary to support external financing if, for example, companies deliver on their promises not because they are forced to but because they want to build a good reputation to facilitate their access to capital markets (Diamond 1989, 1991; Gomes 1996). Reputation unravels if there is ever a time when the gains from cheating exceed the value of keeping external financing open, since investors, through backward induction, would never extend financing to such a firm to begin with.

Second, poor laws and their enforcement may have no real consequences if firms can easily opt out of the laws of their legal jurisdictions. Easterbrook and Fischel (1991) are skeptical that legal rules are binding in most instances, since entrepreneurs can offer better investor rights, when it is optimal to do so, through corporate charters that effectively serve as contracts between entrepreneurs and investors. In practice, however, opting out may be costly both for firms that need to write non-standard contracts and for investors who need to study them. In addition,

courts may be unwilling or unable to enforce non-standard contracts, further limiting the scope for opting out.

Alternatively, if legal institutions matter, ownership concentration should be higher in countries with poor investor protection than in countries with strong protections for investors for at least two reasons: First, agency problems may call for large shareholders to monitor managers and thus prevent or minimize expropriation. Second, minority shareholders may be unwilling to pay high prices for securities in countries with weak legal protection. At the same time, entrepreneurs are going to be more reluctant to offer shares at discounted prices, thus resulting in higher ownership concentration as well as smaller and narrower markets for external equity.² Similarly, bad creditor rights may have analogous price and quantity effects on debt markets. In other words, if laws do not protect the rights of creditors, debt markets may be small, because creditors may demand high interest rates and firms may be reluctant to borrow from arm's-length sources in such conditions.

Ultimately, the question of whether legal institutions matter is fundamentally empirical: If opting out were cheap and simple, the patterns of ownership and external finance of firms would not be affected by differences in legal institutions across countries.³ Accordingly, in this section we examine two types of evidence regarding the influence of legal institutions on external finance: ownership concentration, and the size and breath of capital markets. Table 5 summarizes the results.

A. Data

We describe sequentially our measures of ownership concentration, external equity financing, and debt markets. First, to measure ownership concentration, La Porta et al. (1998a) assembled data for the 10 largest publicly traded, non-financial private domestic firms in each of 45 countries. For each country we measure ownership concentration as the median percentage owned by the three largest shareholders in each of these 10 firms.

Second, as in La Porta et al. (1997), we also use three measures of equity finance. The first measure is the 1994 ratio of external equity finance to GNP in each country. To compute a rough proxy of external equity finance, we multiply the total market value of common stock of all publicly traded firms by the average fraction of the equity not held by the largest three investors (i.e., the complement of the ownership variable just described). We scale the total

TABLE 5

External Finance and Legal Institutions

This table classifies countries by legal origin. Definitions for each of the variables can be found in Table 1. Panel B reports tests of means for the different legal origins.

COUNTRY	OWNERSHIP CONCENTRATION	EXTERNAL CAP / GNP	DOMESTIC FIRMS / POP	IPOS / POP	DEBT / GNP	GDP GROWTH	LOG GNP
<i>Panel A: Means</i>							
Australia	0.28	0.49	63.55	.	0.76	3.06	12.64
Canada	0.24	0.39	40.86	4.93	0.72	3.36	13.26
Hong Kong	0.54	1.18	88.16	5.16	.	7.57	11.56
India	0.43	0.31	7.79	1.24	0.29	4.34	12.50
Ireland	0.36	0.27	20.00	0.75	0.38	4.25	10.73
Israel	0.55	0.25	127.60	1.80	0.66	4.39	11.19
Kenya	.	.	2.24	.	.	4.79	8.83
Malaysia	0.52	1.48	25.15	2.89	0.84	6.90	11.00
New Zealand	0.51	0.28	69.00	0.66	0.90	1.67	10.69
Nigeria	0.45	0.27	1.68	.	.	3.43	10.36
Pakistan	0.41	0.18	5.88	.	0.27	5.50	10.88
Singapore	0.53	1.18	80.00	5.67	0.60	1.68	11.68
South Africa	0.52	1.45	16.00	0.05	0.93	7.48	10.92
Sri Lanka	0.61	0.11	11.94	0.11	0.25	4.04	9.28
Thailand	0.48	0.56	6.70	0.56	0.93	7.70	11.72
UK	0.15	1.00	35.68	2.01	1.13	2.27	13.86
US	0.12	0.58	30.11	3.11	0.81	2.74	15.67
Zimbabwe	0.51	0.18	5.81	.	.	2.17	8.63
English origin avg.	0.42	0.60	35.45	2.23	0.68	4.30	11.41
French Origin							
Argentina	0.55	0.07	4.58	0.20	0.19	1.40	12.40
Belgium	0.62	0.17	15.50	0.30	0.38	2.46	12.29
Brazil	0.63	0.18	3.48	0.00	0.39	3.95	13.03
Chile	0.38	0.80	19.92	0.35	0.63	3.35	10.69
Colombia	0.68	0.14	3.13	0.05	0.19	4.38	10.82
Ecuador	.	.	13.18	0.09	.	4.55	9.49
Egypt	0.62	0.08	3.48	.	.	6.13	10.53
France	0.24	0.23	8.05	0.17	0.96	2.54	14.07
Greece	0.68	0.07	21.60	0.30	0.23	2.46	11.25
Indonesia	0.62	0.15	1.15	0.10	0.42	6.38	11.84
Italy	0.60	0.08	3.91	0.31	0.55	2.82	13.94
Jordan	.	.	23.75	.	0.70	1.20	8.49
Mexico	0.67	0.22	2.28	0.03	0.47	3.07	12.69
Netherlands	0.31	0.52	21.13	0.66	1.08	2.55	12.68
Peru	0.57	0.40	9.47	0.13	0.27	2.82	10.92
Philippines	0.51	0.10	2.90	0.27	0.10	0.30	10.44
Portugal	0.59	0.08	19.50	0.50	0.64	3.52	11.41
Spain	0.50	0.17	9.71	0.07	0.75	3.27	13.19
Turkey	0.58	0.18	2.93	0.05	0.15	5.05	12.08
Uruguay	.	.	7.00	0.00	0.26	1.96	9.40
Venezuela	0.49	0.08	4.28	0.00	0.10	2.65	10.99
Latin American avg.	0.57	0.23	7.49	0.10	0.29	2.84	11.11
Rest of French origin avg.	0.53	0.19	11.89	0.28	0.56	3.43	11.89
French origin avg.	0.55	0.21	10.00	0.19	0.45	3.18	11.55
German Origin							
Austria	0.51	0.06	13.87	0.25	0.79	2.74	12.13
Germany	0.50	0.13	5.14	0.08	1.12	2.60	14.46
Japan	0.13	0.62	17.78	0.26	1.22	4.13	15.18
South Korea	0.20	0.44	15.88	0.02	0.74	9.52	12.73
Switzerland	0.48	0.62	33.85	.	.	1.18	12.44
Taiwan	0.14	0.88	14.22	0.00	.	11.56	12.34
German origin avg.	0.33	0.46	16.79	0.12	0.97	5.29	13.21

TABLE 5

Continued

COUNTRY	OWNERSHIP CONCENTRATION	EXTERNAL CAP / GNP	DOMESTIC FIRMS / POP	IPOS / POP	DEBT / GNP	GDP GROWTH	LOG GNP
Scandinavian Origin							
Denmark	0.40	0.21	50.40	1.80	0.34	2.09	11.84
Finland	0.34	0.25	13.00	0.60	0.75	2.40	11.49
Norway	0.31	0.22	33.00	4.50	0.64	3.43	11.62
Sweden	0.28	0.51	12.66	1.66	0.55	1.79	12.28
Scandinavian origin avg.	0.33	0.30	27.26	2.14	0.57	2.42	11.80
Sample Average	0.45	0.40	21.59	1.02	0.59	3.79	11.72
<i>Panel B: Tests of Means (t-statistics)</i>							
Common vs. Civil Law	0.91	3.12 ^A	3.16 ^A	3.97 ^A	1.33	1.23	1.06
English vs. French origin	-2.68 ^A	3.29 ^A	3.16 ^A	4.50 ^A	2.29 ^B	1.97 ^C	0.28
English origin vs. Latin America	-2.34 ^B	1.97 ^C	2.29 ^B	3.21 ^A	3.42 ^A	1.93 ^B	0.46
French vs. German origin	3.29 ^A	-2.38 ^B	1.85	0.78	-3.39 ^A	-1.96 ^C	-2.48
French vs. Scand. origin	3.32 ^A	0.91	-3.31 ^A	-5.45 ^A	0.82	0.97	0.33
Rest of French origin vs. Latin America	-0.54	-0.35	1.36	2.41 ^B	2.20 ^B	0.88	1.22

Notes:

A. Significant at 1% level.

B. Significant at 5% level.

C. Significant at 10% level.

market value of common stock by the fraction of equity held by minority shareholders to avoid overestimating the availability of external financing. For example, when 90 percent of a firm's equity is held by insiders, looking at the market capitalization of the whole firm gives a tenfold overestimate of how much has actually been raised externally. The procedure we follow may still overestimate the level of external financing, because our ownership concentration figures are based on the largest firms and because they ignore cross-holdings. Still, this procedure is conceptually better than looking at the ratio of market capitalization to GNP.⁴

The remaining two measures of external equity finance capture market breadth. The first is the number of domestic firms listed in the stock exchange of each country relative to its population. The second is the number of initial public offerings (IPOs) of shares in each country between mid-1995 and mid-1996 (the period for which we have been able to obtain the data), also relative to the population. We look at both the stock and flow of new companies obtaining equity financing because the development of financial markets has accelerated greatly in the last decade, and hence the IPO data provide a more recent picture of external equity financing.

Finally, also as in La Porta et al. (1997), we measure the availability of debt financing in each country as the ratio of the sum of private-sector bank debt and corporate bonds outstanding to GNP. Our choice of debt variable is partly determined by data availability, because the analogue of the stock market data that we use to measure external equity financing does not exist for debt markets. However, the fact that our debt measure includes not only corporations but the whole private sector may actually be an advantage, because in many countries entrepreneurs raise money on their personal accounts to finance their firms (for example, by mortgaging their properties).

B. Results

The first striking result of Table 5 is that in the world as a whole, dispersed ownership is a myth: In an average median firm 45 percent of the common shares are held by the largest three shareholders. The second result is that those countries with weaker investor protections have larger share ownership concentration. In particular, countries of the French legal family have an average ownership concentration of 55 percent. Statistically this number is significantly higher than the mean of the rest of the world and of each of the other three legal families individually.

Like the rest of the French-origin countries, Latin America has highly concentrated ownership. With the exception of Chile, which has strong shareholder rights, all Latin American countries in the sample have higher ownership concentration than the world mean. In fact, three of the four countries with the largest ownership concentration in the world are in Latin America: Colombia (68 percent), Mexico (67 percent), and Brazil (63 percent). Only Greece (68 percent) also has a concentration that high. In sum, these data indicate that Latin American countries—and French civil-law countries in general—have unusually high ownership concentration, possibly as an adaptation to weak legal protection.

Several interesting patterns emerge from looking at our proxies for external equity finance on Table 5. First, access to external equity financing is most limited in French civil-law countries. Specifically, both the ratio of external capital to GNP and the ratio of domestic firms to population are roughly half the world mean, whereas the ratio of IPOs to population is roughly one-fifth of the world mean. Equity markets are particularly narrow in Latin America; the ratio of the number of firms to population is roughly one-third of the world mean, whereas the ratio of the number of IPOs to population is more than 10 times smaller than the world mean. In contrast, all three equity measures indicate that, on average, access to external equity is easiest in common-law countries: The ratio of outsider-held stock market to GNP is 60 percent, vs. 40 percent for the world mean; the number of listed firms per 1 million people is 35, vs. 21.6 for the world mean; and the number of IPOs per million people is 2.2, vs. 1.02 for the world mean. Finally, equity markets in countries of Scandinavian origin are smaller but broader than in countries of German origin. To summarize, external equity markets line up pretty well with shareholder rights and legal institutions: They are smallest in French civil-law countries and largest in common-law countries.

The last column in Table 5 shows the aggregate debt measure. The ratio of total debt to GNP is 45 percent for French civil-law countries, 57 percent for Scandinavian countries, 68 percent for common-law countries, and 97 percent for German countries. It is also interesting to note that Latin America, with a ratio of total debt to GNP of only 29 percent, is an outlier even within the French civil-law family. Low creditor rights line up with small markets when we compare French, Scandinavian, and English ori-

gin. However, German civil-law countries are a mystery. We conjecture that a possible explanation of the German-origin anomaly is that firms in both Germany and Japan have large liquid assets and, therefore, our debt measure overstates their true liabilities (Rajan and Zingales 1995).

C. Regression Results

We present two sets of regressions in Tables 6 and 7 for each of our measures of ownership concentration, external equity finance and debt markets. The first set of regressions (Table 6) includes legal-origin dummies, whereas the second one (Table 7) includes our measures of shareholder and creditor rights. In both specifications we regress our measures of capital markets on two control variables and on law enforcement. The first control is the growth of GDP on the theory that growth affects valuation and that in turn may affect ownership patterns as entrepreneurs are more willing to issue at attractive prices. We also control for the logarithm of total GNP on the theory that the creation of capital markets may be an activity subject to increasing returns to scale. If this theory is true, we should observe that larger economies have larger firms, which might therefore have lower ownership concentration.⁵ As a measure of quality enforcement we chose the “rule of law” index, but the results we present are representative of other specifications with alternative enforcement measures.

The regression results in the first column of Table 6 show that larger economies have lower ownership concentration and that, although not significant in this specification, better enforcement leads to lower ownership concentration. In addition, this regression confirms the sharply higher concentration of ownership in the French civil-law countries: Controlling for other variables, the average country of French legal origin has 12 percentage points more concentrated ownership in the hands of the largest three shareholders than the average country of English legal origin.

The first regression in Table 7 has the same controls and legal enforcement variables as Table 6, but instead of legal origin it tests for the significance of stronger shareholder protection in the form of more anti-director rights and the existence of one-share-one-vote rules. Looking at Table 7, the coefficient on the logarithm of GNP remains significant, showing that larger economies have less concentrated ownership. The results also show that legal enforcement significantly reduces the concentration of ownership in the

TABLE 6

Regressions of External Finance and Legal Origin

Ordinary least squares regressions of the cross section of 49 countries around the world. The dependent variables are: (1) Ownership Concentration (the mean of each country); (2) External Cap / GNP; (3) Domestic Firms / Pop; (4) IPOs / Pop; and (5) Debt / GNP. The independent variables are (1) GDP Growth; (2) Log GNP; (3) Rule of law; (4) French origin; (5) German origin; and (6) Scandinavian origin. Robust standard errors are shown in parentheses.

INDEPENDENT VARIABLES	DEPENDENT VARIABLES:				
	OWNERSHIP CONCENTRATION	EXTERNAL CAP / GNP	DOMESTIC FIRMS / POP	IPOS / POP	DEBT / GNP
GDP Growth	-0.0077 (1.3676)	(0.0084) 0.1938 ^B	0.0584 ^B (0.1112)	(0.0259) 0.0251 ^B	1.0111 (0.0148)
Log GNP	-0.0436 ^A (1.9117)	(0.0132) -0.0662	0.0038 (0.1193)	(0.0420) 0.0370	-2.9127 (0.0281)
Rule of Law	-0.0031 (1.4708)	(0.0067) 0.2122 ^B	0.0417 (0.0926)	(0.0272) 0.0698 ^A	4.8422 ^A (0.0163)
French Origin	0.1217 ^A (7.9944)	(0.0317) -1.5982 ^A	-0.3225 ^A (0.3902)	(0.1131) -0.1516 ^B	-21.9070 ^A (0.0817)
German Origin	-0.0013 (9.1683)	(0.0660) -2.8119 ^A	-0.2962 ^C (0.6257)	(0.1629) 0.1080	-25.1485 ^A (0.1116)
Scandinavian Origin	-0.0589 (10.9897)	(0.0434) -0.3123	-0.3391 ^B (0.9516)	(0.1494) -0.2764 ^B	-22.2680 ^B (0.1145)
Intercept	0.9889 ^A (22.2848)	(0.1314) -0.9201	0.0336 (1.4532)	(0.4001) -0.3496	33.0486 (0.2786)
Observations	45	45	49	41	39
Adjusted R ²	0.5517	0.3840	0.3497	0.5671	0.6647

Notes:

- A. Significant at 1%.
 B. Significant at 5%.
 C. Significant at 10%.

TABLE 7

Regressions of External Finance and Shareholder and Creditor Rights

Ordinary least squares regressions of the cross section of 49 countries around the world. The dependent variables are: (1) Ownership Concentration (the mean of each country); (2) External Cap / GNP; (3) Domestic Firms / Pop; (4) IPOs / Pop; and (5) Debt / GNP. The independent variables are (1) GDP Growth; (2) Log GNP; (3) Rule of law; (4) Anti-directors rights; (5) One-share = One-vote; and (6) Creditor rights. Robust standard errors are shown in parentheses.

INDEPENDENT VARIABLES	DEPENDENT VARIABLES:				
	OWNERSHIP CONCENTRATION	EXTERNAL CAP / GNP	DOMESTIC FIRMS / POP	IPOS / POP	DEBT / GNP
Growth	-0.0124 (1.3976)	(0.0097) 0.1433	0.0604 ^A (0.1251)	(0.0176) 0.0311 ^C	1.3926 (0.0184)
Log GNP	-0.0312 ^B (1.7815)	(0.0116) -0.1814	0.0205 (0.1541)	(0.0306) 0.0667 ^B	-4.7687 ^A (0.0270)
Rule of Law	-0.0151 ^B (1.4273)	(0.0060) 0.2824 ^A	0.0456 ^B (0.0887)	(0.0214) 0.0615 ^A	4.8174 ^A (0.0142)
Anti-director Rights	-0.0385 ^A (1.6293)	(0.0385) 0.5761 ^A	0.1244 ^A (1438)	(0.0378)	6.0688 ^A
One-share = One-vote	0.0044 (7.0938)	(0.0461) 0.0226	0.1433 (0.5267)	(0.1278)	0.4189
Creditor Rights					0.0518 ^C (0.0287)
Intercept	1.1041 ^A (0.1304)	-0.3219 (0.2614)	20.9494 (17.3374)	-1.1172 (1.4796)	-0.8622 ^A (0.2763)
Observations	45	45	49	41	39
Adjusted R ²	0.4862	0.4549	0.2671	0.4541	0.5993

Notes:

- A. Significant at 1%.
 B. Significant at 5%.
 C. Significant at 10%.

regression. A 4.65 point increase in the rule-of-law score (roughly the difference between New Zealand and Argentina or Mexico) reduces average ownership concentration by 7 percentage points. Similarly, countries with stronger shareholder protection, measured by our aggregate score of anti-director rights, also have a statistically significantly lower concentration of ownership. A 1.6 point increase in the anti-director rights score (roughly the difference between common-law and French civil-law averages) reduces ownership concentration by 6 percentage points. Finally, the existence of a one-share-one-vote rule in the corporate law turns out not to be significant for ownership concentration. In sum, regression results confirm our previous finding that the protection of shareholders through legal institutions is an important determinant of ownership concentration.

As with ownership concentration, we present two sets of regressions for external equity markets in Tables 6 and 7. Two key results emerge from the analysis of the regressions that use legal origin (Table 6). First, rule of law has a large impact on all three variables: A move from the world mean of 6.85 to a perfect score of 10 is associated with an increase of 13.1 percentage points (the standard deviation of the variable is 37) in the ratio of external market capitalization to GNP, an additional 15.3 (the standard deviation of the variable is 25) firms per million population, and a further 0.67 (the standard deviation of the variable is 1.5) IPOs per million population. However only the last two results are statistically significant. Second, legal origin matters. Relative to common-law countries, French civil-law countries have a ratio of external equity-to-GNP 32.2 percentage points lower, 21.9 fewer publicly traded firms per million population, and 1.6 fewer IPOs per million population. German and Scandinavian legal origin are also associated with smaller and more narrow stock markets than English origin but the effects are not as pronounced as with French legal origin. All estimates are statistically significant with the sole exception of the effect of Scandinavian origin on the number of IPOs per million population.

The results on anti-director rights and one-share-one-vote (Table 7) are easy to summarize. One-share-one-vote has the expected sign, but it is never significant. In contrast, anti-director rights has a large impact on equity financing both in statistical and economical terms: A move from the world mean of 2.5 to a perfect score of 6 is associated with an increase of 43.5 percentage points in the

ratio of external market capitalization to GNP, an additional 21.2 publicly traded firms per million population and 2.0 additional IPOs per million population. Finally, as in previous regressions, rule of law has a large impact on equity financing, and it is now statistically significant everywhere.

Overall, the results on external equity finance in Tables 6 and 7 show that rule of law and shareholder rights have a large impact on the availability of external equity financing. With the exception of the number of IPOs per million population in Scandinavia, the regressions also confirm our earlier results that the legal institutions of civil-law countries reduce the size and breadth of the stock markets.

As for the results on the size of debt markets, the last column on Table 6 shows that French civil-law countries have a ratio of debt to GNP 15 percentage points lower than common-law countries. Similarly, Scandinavian-origin countries also have much lower (28 percentage points) debt-to-GNP ratios than common-law countries. In contrast, German-origin countries have higher (11 percentage points) debt-to-GNP ratios than common-law countries. Finally, both regressions show that rule of law has, as in the case of equity financing, a large and statistically significant effect on the level of the debt-to-GNP ratio: The move from world mean (6.85) to a perfect 10 is associated with a 20 percentage point increase in the debt-to-GNP ratio.

The results using legal origin are confirmed in regressions that include creditor rights. In particular, Table 7 shows that the creditor-rights index is statistically significant at 10 percent. The point estimate implies that a move from the world mean (2.30) to a perfect score of 4 is associated with an 8.8 percentage point increase in the debt-to-GNP ratio, which is economically significant when compared with a world mean debt-to-GNP ratio of 59 percent. The size of the debt market does vary with rule of law, creditor rights, and legal origin. As a result, French and Scandinavian civil-law countries have narrower debt markets than common-law countries.

In sum, the results in this section show that the protection of investors through legal institutions is an important determinant of ownership concentration and the size and breadth of capital markets across nations.

IV. Conclusion and Policy Implications

In this paper we have surveyed the evidence on laws governing investor protection, the quality of enforcement of

these laws, and their effect on the availability of external financing on a sample of 49 countries. The analysis suggests three broad conclusions:

First, investors in different legal jurisdictions have very different bundles of rights. Therefore, investor rights are not inherent to securities but rather are determined by laws. In particular, French civil-law countries protect investors the least and common-law countries the most. Countries of German and Scandinavian legal origin take an intermediate stance toward investor rights.

Second, law enforcement differs a great deal around the world. French civil-law countries have the worst quality of law enforcement, whereas German and Scandinavian civil-law countries have the best quality of law enforcement. Law enforcement is strong in common-law countries as well. These rankings also hold for one critical input into law enforcement in the area of investor protections: accounting standards.

Third, the evidence surveyed in this paper suggests that large capital markets require that countries protect financiers against expropriation by entrepreneurs and provide them with good enforcement mechanisms to exercise such rights. In the absence of a good legal environment financiers are reluctant to surrender funds in exchange for securities, and hence the scope of capital markets is limited. Specifically, we see evidence that poor legal institutions result in high levels of ownership concentration, low availability of external equity financing, narrow equity markets, and small debt markets.

Latin America offers investors a rather unattractive legal environment. Both creditor rights as well as the quality of enforcement lag behind the rest of the French civil-law origin countries, while shareholder rights are marginally better than the rest of the French legal origin average. As a result, credit markets are exceedingly small, and stock markets are both small and very narrow.

It is clear that improving corporate governance should be at the top of the policy agenda in Latin America. The immediate reaction to the evidence surveyed in this paper is to call for wholesale legal reform. Clearly, minority shareholders would benefit from the existence of a mechanism to redress expropriation, and there is plenty of room to strengthen voting rights and to enhance disclosure requirements. Similar arguments can be made for creditor rights.

However, to the extent that improving the efficiency of the judicial system and asserting the rule of law are slow

processes, it is important to incorporate those constraints in the policy design. For example, it may be particularly valuable to adopt an oppressed minority mechanism, perhaps similar to Chile's, that minimizes the involvement of the courts even if its more mechanical nature results in less fair outcomes. Similarly, mandating enhanced disclosure requirements may not be sufficient in countries with weak legal institutions. In such instances it may be desirable, for example, to require that institutional investors only be allowed to invest in companies that meet minimum corporate-governance standards as determined by independent best-practice commissions.

Finally, in the area of creditor rights one may want to emphasize bankruptcy procedures that minimize the involvement of courts. The United Kingdom's administration procedure is an example of bankruptcy procedure that puts most of the discretion in the hands of commercial banks rather than in courts. Along the same lines, another departure from current practice would introduce market forces in the bankruptcy process by auctioning off bankrupt firms much the same way that state-owned enterprises are currently privatized (Hart et al. 1997).

References

- American Bar Association (1989 and 1993). *Multinational Commercial Insolvency*. Wisconsin: MG Publishing.
- Diamond, Douglas (1989). "Reputation Acquisition in Debt Markets." *Journal of Political Economy*, 97, pp. 828–62.
- Diamond, Douglas (1991). "Debt Maturity Structure and Liquidity Risk." *Quarterly Journal of Economics*, 106, pp. 1027–54.
- Easterbrook, Frank, and Daniel Fischel (1991). *The Economic Structure of Corporate Law*. Cambridge, MA: Harvard University Press.
- Gomes, Armando (1996). "The Dynamics of Stock Prices, Manager Ownership, and Private Benefits of Control." Manuscript, Harvard University.
- Grossman, Sanford, and Oliver Hart (1986). "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration." *Journal of Political Economy*, 94, pp. 175–202.
- Institutional Shareholder Services, Inc. (1994). *Proxy Voting Guidelines*. Several countries, ISS Global Proxy Services.
- Investor Responsibility Research Center (1994). *Proxy Voting Guide*. Global Shareholder Service, Washington, DC: I.R.R.C.
- Jensen, Michael, and William Meckling (1976). "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure." *Journal of Financial Economics*, October, 3, pp. 305–60.
- Hart, Oliver, Rafael La Porta, Florencio Lopez-de-Silanes, and John Moore (1997). "A New Bankruptcy Procedure that Uses Multiple Auctions." *European Economic Review*, 41, pp. 461–73.

- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1997). "Legal Determinants of External Finance." *Journal of Finance*, July, 52, pp. 1131–50.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1998a). "Law and Finance." *Journal of Political Economy*, December.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer (1998b). "Corporate Ownership Around the World." *Journal of Finance*, forthcoming.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny (1998c). "Agency Problems and Dividend Policies Around the World." National Bureau of Economic Research Working Paper # 6594, June.
- Modigliani, Franco, and Merton Miller (1958). "The Cost of Capital, Corporation Finance, and the Theory of Investment." *American Economic Review*, June, 48, pp. 261–97.
- Rajan, Raghuram, and Luigi Zingales (1995). "What Do We Know about Capital Structure: Some Evidence from International Data." *Journal of Finance*, December, 50, pp. 1421–60.
- Reynolds, Thomas, and Arturo Flores (1989). *Foreign Law: Current Sources of Basic Legislation in Jurisdictions of the World*. Littleton, CO: Rothman and Co.
- Shleifer, Andrei, and Robert W. Vishny (1986). "Large Shareholders and Corporate Control." *Journal of Political Economy*, June, 94, pp. 461–88.
- Vishny, Paul (1994). *Guide to International Commerce Law*. New York: McGraw-Hill.
- White, Michelle (1993). "The Costs of Corporate Bankruptcy: The U.S.-European Comparison." Manuscript, Ann Arbor: University of Michigan, Department of Economics.
- World Bank (1993). *Social Indicators of Development 1991–1992*. Baltimore: Johns Hopkins University Press.
- World Bank (1995). *World Development Report*. Washington, D.C.: Oxford University Press.
- World Bank (1996). *World Development Report*. Washington, D.C.: Oxford University Press.

Endnotes

1. By every single measure, richer countries have higher quality of law enforcement. Nonetheless, even controlling for per capita income, French civil-law countries still score lower on every single measure, and statistically significantly lower for almost all measures, than the common-law countries do. The regression results continue to show that legal families with investor-friendlier laws are also the ones with stronger enforcement of laws. (See regression results in La Porta et al. 1998a).

2. Ownership concentration per se may be efficient, because the existence of large shareholders who are monitoring management reduces the agency problem between management and shareholders (Jensen and Meckling 1976; Shleifer and Robert Vishny 1986). But large concentration comes at a cost as it creates another agency problem: the expropriation of minority shareholders by large ones. An additional cost of heavily concentrated ownership is that the core investors are not diversified.

3. La Porta et al. (1998c) find that, for a cross-section of countries around the world, various measures of dividend payout ratios are lower in countries with poor investor protection than in countries with high investor protection. This evidence suggests that companies in countries with poor laws and poor enforcement of those laws do not build reputations by paying high dividends to their shareholders.

4. The results presented below hold for that uncorrected ratio as well.

5. In alternative specifications presented in La Porta et al. (1998a) we also controlled for the Gini coefficient of each country on the theory that more egalitarian nations have lower ownership concentration; and for the logarithm of GDP per capita under the theory that richer countries may have different ownership patterns. The coefficients on these two variables are insignificant in most specifications, and their inclusion does not significantly affect the results presented here. In the case of GDP per capita, a further reason to eliminate this variable from the specifications is that its correlation with rule of law is quite high (0.87)

Comment

MICHELE LUBRANO

IT IS A GREAT HONOR TO BE HERE. THANK YOU VERY MUCH, RAFAEL, FOR A VERY INTERESTING paper. It is also a great pleasure for me to be here, since usually when I am with a group this large, they are all attorneys. It is much better to be with a more mixed group. I really am very much jealous of Rafael because he can associate with attorneys when he needs them and needs their help, and then he can go back to his office at Harvard and avoid them. I cannot avoid them. In fact, I even go home to a wife who is an attorney, and a litigator on top of that.

I am really not competent to make hard and fast judgments on the methodology or the conclusions of the paper, except to say that it correctly identifies some of the critical problems, some would say pathologies, of the legal framework for finance in this region. Rather, I think I am here to provide some observations from the point of view of a business lawyer who has advised underwriters and investors in transactions in Latin American capital markets and who more recently has been involved in advising governments and regulators on legal and regulatory reforms in the financial sector, most recently in IFC's work in Chile on proposed reforms to corporate governance as well as to takeovers and tender offers.

First, I would like to say that the difference in what investors have been buying, in terms of what collection of rights they are really purchasing when they buy debt or equities in this region, has been recognized by

the underwriters and the bankers and their lawyers, but I am not too sure—I suppose Mr. Corrigan can give us a better idea—whether they have shared that information sufficiently with the actual end-purchasers.

I do believe, though, that a major problem that has not been a major concern of investors—but, particularly with what has gone on in East Asia, now there is no denying—is corporate governance and the rights of debt-holders and shareholders. I would like to give two examples where, in my personal experience, these issues were not adequately appreciated in the past but have now become very clear.

One is, when you do a senior debt issue for a Latin American company, if you do not have a functioning bankruptcy system—and in most of the countries I think it is

not unfair to say that for large companies you do not have a functioning system and that no company will actually go into liquidation—if you do not have a functioning bankruptcy system or liquidation system, what is senior debt? My clients would come to me and say they have a senior claim. They think this means if there is a bankruptcy, they get to collect first, so they have some leverage. And I would say, well, on paper, yes, but in practice, we do not have any major company in this country that that has ever happened to. Lots of companies there have become financially distressed, but none of them has ever gone into liquidation, nor have their creditors ever wanted to put them into liquidation, because the priorities in bankruptcy are such that all the money would have gone to the state in taxes and to

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the workers for unfunded pension and benefits and unfunded severance pay. So, all I can say is that if you call it “senior” debt, it just means that it is older. That is the only reason I can find for calling it “senior.”

The other issue is with the American Depository Receipt Programs. This hemisphere has produced a lot of American Depository Receipt Programs where equity shares of Latin corporations are traded in New York and, in the case of the Global Depository Receipts, in Europe. In these cases it seems that the holders actually are trying to give up what little corporate control they have because in practice the contracts provide that the ADR shares, except under exceptional circumstances, are just going to be voted by the management of the company. So, you basically vote with your feet by selling, but at no stage is there really a practical mechanism to vote those shares. I have recently been in Chile where, when someone calculates what the control block is of a Chilean company, they count the controlling shareholders, who control management, plus the ADR program because they always can vote those shares. And that is something that is arguably—well, more than arguably—in the control of the underwriters and the people who organize the deals from the start.

I guess I am not an optimistic person by nature. I am really more of a cynic, but since I am here, and since I think the cynical approaches will be more than adequately expressed, I thought I would focus my remaining remarks on what I see as some of the areas where there are hopeful signs for the development of laws in the financial sector in this hemisphere that would foster efficient allocation of investment by more clearly defining the rights of shareholders, creditors, and debtors. And I think it is very important, even if they are bad, that they be clearly defined so these people know where they stand and what they can try to deal with contractually and also how to foster the right incentives for rational investment patterns.

As much as I am often frustrated in practice and in my advisory capacity by the current legal frameworks of many of the countries in which I have been called upon to work, I try to keep in mind that in many ways we are still in the early stages of economic and social reform in this region. The countries of the “French” civil law legal tradition—I prefer myself to say Latin tradition, so that we can include the countries in this region and the mother country for me—those countries share much more than just the legal tradition, what they inherited from the Bonapartes. They

share a history of relatively late industrialization, even in Europe. They share histories of political and economic volatility and in this century statism and concentration of private wealth.

We are for the most part still in the process in the region of building greater democracy, more social participation in government, and free markets, and this, I think, is also true even in Europe when you make comparisons with the countries of the Anglo-Saxon, German, and Scandinavian tradition. That’s why I don’t think it is inimical to the Latin legal tradition to construct a legal system that would function much better than the ones that Rafael has been criticizing. I think if you took the best data points from among the countries and put them together and built an ideal hypothetical tradition that might exist in one hypothetical country, you could do a pretty good job.

Since I’ve been informed I’m supposed to be very short, I want to get on to four areas where I think there is progress and where I think policy-makers and multilateral institutions could be very helpful and should focus some of their attention. There must be many, many more areas, but these are the ones that are clearest to me:

First, the models for reforms that have occurred already in this hemisphere have come from across legal traditions. They have sometimes been faddist—I would say that the focus on U.S. securities laws can sometimes be faddist—but they are usually pragmatic. The areas of reform in securities, in competition law, antitrust law, the banking and finance laws, even in bankruptcy, particularly Argentina, have looked at models way beyond just the French legal tradition, and efforts are also being made in secured transactions and in the pension reforms. And in some of these areas—for example, securities—parts of reform in more global areas, like secured transactions, or incorporating the concept of using the customary law as something that the judges and that the securities regulators can look to, have been incorporated. It’s partial but it’s a start.

A second force, I believe, is regional integration and harmonization. In this hemisphere it’s NAFTA and Mercosur. In NAFTA we can see an effort to accommodate both civil- and common-law traditions. Within the North American federal systems of Canada and the United States, the civil-law jurisdictions like Quebec, Louisiana, and Puerto Rico manage to function in ways that are effectively the same as the common-law jurisdictions. In the case of NAFTA we also have the example for the first time in Mex-

ico of notice and comment requirements for regulations that they never had before—and now not only in the areas required by NAFTA, but also more generally in Mexican law.

In the case of Mercosur, the World Bank's LAC Region recently produced a book focusing on harmonization of competition law in Mercosur, but also touching bankruptcy and intellectual property. And we can see that not only are the four Mercosur countries trying to harmonize among themselves, but also to import best practices from outside the region. And, of course, each of the countries has its own independent incentives to do that. The Argentine bankruptcy reform will, in essence, push the other three countries to also look at reforms in this area. And, of course, the model for Mercosur, generally, is the European Union, not that they would want to copy it directly, but that it is definitely where they look to. And the EU directives and the other efforts to harmonize practice and to accommodate transactions through the various legal traditions will also be a strong influence in Mercosur.

Also, as I was mentioning before, the process of making laws and regulations is opening up. I think the example I would give is Mexico's efforts to reform its bankruptcy system. In the 1940s Mexico wanted a new bankruptcy code. The government hired a Spanish refugee to write it. It was approved by the Minister of Finance. It was brought to Congress. It was accepted without any change. That's unthinkable now in any of the countries in the region.

Laws are debated. Interest groups are organized. Practical problems that exist get revealed, and proposals get made to change them. As I mentioned before, NAFTA has introduced notice and comment to the regulatory framework in Mexico.

And finally, a plug for my own profession. There's been in the last 10 years the development of a hemispheric bar of business lawyers, people who identify themselves—and there are a couple of them here in this group—as business lawyers and folks with experience among the countries in North America and in the region and in Europe. That field is becoming more specialized. Business lawyers are not the old-style lawyers who will largely give answers that are negative. Instead, they are folks who understand their job as to serve the clients and try to get them what they want, and if they can't get them what they want in the long run, the goal is to get the legal system to match reality and to foster beneficial transactions.

There are increasingly formal links among the firms among the countries. Latin American law firms have become associated formally and informally throughout the region, and there are also important links between Latin American firms and U.S. and Canadian firms. This brotherhood and sisterhood of Latin/U.S./Canadian and European lawyers may still be small, but it's strong and influential. And I believe it can be an effective lobby and workforce for spreading best practices and fixing a lot of the problems that Rafael has underlined here today.

Comment

E . G E R A L D C O R R I G A N

THANK YOU VERY MUCH, MADAM CHAIRMAN, AND GOOD AFTERNOON, LADIES AND GENTLEMEN. I have 10 minutes to deal with a subject that I could tackle perhaps better in 10 years, so, I will immediately get to the substance of the issue.

First of all, I think the most important sentence in Professor La Porta's paper is the very first sentence, when he says that a roadmap for the future is one that centers on institution-building, and, by implication, on structural reforms. I feel very strongly about this. Indeed, I think in many countries, including most Latin American countries, the easy work of getting macroeconomic policies in reasonable order is done. The hard work of economic reforms and the institution-building that goes with it, however, is still largely ahead.

I would submit to you, ladies and gentlemen, that those structural reforms and institution-building efforts are absolutely central to the effort to maintain the political support for sound macroeconomic policies and open economies that are so vital to the long-run development of the region. Moreover, these reforms are the key to beginning to develop the ways and means to deal more effectively with the glaring disparities in income distribution and widespread poverty that characterize so many nations in this part of the world and, indeed, in the world at large. Unless these structural reforms and institution-building efforts

are accelerated, not only will the risks of financial crisis remain very high, but the political commitment to open market-based economies and democratic political institutions will also suffer and could even be reversed.

In no other sector is the need for structural reform more apparent than it is in regard to the domestic banking and financial systems. That necessity, as evidenced by the current situation in Japan, is by no means limited to the so-called emerging-market countries nor, judging from the situation in Asia more generally, is it limited to Latin America. Given the problems that we have experienced in recent years, the first subject of attention when it comes to institution-building and structural reforms in banking systems is the cry for stronger banking supervision. Despite

its crucial role, improved banking supervision is not at all an easy task.

First of all, as many of you recognize, building state-of-the-art bank and financial market supervisory systems is like trying to climb Mt. Everest wearing tennis shoes; it is very difficult, and it is going to take a long time. More specifically, state-of-the-art supervisory systems are at best a necessary, but not a sufficient, condition for success. Also needed, among other things, are fundamental reforms in judicial systems, legal systems, and bankruptcy laws, among others. What many countries around the world are in critical need of is what I have called a "culture of credit." Building that culture of credit requires a frontal attack on all of these difficult areas that have been discussed here this

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morning—in part because they are tough in substance, but also because they are tough politically.

In my opinion, there are two factors that would accelerate this process of structural reform. The first is a much broader menu of participation on the part of the private sector. In the past I have called on the World Bank and the regional Development Banks to help spearhead this effort. Not to take anything away from the contributions that are being made on the official side, I do not think we are getting enough from the private sector in this area.

The second factor in this area is in legal reforms. I think there is something to be said for trying to duplicate the model of the Basle Committee's 1997 Core Principles for Effective Banking Supervision. Though they are but a few short pages, they are exactly what a set of core principles should look like. They strike at the heart of the process and provide political cover for leaders to help them make the case that these are the things that need to be done.

I would like to think that a similar set of core principles pertaining, for example, to legal reforms and bankruptcy reforms could be established. In fact, I have put together a group of people from the legal profession and we are going to take a stab at that this summer. Whether or not our endeavor is successful, I think this kind of a statement of core principles could serve as a roadmap, as well as political cover for those leaders in emerging-market countries who are serious about trying to make these reforms.

I would like to make a broader point in my last few minutes. One cannot help but be worried when looking around the world in the context of the past three years, starting

with the Mexican crisis in late 1994 into 1995, and up to and including the situation in Asia today with the related contagion and spillover effects to other countries.

We have gone through a relatively short period of about three years in which we have been faced with circumstances in which at least a half dozen countries were literally on the edge of running out of money, with serious implications not merely for an individual country, but for the entire world. What we should know, when in doubt, is that when a country deteriorates to this level, there is no easy way out. In these circumstances, I find it difficult to accept the suggestion of many who argue that life would be easier without the IMF. This, ladies and gentlemen, is foolish. This is not to say that there aren't certain things that the IMF could do better, but to suggest that the IMF is unnecessary and life would be much simpler without it is a tragic mistake. Moreover, the dangers of systemic contagion effects are no less severe today than they were in 1994 and 1995 with the Mexican crisis. Therefore, future efforts must not be purely reactive—in other words, waiting to deal with the problem once it has started. Rather, they must be proactive and focus even more on crisis prevention.

Time does not permit me to elaborate any further, but I have prepared a report spelling out my own agenda for the future geared to crisis prevention—which is a critical part of future agendas and rests upon institutional reform efforts (as discussed here), particularly in the area of world financial and banking institutions. You may obtain a copy of this report, titled, "Sovereign Financial Crises: Facing Realities and Building a More Secure Future," from my office.

Comment

GINO BETTAGLIO

I WOULD LIKE TO OUTLINE THE EVOLUTION OF EL SALVADOR'S FINANCIAL SYSTEM AND PROVIDE some data concerning Central America, since there is a tendency to skip from Mexico to South America while overlooking the fact that Central America is 2,000 kilometers long and has a population of 35 million and bank assets totaling nearly US\$20 billion.

The economic situation during the 1980s was characterized by low rates of growth, particularly in El Salvador, elevated inflation rates, significantly reduced exports, low international reserves, serious fiscal imbalances, and growing external imbalances, with the result that debt levels were extremely high. El Salvador's financial sector featured a nationalized banking system accompanied by the typical attendant problems: high delinquency rates (delinquent loans accounted for roughly 40 percent of bank portfolios), an inadequate regulatory framework, and, naturally, weak supervision. Interest and exchange rates were set by the Central Bank, which also directed lending operations.

Far-reaching macroeconomic reforms were introduced: First, the financial system was deregulated, interest rates and exchange controls were relaxed, directed credits were eliminated, the economy was opened up in all respects, and steps were taken to modernize the state by reducing the operating costs of El Salvador's businesses. In addition, a very valuable program—the National Competitiveness Program,

managed by El Salvador with backing from a regional project supported by the Harvard Institute—was launched to identify clusters likely to generate higher profits for investors.

Also, investment in human capital rose in the social sector, the financial sector underwent a major overhaul, as I will explain shortly, and monetary and fiscal discipline were imposed.

In the financial sector, the Central Bank's functions were redefined, enabling it to become a modern institution whose sole responsibility is to promote and maintain monetary stability. The regulatory framework was modernized, and legislation on banking, insurance, securities, and pensions was amended to reflect international standards. The

strengthening of the Supervisory Authority of the Financial Sector made it possible to restore banks to health, thereby facilitating their privatization, and stock market growth was spurred by the adoption of enabling legislation in 1994. An individually funded pension system was established recently and began operations this past April.

Turning next to the current macroeconomic situation in El Salvador, the economy grew by an average of 5.6 percent annually during the past eight years. With the peace accords in place, growth has been expanding significantly since early 1992, although problems arose in 1996 because of a rapid increase in lending during 1995-96 that was concentrated in only a few sectors, especially construction and consumption. This led to an oversupply of housing,

Gino Bettaglio is President of the Central Bank of El Salvador.

which in turn caused an economic downturn, resulting in growth of 2.5 percent for the period.

El Salvador has embarked once again on the road to sustained growth. Inflation in 1997 was at its lowest recorded level for the past 26 years, and we anticipate a rate of 3.5 percent in 1998. Exports have increased steadily in recent years, representing almost 22–23 percent of gross domestic product; international reserves, representing 6.5 months of exports, account for approximately 15 percent of GDP.

We have some regional data on lending as a percentage of GDP. In both El Salvador and the region's other countries, lending now accounts for approximately 38 percent of GDP. Private sector deposits in El Salvador represent roughly 45 percent of GDP. We were unable to obtain comparable data for the region's other countries, although we checked with the Central American Monetary Council, which provided the data we do have.

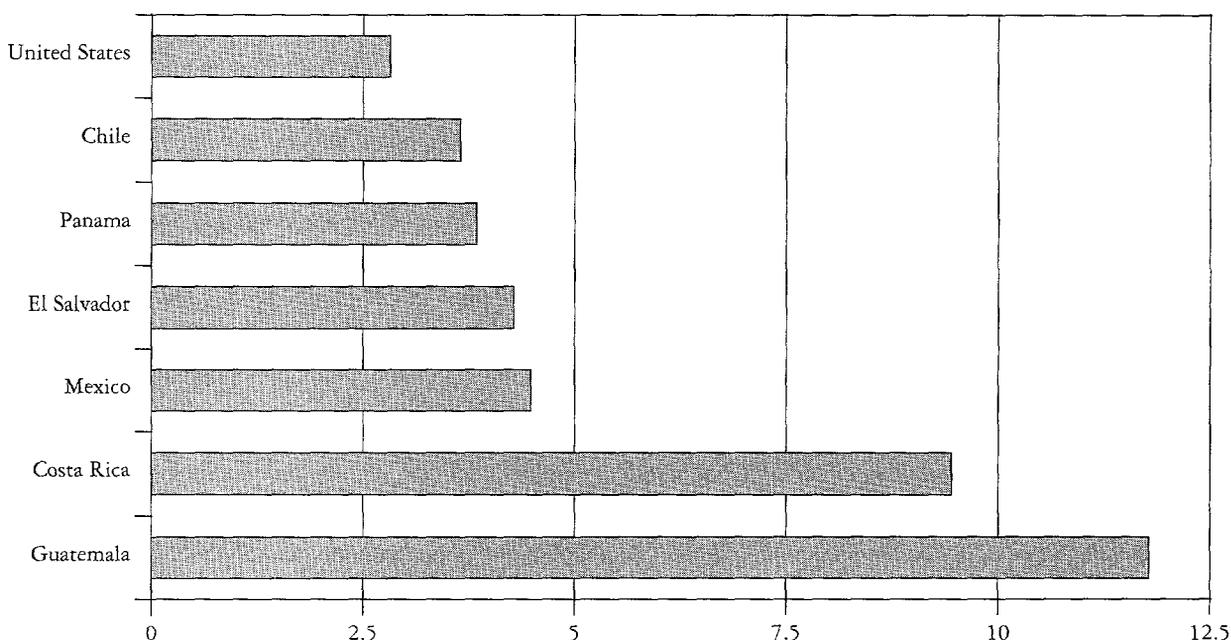
Regarding the financial sector (banks primarily), as noted earlier, total assets are approximately US\$20 billion, while the return on net worth of institutions averaged 16 percent in December 1997.

This chart caught our attention, and we would like to show it to you. It indicates nominal rates or intermediation margins calculated on the basis of loan and deposit interest rates in 1997. It is interesting to note that in some countries—the United States, Chile, Panama, El Salvador, and Mexico—financial margins have decreased.

Turning next to economic indicators in Central America—specifically, the balance-of-payments current account—perhaps the main point we wanted to make concerning El Salvador is that this figure averaged 1.2 percent of GDP over the past five years. This is significant, since the closer this reading is to zero or above, the easier it is for countries to grapple with the problems this conference was convened to address. The fiscal deficit is another important factor to consider.

I would like to outline the steps El Salvador is taking on the legal front. A program is under way to amend all of our financial legislation. These measures include the insertion in the Constitution of a clause prohibiting the Central Bank from extending credit to the government; a banking bill; amendments to the laws governing the Central Bank and

FIGURE

Nominal Rates for Loans and Deposits, 1997

Source: Monetary Council Secretariat for Central America

the Supervisory Authority of the Financial Sector; and a bill on non-bank financial intermediaries. The objectives of these reforms are to bring our financial legislation in line with international principles governing bank regulation, increase public confidence in the system, and foster the growth of a sound and competitive financial system capable of becoming an effective player in international markets.

The banking bill addresses the following key issues: opening up and efficient functioning of the financial market; consolidated supervision of financial conglomerates; establishment of bank entry and exit policies; institutionalization of deposit insurance; responsibility of directors for all institutional information banks make public, including their own financial statements, which directors are required to sign; prudential regulation; requirements governing external auditors; and increased transparency of information.

Finally, I would like to draw your attention to the hospitable climate for business in Central America and El Salvador. It is a region with relatively stable economic growth, financial legislation based on international principles, specialized supervision targeting banks, insurance companies, pension funds, and the stock market, and a financial market that is expanding on all fronts.

I will conclude by showing you this slide from a 1996 issue of Standard & Poor's *Credit Week* indicating that addi-

tional banks were expected to enter the market. Today, more than 20 foreign institutions are operating in El Salvador. Some are engaged in banking operations, others are engaged in pension fund administration, and still others participate in strategic alliances with insurance companies. It is our hope that such operations will continue, thus enabling our financial system to become more competitive.

“The banking system in El Salvador benefits from a wide base on assets, of a prudent and solid regulation and efficient lending operations...”

“With respect to the future, Standard & Poor's expects that more banks will be used as a base to serve the market of El Salvador, Guatemala, Honduras and Nicaragua...”

“The Salvadorian banks are among the most efficient banks in Latin America...”

**Standard & Poor's Credit Week
August 1996**

III. Roundtable:
The Impact of Foreign
Banks and Competition
between Banks and
Non-Banks

M I G U E L U R R U T I A M O N T O Y A

THANK YOU VERY MUCH. I TOO WOULD LIKE TO THANK THE ORGANIZERS FOR THE KIND invitation they extended to me, and to say a few words about direct foreign investment in the financial sector.

From the viewpoint of Central Banks, foreign investment in the banking sector is generally welcome, particularly if it comes from large banks with access to international markets. In this way, the bank in question can be capitalized at times when local conditions are difficult, and its parent bank will have access to a Central Bank with reserve currency. This can be very important if foreign-exchange problems arise.

Overall, the presence of such a bank can make managing financial problems at times of crisis much easier. It is also worth pointing out the attraction of having a dual form of supervision, exercised both by the host country and by the authorities of the country in which the parent bank is located.

Another advantage of direct foreign investment in banking is that it brings competition, and this is likely to increase efficiency and to reduce intermediation margins. In some of the filmstrips shown today we saw that in Spain these margins are very small (about 2 percentage points), and—not surprisingly—the bulk of foreign investment in the Latin American financial sector comes from Spanish institutions; however, I

imagine that Spanish banks would be unwilling to lower the margins they apply in Latin America to 2 percent, because in that case they would not bother to come. They want to make profits by applying somewhat higher margins. From the point of view of a central banker, this is also a good thing, because a sudden, sharp fall in margins could cause problems for some local banks.

The only danger (because, of course, not everything can be positive) is that if an economic crisis develops, depositors may withdraw their funds from the local bank and place them in the foreign bank. This, in turn, would produce a crisis that would be difficult to manage in certain areas of the financial market, and, as I understand it, this is one of the phenomena witnessed in Asia, particularly in Indonesia.

Nevertheless, I would like to point out that, in the case of Latin America, not all financial investment comes from large international banks. For example, Colombia's financial sector has received investment from Venezuela. The good news is that it proved successful; moreover, these investments were among the few that were recoverable when the financial crisis arose in Venezuela. However, selling the various branches called for careful management, and this is something that merits our attention.

Colombia's financial sector has also received investments from Ecuador, and problems in that country have made it difficult to capitalize some of the subsidiaries in Colombia. Even though financial investment among Latin American countries has enormous advantages, it still requires careful management.

First, there has to be close cooperation among supervisors at the regional level, and the local supervisors have to be very strict in enforcing the required levels of current ratios in the case of institutions whose parent banks are located in other Latin American countries, because, as I was saying, capitalization problems can arise when there are difficulties in those other countries. Applying very strict supervision prevents the spread of contagion from one area to another.

In some countries, one impact that foreign investment in the financial sector has produced is a considerable degree of consolidation, and there is clear evidence of this in Colombia. The effect of such consolidation is that a larger proportion of total deposits comes from entities that are "too big to fail." Once again, although consolidation is important from the viewpoint of efficiency, it also necessitates very much more careful supervision, precisely because of the problems that can appear when one of those much larger institutions gets into difficulties.

Recently, I have seen studies that make me wonder whether it is possible to achieve large economies of scale in a service-intensive industry like banking. It would seem that efficiency could be achieved at various degrees of size, and that efficiency can be achieved in different niche markets.

Very probably, local banks enjoy something of an advantage in knowing their customers, particularly those in small- and medium-sized enterprises in intermediate and even small towns. But these are not the customers that the international banks are looking for, and thus it is important that, while the consolidation process is under way,

there should also be a substantial group of local banks that are better acquainted with their customers and with the characteristics of small- and medium-sized enterprises.

So what problems can I see for this new banking market dominated by direct foreign investment? First, one difficulty is that conventional banks have had high transactions costs, and it was inflation that enabled these costs to be covered. Because of the economic stabilization processes implemented in most Latin American countries, customers will no longer accept this type of cost, which will also be reduced by competition. As a result, patterns of staffing have to be changed, and that is not easy. The advantage is that the international competitiveness of entrepreneurs generally depends on reductions in intermediation margins. In some surveys of exporters, the high cost of credit is identified as one of the cost disadvantages that prevent our manufacturers from being more competitive on international markets.

So how, then, can these intermediation costs be lowered? The easiest way is to reduce inflation. Reducing inflation is probably a determining factor in reducing intermediation margins, and—obviously—competition and foreign investment can help. Central Banks also have a role in reducing intermediation costs. On the one hand, attempts can be made to reduce compulsory reserves and investment, as far as existing monetary policies will allow. On the other—and this is a topic that has received little consideration—the Central Banks can also point the way toward increased efficiency in payment systems, and this can also lead to lower costs.

C L A U D I O L O S E R

I ALSO WOULD LIKE TO THANK THE WORLD BANK AND THE ORGANIZERS OF THIS CONFERENCE for the opportunity to participate in this meeting, a meeting that is both interesting and very relevant to the current situation.

This roundtable was set up to discuss the impact of foreign banks and non-banking intermediaries in the countries of the region. Of course, there has been discussion of this topic throughout the conference, not just on this panel. Clearly what we have to analyze in a situation of improved competition is that there are benefits and costs associated with this competition. Therefore, I believe that even though there are very positive elements, there will always be an element of criticism regarding liberalization. Obviously, the Latin American banking system was previously characterized by a number of serious inefficiencies and high capital costs, with macroeconomic instability and a very weak system of supervision. With the opening of these markets to competition in recent years, one might think, in terms of benefits, that there has been increasing stability because of the greater size of the banks entering the system, with the resulting better financing, and because this would involve less risk from the country's point of view.

The presence of foreign banks could allow for increased efficiency due to better management of operations. This, while debatable, is explained by the fact that foreign banks bring with them a regulatory system that is

likely to be stronger, and this obviously makes it possible to have more solid institutions.

Non-banking financial institutions also provide strong support for the process of intermediation given that they can allow for deepening of capital markets due to greater specialization. Of course, there are also risks to be mentioned. It can be said that when the financial system and capital movements are liberalized too rapidly, the situation may arise where laws do not evolve at the pace required to absorb the larger process of investment. It could then be thought that foreign banks, in order to win markets, are able to make loans without the necessary precautions. However, the same argument can be made regarding domestic banks, because in a situation of greater competi-

tion these banks may borrow more in order to lend. In addition, it is argued that specialized institutional investors may act like sheep, producing greater volatility in the markets.

However, the benefits basically have been made quite clear in the papers presented thus far, the primary benefit being that greater competition allows financial systems to operate better. Obviously, in Latin America we do see that there has been increased participation by foreign banks, mostly from Spain, Canada, and the United States, but as Dr. Urrutia mentions, also from banks within the region. What we are seeing is that in various countries foreign banks control the activities of the sector to a significant extent. For example, this is happening in Argentina and

Mexico, and even in Chile, Peru, Colombia, and Venezuela, and has provided somewhat greater stability. Another important aspect is that this has happened at a time when direct foreign investment in the region has increased. Thus, in the 1980s direct investment in the region was perhaps \$10 billion per year, while in 1997 direct investment in the region was \$50 billion, with perhaps 5 percent of this directed to the financial sector before and between 10 percent and 15 percent going to that sector now.

In addition, there is also significant growth in the operations of non-banking organizations. In the 1980s, pension funds had practically no resources, and they now control \$130 billion in funds in the region, a sizable amount. Other financial intermediaries have also been developed, but the fact of their rapid growth does not mean that Latin America has fully embarked upon this process of integration. For example, in the OECD countries, pension funds have assets equal to 50 percent of the gross domestic product. In Latin America and the Caribbean, pension funds represent only 6 percent of the gross domestic product, a relatively small amount. In addition, these funds are highly concentrated in Chile, Brazil, and Colombia and are growing rapidly but starting from a small base in Argentina and Peru. In terms of recent financial developments in the region, what we see is that along with the entrance of foreign banks, there has also been a consolidation of domestic

banking—i.e., there are currently fewer banking institutions. The new banks are stronger, but this may have reduced competition, although probably to a marginal extent. For their part, foreign banks are not being set up as branches that would be controlled by the regulations of the country of origin, but rather as subsidiaries regulated by domestic legislation. This reduces the quality of supervision, and the benefits of the stronger supervision that may exist abroad are thus lost, particularly if the banks originate in important financial centers.

In any case, we can see a significant process of integration and liberalization that has combined with increased efficiency in the context of a banking system characterized by the elimination of direct controls, lower reserve requirements, elimination of regulated interest rates, and, perhaps most importantly, by changes in the regulations, which have been amply discussed by a number of presenters.

To conclude: Another aspect that is extremely important to remember is that this process is occurring within a context of significant improvement in the region's macroeconomic conditions, as mentioned by Dr. Urrutia. This allows us to predict that conditions are right for a deepening of capital markets and greater efficiency in the region's financial systems, even under difficult conditions such as those that characterize the current international scene.

Thank you very much.

S T I J N C L A E S S E N S

I WANT TO START OUT BY SAYING THAT OPENING UP TO FOREIGN COMPETITION RELATES to two other processes—domestic deregulation, which we are discussing here, and another important liberalization, also related to foreign direct investment, capital account liberalization. I think the three processes are interconnected with each other.

I will be very brief on the favorable impact of foreign direct investment, as several speakers have already commented on that. We have now seen foreign direct investment in Latin America for a number of years. Unfortunately, it has followed rather than preceded a crisis. This pattern has repeated itself in East Asia, where we didn't see much foreign direct investment earlier. Now, with the IMF programs, we have seen some opening up in those countries. So, unfortunately, the benefits, which I think are significant, have come too late in some cases.

What are those benefits? The work that we have done really confirms what has already been mentioned here. The first benefit is the positive effect on competition, where you can actually show that if you have an increase in the number of foreign banks, the overhead and the margins go down for the domestic banking system.

The second benefit is the stability in your financial system that may come in part from the access to foreign financial savings in times of crisis. This was the case here in this region—in Argentina, for example,

during the Tequila Crisis, when some foreign banks had more access to foreign savings.

I think, however, the most important benefit is really the dynamic gains—improvements in innovation, efficiency, the quality of financial services—that countries will receive as a result of foreign entry. I think all three of these benefits are well-known.

I want to focus my remarks more on what are the issues that have come up as a result of the increased foreign direct investment in this region. I think an important issue will remain whether these foreign banks are niche players or will extend their services throughout the economy to consumers, small and medium enterprises, and other groups.

It appears to me that, at least on the consumer side, we are getting some of these benefits extended in Latin America. Foreign banks that have recently entered the area have shown more of a consumer profile. Of course, even before them, we already had quite a lot of foreign banks catering to high-net-worth people in this region. Nevertheless, the benefits of foreign bank entry have not yet extended to many small- or medium-term enterprises, which we know are always going to be an important source of growth.

I think this phenomenon links with capital account liberalization, the other reform process that I mentioned. As foreign banks enter the arena here, there is increased intermediation going on offshore in the form of large domestic firms going abroad to get financial services in New York or

other financial centers. As a result, local domestic banks may be squeezed between foreign financial firms catering to large domestic firms or to consumers on the one hand, and large firms going abroad on the other. At the same time the segment in between—small- and medium-size enterprises, or SMEs—may not be getting the services from the foreign banks.

We may, then, be risking some kind of a model in which banks start to operate the way multinational firms work, where you have subsidiaries of foreign financial institutions in local markets in some sense feeding the business to the international capital centers, let us say to New York, from various local markets. We have already seen this happening in the American deposit receipts (ADR) market and some other global markets. The business may be initiated locally, but the value-added often happens in New York or somewhere else (perhaps because the legal framework may be stronger outside the country).

On the consumer side in this region I also observe that consumers already often have access to foreign financial services. As the Internet and other technology increases, you are likely to observe increased pressures on domestic banks there as well.

The issue in my mind, therefore, is how can we get foreign banks to better provide services to the middle segment of the market. In that context, I think it is important to foreign banks that the environment as a whole is stable and open, and that banks are shown to be welcome for a long period of time. Of course, macro stability is an important ingredient for that. I think another part of the commitment to open trading regimes can be through the World Trade Organization. In the WTO, a financial services agreement was concluded last year, which on the whole didn't open up all that much. There was some formal opening of the countries already committed to it, but it wasn't much more than current levels. It may have been a missed opportunity for a variety of reasons.

I think that agreement would have been a good opportunity to signal to the rest of the world that markets are open not just now, but for a long time, as we always will have uncertainty. The opening up under the agreement could have induced foreign financial firms to really establish themselves here to service the local market, including the smaller- and medium-term enterprises.

As I said, that commitment didn't materialize for a variety of reasons. We do see this starting to happen on a

regional basis, but there are some drawbacks, including regional contagion. Going forward, a key issue in my mind thus remains: How can one get the foreign banks to commit to the local markets for a longer period of time?

The second issue that comes up with increased integration is supervision. We already discussed that "home rule"—that is, supervision by the home authority—is not enough if you have subsidiaries. You have to get the host country involved as well. Nevertheless, as the Barings crisis and other cases have shown, there is still a lot of harmonization, integration of rules, systems, and information-sharing that needs to be done in order to prevent such an event from happening again.

In addition, supervisors need to consider a lot more the stability of the home market of the countries from which foreign banks come. In the case of this region, Spain is, of course, becoming an important country to watch, in terms of how stability there could affect the local market here. We have seen examples from industrial countries where, as Japan's banks weakened, they started to withdraw from the United States, which did affect borrowers. In the United States there is a lot of substitution, and a borrower can relatively easily find another bank, so the withdrawal of Japanese banks didn't have any economic impact. Nevertheless, in more concentrated markets this is clearly an issue to watch.

On the issue of capital volatility, there is a possible link between increasing foreign bank entry and more volatile capital flows. Foreign entry allows consumers and firms more easy access to foreign savings, including shifting from domestic deposits to foreign banks (which did occur in East Asia). I think this is a risk that one would want to watch. I have not seen it in large proportions, but nevertheless one would want to be cognizant of it.

On the supervisory and regulatory side—and this links a little bit to the second part of this talk, which is on the non-bank versus bank competition—we have seen that when countries have opened up, home regulation starts to affect the entity when it enters into the host country. In the United States particularly, separation between various types of financial activities is stricter; in most Latin American countries you don't have the same system. This came up in NAFTA quite a bit. So one needs to harmonize not just on basic rules, but also within the financial sector globally, in order to efficiently conduct financial services across borders.

Another supervision issue that is coming more to the forefront—not just because of this, but it is highlighted by it—is that, as you increase competition, you need to deal much more with bank failure resolution. Countries need to set up mechanisms so that they are prepared, as they restructure old banks, also to let some of them exit out of the process. It doesn't add up if you just allow entry—from foreign firms—without putting an exit mechanism place at the same time.

My last comment is more on competition between banks and non-banks. Maybe that is an issue that was more relevant in the past; currently, it becomes more competition between financial systems. The universalization of financial services, where banks and non-banks really cannot be separated as easily anymore, implies that competition between domestic and foreign financial service systems is important, rather than competition within the system itself.

G A R Y K L E I M A N

I AM GOING TO TRY TO TIE A LOT OF THESE THEMES TOGETHER, HOPEFULLY REINFORCING AND elaborating, and particularly adding a dimension of a practitioner from the private sector in this field. In the whole field of foreign bank entry or equal or internationalization of financial services, there is the principle of what is called “equal treatment and non-discrimination,” and I must wonder whether I might have a claim to file given my 10 minutes at the end of the day to present a private sector view, whereas the rest of the entire period has been given over to official and academic ones.

Nonetheless, first, I will just preview a little bit of my talk, and certainly I am going to underscore what is the subtitle, which is the commercial versus the prudential challenge that we face in addressing all these banking and non-banking issues. First, I will provide a little bit of global perspective, and then I will move into the situation in the region and talk about the emergence of the so-called new phenomenon—as if you didn’t have enough worries already—the so-called non-bank, rogue institutions that were quite prominent during the Asian crisis.

First, I have to address the global scene. For those of you who have not been aware because we have been cloistered, when we talk about regional issues and challenges, the distinction between regional and global I think is almost as antiquated as it is between banking and non-banking financial institutions when we

talk about the financial sector. And for those of you who are not aware, today, if we don’t remember this gathering for anything else, we could recall that today witnessed the onset of truly worldwide contagion.

But you see a lot of foreign non-banks getting into areas like leasing and consumer finance, mortgages, even venture capital, which is an overlooked area for which there is a very active market globally, using both local and international partners to address this particular segment. But I think the greatest growth area, and what our clients—and certainly those I know anecdotally—are most keen on has been the private pension fund revolution in the past five years and its spin-offs. For those of you who may not know, the largest player in private pension funds in this region is CitiBank or CitiGroup.

When we talk about globalization and universalization, imagine trying to manage that behemoth CitiGroup when it is involved in all our countries in banking, securities, insurance, etc. I suppose we’ll have to call in the IMF if they get into trouble. But on private pension funds, not only is that direct business appealing for many reasons, but so are all the spin-offs related to it—that is, the stimulation of securities markets, both debt and equity, which can lead to underwriting, trading, brokerage, and other opportunities; the entrance of rating agencies, which is often required; insurance companies are required to provide for disability, provide for insolvency insurance, and the insurers themselves want to enter this business and separately offer annuity products; mutual funds (by the same token,

the AFPs are natural wholesale customers for these products); etc. So you see all these business lines as a result of the proliferation of this scheme throughout the region.

Yet there is a challenge that is increasingly important and must be addressed in that you see a lot of cross-border proliferation, a lot of cross-border expansion. The pension company PROVIDA, for example, in Chile is active throughout the region. At the same time, when we talk about the openness of the market, again we confront this same disparity in supervisory treatment.

Although these schemes are roughly variations of the original Chilean model, they have all different sorts of operational and portfolio dimensions that have to be addressed, whether it is basic licensing structure, the cost and discounting approach, the portfolio guidelines, local versus foreign, debt versus equity, and private versus public, which foreign financial institutions are seeing increasingly as a challenge because they want to reach a certain economy of scale as well because this private pension fund business is at its essence based on that particular emphasis.

Finally, I want to talk about the emergence of the so-called non-bank financial companies that are untraditional actors in this field but that were very prominent in the Asian crisis and very prominent here and throughout other emerging markets. I characterize these under a variety of terms because they really have not been studied very well, and they really are not overseen very well. Although in theory there is some regulation, very often in practice there is no enforcement, and basic surveillance isn't even in place.

These can be deposit-taking companies, and they fall under a variety of names—investment trusts, merchant banks, plain financial groups—and they very often have

a tendency to engage in very virulent speculation in which they are not qualified. In Asia many of these institutions were involved in currency derivatives and property speculation—often in conjunction with mainstream financial institutions that used these entities to mask their involvement. These very often were not overseen and were not subjected to any basic capital adequacy or other norms. And there is a tendency for fraudulent actors to enter the field. I think you saw this even in this country with the FINSAPRO affair, from what I understand. So you have a lot of experience here in this region as well.

In Central and Eastern Europe it often manifested itself through pyramid schemes, which led not only to individual problems but the possibility of systemic collapses. In Albania and Bulgaria you saw the whole financial systems downed by these rogue financial companies.

Just to give you an idea of some of the quantitative growth, there are very few institutions policing them. Central Banks are pretty busy, and finance ministries as well, dealing with these other urgencies—although a few Central Banks have at least started to monitor and quantify this phenomenon. In India, for example, with liberalization—and India is not a very liberal environment—these finance companies grew in a very few years to capture 15 percent of household deposits, and the collapse of one led to a run on many others and the introduction of some capital adequacy norms. You should at least begin basic surveillance. In sum, it does represent a different type of systemic risk when we look beyond the non-traditional, non-bank actors—that is, the securities insurance, mutual and pension funds, venture capital, etc.

IV. Experiences in Banking Crises Resolution

Clearing the Decks: Experiences in Banking Crisis Resolution

A R I S T Ó B U L O D E J U A N

THE AUTHOR WAS ASKED TO WRITE A “HOW TO” PAPER FOR THIS WORLD BANK CONFERENCE. That is why I spell out a set of principles, rules of thumb, and “do’s and don’ts,” from different perspectives, on how to deal with the different aspects of banking crises. The result may be somewhat dense, as it may sound too assertive. But I do not mean to be dogmatic.

The numerous areas that had to be covered in this paper and their complexity have led me to give priority to concepts rather than to specific country cases. Although each concept I describe is backed up by one or more country cases, I have limited the number of examples I used because too many references would have made the paper confusing. Indeed, I made just a few references to the experiences of specific countries.

As used in this paper, the term banking crises assumes that they always involve deep insolvency, be they single bank failures, widespread crises, or systemic ones. These are the reasons why the terms crisis and insolvency are often used as equivalents. So are the terms bank restructuring (to include bank closures), crises resolution, and deck clearing.

The doctrine about these concepts is growing deeper and richer, thanks to the international experience gained since the early 1980s. My contribution is not that of a professor or an economist. Rather, it is that

of a practitioner, who sees things from a micro perspective, has worked in bank pathology in a variety of countries over a number of years, and has seen some resolutions succeed and many fail. This has led me to express concepts and refer to some successful cases that were contrary to conventional wisdom—sometimes even if only for the sake of debate.

I. Let Us Welcome Financial Crises

Banking Crises as a Trigger for Awareness and Reform
Countries “need a good banking crisis” to ignite the engine and undertake serious banking reforms. This may sound like black humor, but, in fact, it is only when a country has a serious crisis that its government reacts thoroughly and

addresses such key areas as bank restructuring and crisis resolution. So, let us welcome financial crises, particularly if they are systemic.

A few examples illustrate this point: When did Spain and Chile begin to have a strong banking system and a strong regulatory framework? After their banking crises of the '80s. When did the United States enact the Federal Deposit Insurance Corporation Improvement Act, as an attempt to prevent insolvency through gradual remedial action? When did the United States establish the Resolution Trust Corporation? After its huge banking crises of the '80s. When did the Scandinavian countries and Argentina really start to strengthen their regulatory systems? After their banking crises of the mid '90s. Now, it is

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easy to predict that countries like Russia and those in East Asia, including Japan and China, will seriously enhance their regulatory and restructuring systems as a result of their current crises. Actually, it is when crises occur that governments, Multilateral Financial Organizations (or MFO's) academics, and experts realize—or should realize—the following:

The soundness of a banking system is of paramount importance—not only for the payment system, but also for macroeconomic stability and growth. The latter implication is a recent discovery for many. If the banking system suffers, a fiscal and monetary sacrifice may have to be made, as a trade-off.

Systemic banking crises generally are triggered by macro upheavals, but they usually include many banks that, because of poor managerial practices, were previously insolvent. Insolvency may be blamed on macro mismanagement, but, to the extent the insolvency is timely identified, they should be given a rigorous case-by-case treatment, in order to avoid bankers' bailout.

Private sector solutions have their own merits. But in actual fact, realistic and effective resolutions of banking crises require primarily government intervention and funding, in order to force banks to close or to restructure them for sale to or merger with sound investors. We live in a second-best world. Avoidance of macroeconomic instability requires a trade-off.

Prudential regulation and supervision are necessary to prevent crises from happening, but they do not solve past crises and may prove to be of little use if no restructuring legislation and institutions are in place, even on a stand-by basis.

Excess borrowing often leads to illiquidity, through the relaxation of sound lending and recovery policies. This, in turn, leads to insolvency and then to illiquidity. While insolvency and illiquidity grow deeper and deeper, they may remain hidden for a few years due to poor supervision, cosmetic accounting, and expensive fund-raising. At the end of the process, illiquidity ultimately comes to surface, and you discover that the bank had been deeply insolvent long before. This illiquidity, in turn, makes insolvency deeper.

If a crisis is really deep in terms of solvency, a wrong diagnosis the size of the “black hole” will lead to inadequate treatment and to a waste of money and efforts. And if crises are treated half-way, they are likely to repeat themselves, perhaps just a few years later.

The later a crisis is thoroughly addressed, the more costly its solution will be. Losses will grow, sometimes even in a spiral. And, ultimately, the government's vaults and the economy of the country in general will end up taking the bulk of the hit.

The Recent Evolution of Prudential Regulation and Supervision

A historic overview of how financial systems were approached by many governments, MFO's, academics, and experts since the early 1980s may prove very illustrative.

In the early '80s, the general assumption was that only the real economy counts. If it went well, the financial systems would also go well. There would be no need for action. If it went through a depression, so would the financial systems. Any action on them would prove useless. Therefore, nothing relevant could or should be done about financial systems. “Country Economic Reports” issued by MFO's—thick documents, supported by heaps of data—made practically no reference to financial sectors. At most, just a few lines stated that the financial sector of a particular country was in very serious trouble. Period. That was all.

In spite of the systemic crises of 1982 in the less-developed countries, by the mid-'80s just a couple of concepts were added to the previous general wisdom: Financial sectors should be completely deregulated, and bank closures and mergers of institutions should be the solution to insolvency. No awareness was raised about some frequent implications of those policies: Quick deregulation in situations of economic depression and without a proper prudential regulatory framework is often counterproductive; bank closure may prove contagious and may cause wider crises; and mergers of insolvent institutions compound problems. The isolated cases of bank restructuring that were addressed were looked at with curiosity, as if they were just laboratory experiments or visionaries' inventions.

In the mid '80s, the Basle Committee made a tremendous breakthrough by emphasizing the role of capital as a pillar of bank soundness and by having countries agree to the establishment of a minimum ratio of capital versus risk assets. In the 1990s, other areas of banking regulation followed, such as interest risk, market risk, cross-border supervision, supervision of financial conglomerates, etc. But international enhancement of and convergence on evaluation of the quality of assets, as a crucial concept to make

the capital requirements effective and meaningful, is still pending full consensus today.

Simultaneously, also since the mid-'80s, the World Bank began to fight a conceptual battle based on the following principle: "Rather than emphasizing development finance, emphasize finance development." The implications of that principle had a wide scope. This institution strongly emphasized the concepts of prudential regulation, prudential supervision, and bank restructuring, usually by way of conditions to policy loans, as well as through seminars, conferences, and conventions. In the '90s, the concepts of enterprise restructuring (particularly for the economies in transition) and bank governance were also emphasized. The IMF, which had previously focused more on central banking, monetary policy, and foreign-exchange matters, eventually followed suit—later, but actively. So did the Inter-American Development Bank and other MFO's, as well as international research centers.

Thus, the concept of prudential regulation became central to the doctrine of sound banking and to banking reform and was considerably strengthened in developing and emerging countries. However, actual banking supervision lagged seriously behind. It was conceptually accepted as a necessary tool "to get out of the dark" and to put preventive and remedial action in place. But, unfortunately, lack of political will, a fear of recognizing the true situation of financial systems, and lack of skills to verify the condition of banks through inspections has made implementation of supervision slow and faulty in many countries. Regulation has improved worldwide, but, very often, it is not being applied. And the problem is that good prudential regulation proves ineffective if there is no strong supervision, particularly in the areas of examination and enforcement action.

Bank Restructuring: The Poor Relative

The concept and techniques of bank restructuring, which have been advocated, alongside with regulation and supervision, have met special reluctance. It is taking a long time for them to be accepted and implemented in a realistic and effective manner. The idea that capital losses should be refilled with real money, at a cost for the government if need be, was a very difficult pill to swallow. And it still is in the late '90s. Opponents of bank restructuring also advocated a magnified and sometimes unfocused concept of moral hazard as a theoretical approach. Also lobbies oppose

restructuring, because, if properly implemented, owners and managers would lose their investment and their jobs.

Many countries have undergone a serious financial crisis. Then, and only then, have they put in place—even if reluctantly—restructuring operations. All countries boast that they have restructured their banks, but this does not mean much. The key questions are: Where you successful? And which restructuring operations worked satisfactorily and which ones did not? Unfortunately, if we study international experience, we observe that many restructuring operations did not work: Restructured banks continue to be capital-insolvent and results-insolvent, even if capital improved to a certain but limited extent. Many operations lead to a stage of "muddling through," in the hope that the economy will grow and the financial system will grow out of the crises. Sometimes this may come true, but only when insolvency is shallow and economic growth is very quick and sustainable—not when insolvency is deep and the banks' capital has been lost several times, as is often the case. If so, the losses grow more rapidly than the economy. In the meantime, the danger of a liquidity crisis and a credit crunch will hang over the system.

The fact is that bank restructuring is the "poor relative" of banking reform. Many writings from academia and MFO's about the soundness of financial systems or banking reform practically ignore the concept and mechanisms of bank restructuring or water it down with a whole barrier of reservations. Also, much banking legislation does not cover bank restructuring at all, under the assumption that insolvency of individual banks does not require special treatment and that systemic crises should be treated by special emergency laws. In other instances, legislation addresses insolvency by way of just private sector mechanisms, namely recapitalization by the previous owners and through creditors' committees. But these mechanisms only operate satisfactorily if and when capital erosion is unveiled very promptly, thanks to strong supervision—not if insolvency is unveiled when it is already deep. If such an approach is applied to countries with weak regulation and poor supervision, the solution to insolvency and crises is most likely to be improvised, in a haphazard way, too late and sometimes through amateurish institutional and financial arrangements.

II. We All Dream of Systems with Little Government and No Decks to Clear

The market is supposed to operate efficiently by itself through tough competition; moderate spreads; good gov-

ernance; good internal controls; transparency to the public; assistance from external auditors and rating agencies to that effect; rigorous interbank markets and self-regulation, as a mechanism to prompt exit; recapitalization of banks by previous or new shareholders; and, in case of insolvency, closure of banks through bankruptcy or similar procedures.

But with some rare exceptions, life is not quite like that—definitely not when supervision is weak, insolvency is widespread, and political will to achieve a sound banking system is not strong and sustained over time. Let us not forget that policies that are good in times of prosperity may prove harmful in times of crisis or depression. Some reflections:

- Good governance is always necessary, but if just good governance were applied to deep insolvency or illiquidity, it would be of no use.
- Market discipline and rating agencies are also necessary, but what happens if they are based on non-transparent information provided by problem banks in self-defense? Market discipline should work just as a supplement to prudential regulation and supervision, not as a substitute.
- Transparency is a clear objective, but what would happen if governments or banks all of a sudden publicized the deep insolvency of many of them? If you think, for instance, of the United States in the late '80s, you realize that you would probably have to wait until the storm has cleared. In the meantime, transparency should be reinforced, but in a gradual manner.
- Enhancing competition through licensing numerous banks is welcome as a concept, but is it wise to do so in times of crises? Shouldn't you establish a licensing moratorium? Also, what if most of the new licensees are businessmen whose ultimate objective may be taking deposits for self-lending? Will real competition be fostered?
- Self-regulation is an ideal approach in theory, but what if there is no transparency? What if this concept degenerates in a collective exercise of mutual protection against government intervention?
- Shareholders are responsible for filling in the capital gap. It goes without saying. But will they do so if capital has been depleted several times? What to do then?
- Closing insolvent banks is a healthy and consistent approach, but is it the best recipe if financial, social,

or political implications are likely to trigger a general crisis of confidence?

The conclusion is that, in times of deep insolvency, the contribution of the private sector to preventing and solving the core problems may be useful but, in fact, proves rather limited. Governments have to step in and—indeed—clear the decks. It is only then that those creditors' committees, private institutions specialized in mergers and acquisitions or asset disposal, etc., may prove a good supplement to achieving effective restructuring operations.

III. Obstacles to Deck Clearing

Fiscal Discipline

When a bank is insolvent, the previous owner or new partners are supposed to recapitalize it. Otherwise, it should be closed, unless the government considers it is viable or its closure is expected to trigger a widespread crisis. There are cases when governments adopt the general policy of never closing any bank. They may be utterly wrong, but they adopt the policy anyway. So let us suppose that the insolvent bank is not closed, for whatever reasons. Then guidelines for alternative action should be in place. For instance, in such situations, the capital deficiency—the “hole”—has to be refilled by someone else, and it has to be refilled with capital. The objective is not just to make the net worth positive, but also to turn the results and the cash flows from the red into the black. This is what financial restructuring is all about.

Rather than theorizing, let us mimic a typical dialogue between a government official (G) and an adviser (A), which has been almost “transcribed” from real life by the author.

A: In case of restructuring, the name of the game is real capital. It is not a matter of loans, under any modality: last resort, refinancing, subordinated debt, etc. It is not a matter of debt equity swaps, financial engineering, etc., either.

G: I understand that, but, mind you, the previous owners will always refuse to put good money after bad money.

A: I suppose so. Close the bank then. Or, if you cannot afford to close it, for serious reasons, recapitalize it with public funds. Then make sure you write off the previous capital first, in order to eliminate the pre-

- vious managers and owners and thus avoid moral hazard. And, lastly, sell it to a sound institution.
- G: Great, but where do we get the capital to protect depositors (in case of closure) or to thoroughly recapitalize the bank (in case of restructuring)? There are no budget funds available, and departure from fiscal discipline is a no-no. International organizations would kill us. So let's wait until illiquidity appears, and then we can use the Central Bank's last-resort facilities. Repeated rollover of short-term facilities may save us. They might even be repaid, sooner or later. Who knows? But never mind. Some experts or politicians don't worry about lending of last resort. They do not want to recognize that those loans may become a quasi-fiscal or even fiscal loss and mistake them for recapitalization funds.
- A: Sorry. Let me tell you that when illiquidity appears and stays on for longer than a few weeks, insolvency has probably been there for quite some time, is probably very deep, and grows deeper and deeper. Lending of last resort is no solution. Neither is imaginative accounting or financial engineering. Please, do not use gimmicks. We are talking about real capital—be it injected as equity or via purchase of bad assets with loss assumption by a third party, usually by the government; be it by using cash or government securities. Of course, we are talking about capital in adequate proportions in order to produce real profits and real positive flows.
- G: This is impossible. I said that printing money or increasing the fiscal deficit has to be ruled out. Having the Central Bank lending or incurring losses for these purposes is a deadly sin. There is only one way around the problem: You consider that insolvency is shallow by way of an upside-down approach. In other words, you may decide that the sum of estimated losses cannot be higher than the sum of funds you can make available for restructuring. Let's suppose they are equal. Then you make some form of soft loans and put some nominal recapitalization funds into the bank, perhaps borrowed from MFO's. And, of course, you announce publicly—even abroad—that the problem is solved. This move will restore confidence, obtain foreign financial support, and buy time—perhaps until the new elections bring in a new government.
- A: Then you are lost. Don't forget that while insolvent banks hide their situation and remain artificially liquid, hidden insolvency grows in a spiral, exponentially, with very detrimental effects: a credit squeeze, misallocation of resources, growth of the final bill to be paid by the government, and moral hazard.
- G: So, you think we are really lost? Or will economic growth solve things? This is what we believe. And, if so, the obvious recipe is to buy time. Our successors will know how to solve the problems.
- A: Kidding yourself and doing nothing is the worst policy you can adopt. If insolvency is deep, the losses run like a rabbit. Simultaneously, economic growth may move like a tortoise. Improving the borrowers' repayment capacity takes a long time. In the meantime, I said already what happens. Don't you realize that the loss is already in the system? Actually, you are supplying a lot of capital under different forms: last-resort lending, refinancing of loans that were allocated to state-owned companies, subsidies to the banks or to bank's borrowers. Why don't you form a package with all these forms of support and put it to a better and organized use to start with? Right now, you are having the cost, but not the benefit.
- G: We disagree entirely. What you want is to bankrupt our financial system.
- A: Wait a minute and listen, please. I am not bankrupting your system. Your system is already bankrupt, whether I say it or not and whether you recognize it or not. What is at stake, among other things, is macroeconomic stability and growth, as well as the proper functioning of the payment system. And the later you act, the more costly it will be. All this is very important. You can't make an omelet without breaking eggs.
- Maintaining macroeconomic stability and protecting depositors (who, by the way, have been neglected by your poor supervision) has a price. There is no magic solution.
- I invite you to do three things: First, *fight conventional wisdom* in the fiscal and monetary areas. Second, *use your imagination* to mitigate, share, and compensate for—avoidance is probably impossible—the fiscal and monetary impact. And third, *design institutional channels* that may ensure an effective restructuring operation.

Poor Institutional Arrangements and Poor Coordination among Players

When addressing a restructuring operation for the first time, the right institutions may not be in place, and there may be strong hesitations about whether to act and about who should do what. These limitations may be due to conceptual question marks or to gaps in the regulatory framework. Generally, there are different institutions concerned: the Treasury, the Central Bank, and the Superintendency of Banks. In addition, one or several specialized institutions are often established to deal with failure resolution. Lack of effective and expeditious coordination between all the above institutions is very frequent and constitutes an obstacle to address a restructuring operation and, needless to say, to good decision-making. Sometimes there are turf fights. Frequently, to the contrary, everyone wants to pass the buck until the Central Bank is left holding the “baby,” who happens not to have any father. The topic of institutional arrangements will be revisited later in this paper.

Lack of Legal Security

Closing banks and recapitalizing insolvent banks with government funds implies having bank owners lose their investments and voting rights, and having bank managers lose their positions. Sometimes they also may be taken to court. Their interests and those of delinquent borrowers and some of the staff are damaged. The defense of some of those interests often leads to legal action against the authorities, be it civil or criminal, on grounds of confiscation, inadequate asset valuation, discriminatory treatment, corruption, etc. The authorities need legal security by way of clear laws that provide solid ground for them to undertake the different measures that are involved in crisis resolution, particularly in systemic crisis resolution. Lacking such legal security, the authorities may hesitate to take any action at all or may feel encouraged to avoid this obstacle by turning problems around. Among other things, the legal framework should allow for severance of owners and managers, for acquisition and sale of the bank shares and assets, for their pricing and disposal, etc. Judicial procedures also need to be reliable and expeditious.

It goes without saying that the previous bankers should have adequate rights to protect themselves—preferably “post facto,” because, otherwise, closing or failure resolution could be delayed, while more and more losses and disruptions occur. In support of this statement, it can be said

that the error of closing or restructuring banks due to a pessimistic diagnosis is most rare. Actually, in 20 years of hands-on experience in this area, the author has known of none. On the contrary, the error of leaving insolvent banks in operation occurs very frequently.

Bankruptcy and Foreclosure Procedures

Laws as well as judicial procedures in the areas covered in this paper are old-fashioned in many countries and not well-adapted to the specific nature of bankruptcy of financial institutions. Creditors may not be given the right priority or may not be well-protected. Liquidation procedures may prove bureaucratic, extremely lengthy, and make assets lose a considerable part of their value. Also, foreclosure on collateral, a procedure that is supposed to protect the lender against delinquent borrowers, is also cumbersome, protracted, leads to poor recovery, and is sometimes subject to corruption. Bankruptcy and foreclosure procedures become serious obstacles to effective bank restructuring. New laws have to be put in place to radically reform procedures. Judicial reforms also are strongly needed in many countries. However, this paper will not dwell on these matters, because they require very long and complex coverage that would be out of proportion here.

IV. Some Qualifications on Moral Hazard

In many aspects of life moral hazard is a very important concept. It forms part of human nature. It basically means that, if given the wrong incentives, people do wrong things. When talking about financial systems, regulators should do their best to avoid moral hazard altogether or at least keep it to a minimum. Moral hazard may derive from many aspects of a variety of government policies. But sometimes warnings about the risk of moral hazard in the financial system are unfocused or unrealistic, seen as a concept that indiscriminately haunts a number of aspects of bank regulation and restructuring. Qualifying this topic may clarify when moral hazard is a real danger and when it is not. This is very important, because when decisions on a banking crisis have to be made in a government’s board room at 3 a.m., stemming “the bleeding” becomes the first and foremost objective. Under those circumstances, avoiding moral hazard tends to be a second priority.

To understand moral hazard, we first must distinguish among several kinds of moral hazard—bankers’, depositors’, creditors’, borrowers’, and supervisors’. I will com-

ment briefly on what leads these players to moral hazard and what does not.

Bankers' Moral Hazard

Bad bankers can be led to make risky placements or engage in risky off-balance sheet operations, to undertake fraudulent practices, or to remain artificially liquid by paying high interest rates on their liabilities. This is particularly true if they are in trouble and want to gamble for survival or resurrection, which will happen if they are aware that the regulatory framework is poor and they have nothing to fear. But this will not happen if they feel a credible threat of government intervention, through which they may lose their investment, their financial instrument, their social pre-eminence, and may even be taken to court. Whether depositors lose their deposits or not is of secondary importance to bad bankers, unless it causes legal problems for them.

Poor regulation and supervision make it possible for bank insolvency, insider lending, and fraud to go unnoticed. And the damage will not be undone by severe remedial action, including fines, dividend suspension, mandatory capital write-offs, mandatory capital increases, closure of banks, etc., if these measures are untimely. To this effect, poor regulation and supervision do foster moral hazard.

But if, on the contrary, the regulatory framework is strong, it will be possible to identify and unveil problems promptly, to impose gradual provisioning and effective remedial action, make transparency possible, close banks, write off capital, and force the owners and managers to leave the bank. If this is the case, moral hazard will certainly play no role.

Deposit insurance. Full deposit protection may certainly lead to moral hazard, especially if it is explicit. Ironically, this may also be the case when there is no deposit insurance at all, because such a situation often leads to full *implicit* protection. Be it explicit or implicit, full protection makes it difficult for regulators to close banks. It is too costly. In fact, in many countries with full insurance there is a tradition that banks are never closed. As stated before, bad bankers do not care too much about depositors; they care about staying in place and being legally safe. But, being aware that their bank is very unlikely to be closed, they will be tempted to embark on risky practices.

On the contrary, limited and explicit deposit insurance is no panacea, but it does protect modest depositors, who would have never been in a position to tell a good bank

from a bad bank. It also limits the risk and the size of deposit runs. In the author's opinion, this kind of protection does not foster bankers' moral hazard because it makes bank closure easy. The threat of government intervention as described above becomes more credible to bad bankers.

Bank restructuring. Does it foster moral hazard? If restructuring consists of just recapitalization, while the old owners and managers are left in place, it certainly fosters bankers' moral hazard. If recapitalization is delayed more or less indefinitely for lack of funds or faulty institutional arrangements, moral hazard also will exist. But if restructuring is timely and capital write-off and removal of boards and managers go hand-in-hand with it, discipline will be reinforced and bankers will be very careful about the way they run the bank. There will be no moral hazard. The threat of government intervention, here again, becomes more credible. The paper tiger becomes a real tiger.

Last-resort lending. If it is short term and moderate in size—just enough to cover occasional liquidity gaps, which are normal in any banking system—there is *no* moral hazard in last-resort lending. However, if the size of the support grows indefinitely and the maturity of the loans is indefinitely rolled over, there will be bankers' moral hazard. The bad banker knows that the Central Bank becomes more and more committed to bail him out, and his bargaining position becomes stronger. "Come on. It's too late," he may think. "Close the bank now, if you dare." The bad bankers or their subordinates may even be tempted to use those funds for their personal interests. This may happen in any kind of crisis.

Depositors' Moral Hazard

If regulation and supervision are not capable of unveiling problems promptly, if deposit protection covers 100 percent of deposits, and if governments never close banks, depositors will be led to place their money in those banks that pay the highest interest, with no further investigation. These are normally the worst banks. They pay high rates, because the deposits they take make it possible for them to survive and keep lending, by remaining "physically" liquid, while hiding their technical illiquidity and their insolvency. This is moral hazard.

But if regulation and supervision unveil insolvency promptly, if deposit insurance is limited to modest depositors, and if insolvency leads to either bank closure or bank restructuring, decided on a case-by-case basis without a

pre-established policy, there will be no moral hazard. There is one exception: Protected depositors may be led to make placements in risky banks up to the protected limit. But this is probably a lesser evil.

What about depositor protection in case of bank restructuring, through the continuity of the bank or a purchase and assumption operation? There might be some moral hazard, but, here again, if restructuring is decided on a case-by-case consideration and closure remains a possibility every time insolvency is identified, moral hazard will be mitigated, because uninsured depositors are still at risk. At any rate, if restructuring operations are considered to be necessary—compared with their alternatives—this kind of moral hazard may also be the lesser of two evils.

Are depositors, with poor and unreliable information, ever in a position to tell a good bank from a bad bank? If we take into consideration that rating agencies, investment bankers, MFO's, and even supervisors, who have access to tons of information, also make serious diagnosis mistakes, how can we expect depositors to make the right decision?

Creditors' Moral Hazard

What is said about uninsured depositors is also valid for creditors in case of closure, when the creditors are protected through modalities of bank restructuring that allow for the continuity of banks. But if creditors are required to write off all or a part of their subordinated debt or their credits as part of the restructuring package, or swap them for longer-term debt or capital, creditors' moral hazard will be mitigated.

In systemic crises, particularly in large economies or in regions, lending of last resort also may foster moral hazard for creditors if it is given in large amounts and very long term. Creditors will probably end up recovering their loans with their high-risk premium and assume that next time the same mechanism will apply. They will keep making risky loans to risky borrowers in the hope that the risk premium will cover the risk. But they should not forget that, quite often, operations with high-risk premiums may make the lender lose the premium, the standard interest, and often the capital. In a few words, there is moral hazard. Eliminating the moral hazard here seems very difficult. But some suggestions to limit it could be: Make it clear that things may be different next time; try to make creditors take a certain hit; and close banks when you conclude that they are not viable even if they receive last-resort assis-

tance. Additionally, if there is evidence of fraud, the fraudulent bankers should be sued.

Borrowers' Moral Hazard

A good regulatory framework will lead banks to properly classify and duly provision bad debts. This will force them, in turn, to stop lending to bad borrowers and reinforce recovery, which will constitute a moral hazard deterrent for borrowers. Limited deposit insurance, which facilitates bank closure, as well as judicial recovery or liquidation of bad assets, may also be a deterrent. Restructuring will also deter borrowers' moral hazard, if assets recovery and liquidation is left with the restructured bank under new and strong management or if left with a specialized, efficient, and strong recovery institution, be it private or governmental.

But if the provisioning and income-recognition requirements are soft, there will be borrowers' moral hazard. If asset recovery is left with previous bankers, with the Central Bank (which never recovers well), or even with a specialized institution with no proper staffing or incentives to recover, then there will also be moral hazard for the borrowers. They will ask for more and more loans, even beyond their commercial or investment needs, and at any lending rates. They are probably aware that they will never have to pay their facilities back. Borrowers' moral hazard also occurs when political interference puts pressure on banks to be lax on recovery of certain loans, which happens very frequently—but not only—with state-owned banks or state-owned enterprises, or where cronyism prevails.

A most dangerous way to borrowers' moral hazard occurs when governments impose mandatory write-offs or moratoriums on banks vis-à-vis their borrowers' debts across-the-board, or when governments bail out bankers with banks. A number of borrowers may feel morally freed from their commitments to the bank. "If the government solves the bankers' problems rather than ours," they may say, "why should I repay?"

Supervisors' Moral Hazard

There is no reason for supervisors' moral hazard, in a context where regulation is strong, analysts and inspectors are skilled and sufficient in number, enforcement action is effective, and exit policies are realistic, based on proper institutional arrangements, and politically supported. But if there is no legal safety, no political will, or no proper policies, funding, or institutions to "clean up the decks,"

no matter how good the rest of the regulatory and supervisory framework may be, supervisors will have negative incentives to identify problem banks or insolvency situations. If they do, “the baby” will remain in their lap with no solution ahead, and they will run very serious risks, including legal ones.

There is also supervisors’ moral hazard when they are associated with the problems. Actually, when their previous action was lax or wrong, they will be reluctant to unveil problems that make their mistakes apparent.

V. All Right, Let Us Clear the Decks

No Exact Science but Common Objectives

By now we assume that self-regulation and the mere use of market procedures do not provide effective solutions to insolvency, be it individual, widespread, or systemic. We also assume that the obstacles described in this paper can and should be removed, and that it is generally accepted that ineffective resolution or no resolution at all lead to growing hidden and compound insolvency and to compound costs. We also assume that the authorities will not be able to honor the implicit contract they have with taxpayers and insured depositors to control the risk exposure of financial institutions, foster “good governance,” and prevent the undesirable externalities associated with systemic instability or crises. Therefore, decks should be cleared.

“Clearing the decks,” bank restructuring, or banking crisis resolution are no exact science. These names can be applied to closure, liquidation, and rehabilitation. This kind of “business” is not made for perfectionists. A lot of “nasty” things have to be done in order to complete successful operations. But they are less “nasty” than their alternatives.

There are two main objectives that are pursued by “deck clearing”: achieving soundness and avoiding damage.

The main positive goal is to build, at a minimum cost for taxpayers, a sound, competitive, and well-managed banking system, where only viable banks and good bankers stay in business.

- The main damage to be avoided is:
- Disruptions of the payment system.
- General loss of confidence as a result of losses for depositors and creditors.
- Misallocation of resources in favor of the worst borrowers or worst segments of the economy and crowding out of the most promising ones.

- Increasing fiscal and monetary damage.
- Macroeconomic instability.

Different Treatment for Different Scope and Depth

As mentioned before, crises can be divided into those affecting isolated individual banks, those that are widespread in a system, and those that affect the whole system, called systemic crises. In all three categories, deep insolvency and underlying illiquidity is considered to be a common feature. For the purpose of this paper, the concept of deep insolvency is construed as the loss of capital several times, as well as the existence of negative cash flows, whose mere financing at market conditions make insolvency deeper and deeper. If the owners or the market are not prepared to refill the stock of losses and reconstruct the flows, the underlying illiquidity comes to surface. Something urgent has to be done about the institutions concerned. The different kinds of crises will probably need different kinds of treatment, even if they have a number of features in common and if their borders are often blurry. Case-by-case treatment, across the board measures, or a combination of both will be the basic choices.

Single bank failures. Closure is a generally accepted solution for single bank failures unless the size of the bank involves the risk of contagion. If such a risk exists, rather than being closed the bank is likely to be restructured on a case-by-case basis, through special institutional, financial, and operational mechanisms. This is generally the case for large institutions that are considered to be “too big to fail” or “too big to be closed.” But, even if the risk of contagion is not apparent to the public, governments may be aware that there is wider underlying insolvency in the banking system and may avoid bank closure. Also, some governments may have a predetermined policy not to close any bank, in any case. Even if this policy is wrong, banks that failed in isolation will not be closed, but rehabilitated by means of special mechanisms. Those mechanisms should, therefore, be built in the legal framework in order to enable quick and effective action, rather than leaving things to amateurish improvisation and poor coordination on the part of the government players.

Widespread insolvency. Here, a considerable proportion of a system—not all of it—is insolvent. Perhaps 20–50 percent in terms of the number of existing banks, or 10–30 percent in terms of total assets of the system. Widespread insolvency is not necessarily apparent, because losses may remain undisclosed for a long period of time. Illiquidity may not be apparent either, because the actual negative

flows are indefinitely funded with expensive short-term resources. One day, supervisors disclose insolvency in a bank or in a few banks—frequently, only when illiquidity appears and as a result of it. If the supervisor is aware that insolvency is widespread, while not apparent, closing those banks will not be the most frequent choice, except perhaps for small banks that are clearly non-viable. The risk for crises to become systemic crises if banks are closed is as serious as that triggered by the closure of big banks.

Although it is true that the later you treat a crisis, the more costly it will be, it is not always possible to act early. Why? Because doing so would imply the treatment of all banks simultaneously, without necessarily having the necessary resources and expertise. Therefore, a clean-up operation over a period of perhaps 3–5 years is more likely. Is it more costly than a one-shot operation for all the sick banks? On paper, probably so. But the one-shot approach, which is generally advocated by the author for each particular bank, may lead to many errors and higher cost if simultaneously applied system-wide, due to lack of experience and proper institutional and financial arrangements.

Systemic crises. This is a fashionable concept nowadays, because of the crises in Venezuela, Mexico, and Argentina in the mid-'90s and the present crises in Russia, Japan, and in East Asian countries. Systemic crises affect most of the institutions in a system. They prevent the system from performing its basic functions because of the breakdown of payment systems, withdrawals of deposits, and credit crunches. As noted before, the line between a single bank's insolvency and widespread insolvency is sometimes blurry, as is the line between widespread insolvency and systemic crisis. While deep insolvency is present in all three categories of crises, illiquidity affecting most of the banks is the special feature of systemic crises. Therefore, special mechanisms should be put in place to satisfy the liquidity needs and rein in the "wild horse." Additionally, other measures should be taken across-the-board to improve the general flotation line of the sinking boat—i.e., the financial system at large. Of course, macro-economic recovery is also necessary to solve systemic crises.

VI. Across-the-Board Restructuring for Widespread Insolvency or Systemic Crises

A Suggested Mix and Sequencing

It is important to point out that, when you apply support measures to all banks, good and bad, you are being unfair

and may be giving perverse incentives to bad bankers for wrongdoing. What's more, such support will become very costly. This is why, even in systemic crises, a case-by-case approach for diagnosis of individual banks—even if imperfect—should be a prerequisite for action, and it is also why many of the support measures themselves should be case-by-case oriented.

In this regard, I suggest the following approaches and sequencing:

- Try to build enough political consensus and announce some of the key policies you are going to apply, in order to restore a certain degree of confidence. To this effect, information on an initial diagnosis is necessary. But be aware that, in dramatic situations, excess information may trigger panic. And available loss figures initially will have to be multiplied by two, three, or four to reach the real ones. Also, avoid announcing policies and committing yourself prematurely to take measures that you may be unable to implement.
- Prepare and "sell" special emergency legislation to address the situation.
- First close or restructure the worst banks, which were already insolvent before the macro-upheaval occurred. Do not let bad bankers protect themselves and be bailed out on the claim that it was all the government's fault. Be aware that in most bank failures, poor management is a major cause.
- Apply last-resort lending to those banks that, in an initial approach, are not candidates for closure.
- Apply a combination of the across-the-board measures that this paper will suggest later.
- For banks that were not brought back to health by the general measures, but are viable nonetheless, follow the checklist of case-by-case arrangements that can solve their individual problem. This will probably be done over a period of time, as losses of each particular bank are gradually unveiled.

Because of the blurred lines between individual and widespread insolvency, and between widespread insolvency and systemic crises, both widespread insolvency and systemic crises will have to be treated not only with a mix of across-the-board measures, but also with many of the instruments and procedures described later in this paper for case-by-case resolution. Neither of the two packages should be considered without a cross reference to the other.

Lending of Last Resort

It is internationally accepted that one of the main functions of Central Banks is lending of last resort to temporarily illiquid banks. Textbooks say that this lending should be:

- At higher than market rate, as a penalty for poor management and as a deterrent to moral hazard.
- Short-term—ideally, overnight money. Rollovers may be allowed, but up to a limit. Not more than 30 days? Up to 60 or 90 days in exceptional cases? Some flexibility is recommended, but not too much.
- Properly secured, through rediscount or collateralization of assets, which should be as liquid as possible.
- Replaced as soon as possible by recapitalization funds, if the illiquid bank proves to be insolvent and a decision is made to recapitalize it, rather than to close it.

In systemic crises, this kind of support will have to be huge and be supplied directly by the Central Bank or by other sources. It may not necessarily meet the conditions that are mentioned above.

There are countries that recently have gone as far as to prohibit last-resort lending by the Central Bank. Other countries do not have such a legal constraint, but are just unwilling or unable to lend the huge amounts and at the terms that are required in a systemic crisis, without entirely disrupting short-term monetary objectives. In both cases, the need for foreign assistance, both public and private, may be unavoidable. Foreign lines of credit or special debt issues to be financed by MFO's or foreign banks have been used as a solution by several countries in the past few years. Special domestic debt also can be used. These arrangements can prove effective to buy time, but one should not boast that the government is not providing such last-resort financing or is not suffering any monetary or fiscal damage. In other words, who is committed to repay the last-resort funds? Who is responsible for such contingent liabilities?

As indicated above, lending of last resort is applied to individual insolvent banks, to widespread insolvency, and to systemic crises—ideally, only to those banks that are not going to be closed. The problem is that in all these types of insolvency, supervisors do not always know from the beginning whether particular banks should be closed. Initial diagnoses are most often very poor, and you cannot wait until real losses are accurately identified. Loss discovery is a gradual and difficult process. Therefore, chances are

that governments may be supplying last-resort money to banks that ultimately will be closed, and those funds—or a part of them—may become a loss.

Another risk is that last-resort support may “have to be” rolled over for longer periods and for increasing amounts. Then, governments may not dare to close the banks involved, lest they have to turn the loans in their Central Bank's books into losses. Then, in order to remain legal, last-resort lending may be converted into another longer-term modality of lending, perhaps through refinancing of bad loans to state-owned borrowers or through subordinated debt, or through just having the Central Bank's support being replaced by loans from state-owned development banks, without due transparency. In those cases, long-term—actually termless—lending may be mistaken for real recapitalization, and the problem may be wrongly considered as closed. It will spring up again.

Let us consider cases when last-resort money is lent beyond ordinary bounds to illiquid banks, and then a decision is made to restructure those banks. In such cases, the government should do its best to recover such money. Unfortunately, this is not always the case, and those loans are partially or entirely lost. Three formulas applied by Central Banks in different countries to recover those loans are mentioned below:

- Swap them for capital and sell that capital later, once the bank has been restructured (as occurred in Chile).
- Swap them for subordinated debt that will be reimbursed once the bank is restructured. If convertible, the debt can be swapped for capital and then sold. In the meantime, as in the previous case, that capital can be used by the government as a means of exercising influence on or control of the illiquid bank. (This was the case in Mexico.)
- Make reimbursement of those loans a requirement for the future buyers to meet as a part of the bidding that will conclude the restructuring process (Spain's approach).

“Ersatz” formulas for last-resort lending have been used as an initial step to provide liquidity to the banks. One such formula is “directed” or “induced” loans made by sounder banks to illiquid ones, presumably with some kind of support or guarantee by the Central Bank. The rationale for this is that these sounder banks could have been the beneficiaries of “flight to quality” from the worst to the best banks, and it is fair to have them return the flows. Another formula has been “directed” or “induced” pur-

chase of illiquid assets by sounder banks, which has provided some liquidity to “dry” banks. Sometimes, though, it is at a cost: The price of such assets has been established by the buyer, who was in a very strong bargaining position. These formulas do provide liquidity, but perhaps at an additional loss for the weak bank.

Other Across-the-Board Measures

Across-the-board measures—other than last-resort funding—can be chosen from among those listed below. They are just briefly described here, but could be the subject of a separate paper.

Lower reserve requirements and/or remunerate them.

Lifting the government’s tax—which is involved in freezing deposits to meet those requirements—is of help as a supplement of liquidity support and as a way to diminish current losses.

Withhold dividend payments for all banks. If most of them are loss-makers, allowing dividend payments will further decapitalize them. And what you need is to see them recapitalized.

Block delinquent borrowers’ deposits, if there are any left, at the time the crisis occurs.

Recapitalize state-owned enterprises to allow them to repay their debt to banks, fund bad loans made by banks to state-owned enterprises—not always voluntarily—and write off any previous refinancing against the loans that were made to those enterprises.

Arrange for roll-over of short-term foreign credit facilities.

Provide foreign currency for banks to repay their foreign-currency borrowing, entirely or up to a certain limit, when lack of foreign currency was among the macro causes of the crises.

Carve out bad assets across the board as a proportion of each bank’s capital. You can do it all at once or gradually, as the depth of systemic insolvency is identified. Some repurchase agreements could be established between the government and the banks, as an incentive for good management and recovery and for reduction of the cost to the tax payer. But the conditions should not be very strict in terms of proportions, price, and timing, in order to avoid perpetuation of problems and to allow for real rehabilitation. Strike a balance.

Reduce forced credit to economic segments that are otherwise unable to borrow. This is another partial way to

stop the bleeding of liquidity and capital. Authorizing market rates for this kind of lending—rather than mandatory preferential rates—could also help banks diminish their current losses.

What about phasing out requirements on capital, provisions, and income recognition? This is a deadly sin that I do not recommend at all. Particularly in situations where the bank’s or the system’s predicament—i.e., its losses—is growing intrinsically worse, such a policy is probably suicidal. But if governments, faced with a general upheaval, yield to the temptation to have recourse to phasing out those requirements, then, as a last line of resistance, a fundamental rule of thumb should be followed: There should be no free lunch, as explained below.

Governments should not give any assistance or allow for any forbearance to any bank, even across the board, without strictly requiring from them a full turnaround plan, in order to help control the damage the bank suffers. Such a turnaround plan should also be comprehensive and should include surgery measures in all key areas: management, accounting, personnel, administrative expenditure, lending policies, recovery, pricing, etc. The owners and the supervisors should watch over their design, their implementation, and their effectiveness.

VII. Case-by-Case Action

Choice No. 1: No Action

This can happen just by omission on the part of the government or by announcing explicitly that the government will take no action and will let the private sector sort things out. Sooner or later the government will have to reverse gear and take some action.

Taking no action is the worst choice, but there are many reasons why this course may be taken.

- Uncertainty as to the size of the losses and willingness to have a full and thorough diagnosis first. This is a rational approach, but it may lead to an “analysis-paralysis” syndrome. An initial diagnosis is never thorough.
- A fear to close banks as long as they remain “physically” liquid because of the social and political implications of such measures.
- An unwillingness to see the loss taken by depositors and creditors because of the risk of systemic contagion, and because of the underlying complicity of the

government in the lack of transparency to depositors and creditors.

- An unwillingness or a lack of budget funds to take the loss derived from closure or rehabilitation. MFO's surveillance function supports full protection of governments' budgets. This policy is rational and sound in itself, but it may prove unrealistic and even counterproductive if no exceptions are allowed for extraordinary crises.
- An unwillingness to stop receiving taxes (and dividends in case of state-owned-banks) from insolvent banks that kept declaring profits.
- A poor regulatory framework, which may fail to typify the grounds and tools for enforcement of remedial action, including closure and forced restructuring.
- Poor supervisory mechanisms or staff, which may be incapable of identifying insolvency early, accurately, or at all. This will certainly happen when bank examination does not work.
- Lack of political will, sometimes derived from the pressure of individual bankers or their lobbies. "Rather than addressing insolvency by having capital injected," they will say, "let's just forbear on provisions and adjustments, while waiting for the economy to recover. Time will solve things."

The implications of no action are very harmful. Here are some of them:

- Lack of transparency by way of widespread cosmetics, which is fostered by the government through poor supervision.
- Poor allocation of resources to the worst borrowers and segments in the economy—often "the old borrowers"—and crowding out of the best ones.
- Risky and speculative placements, as a common rule.
- Frequent corruption and fraud.
- An increase in the stock of losses due merely to financing of the current stock of losses.
- Serious fiscal distortions, because the Treasury and/or the Central Bank will end up incurring losses. Don't forget that loans to insolvent banks on the Central Bank's balance sheet often result in actual losses.
- Lastly, serious monetary distortions will occur: Interest rates will get out of control when bankers gamble for survival or resurrection, and systemic crisis will bring about inflation, which is a burden for the society.

Choice No. 2: Bank Closure and Deposit Insurance

When to Close

Closing banks is the right thing to do. Shareholders, depositors, and creditors played a market game and lost. The survival of the fittest will operate, and the system will be strong in the long run. The problem is that the long run is made of a sequence of short terms. And the short-term implications of banks closures may be very detrimental for the system and make the long-run horizon never materialize or delay it significantly. This may happen when the size of the bank is likely to produce contagion and a loss of confidence in the rest of the system. This also may happen in systems where banks are licensed to have industrial subsidiaries, or when lending is heavily concentrated in industrial borrowers. Deciding whether contagion is likely to occur should be based on the information available, but also on judgment, because the available information is not necessarily reliable. Turning off the tap may also trigger serious labor and social problems. Another problem, as mentioned before, is that some governments—for good or bad reasons—may simply decide that they will not close any bank, whatever its size.

In spite of the above considerations, one should recommend that non-viable banks—no matter how blurry this concept may be in practice—and banks that do not render a necessary service to a given community or economic segment should be closed. This is particularly true if they are small and the risk of contagion is not significant. Medium-sized banks should also be closed as a matter of principle, but a decision may be made not to close them if, after a case-by-case consideration, a risk of contagion is found. Big banks, however, are special animals, and killing them may have dangerous implications. Generally speaking, they will not be closed. That is why they are called "too big to fail." Rather, they will be subject to a restructuring operation along the lines described in this paper for case-by-case treatment.

It is worth commenting on the concept of "least cost" as the criterion to decide whether an insolvent bank should be closed or restructured. The conventional rule of thumb says—for good reason—that the choice between the two options should favor the least costly one. But what is the real cost of each option? It is certainly not the difference between the market value of assets and liabilities in the books at the time of closure, minus uninsured deposits and

credits. Why? In the case of liquidation, assets lose their market value in high proportions. In the case of closure, the cost of externalities—both quantitative and qualitative—may be very significant. Think of interbank deposits, domino effects, social implications. Also, governments may feel obliged to pay off uninsured liabilities. And in case of closure of universal banks, what will happen to their non-financial subsidiaries? Here again, the use of good judgment and a degree of discretion are necessary to reach a good decision.

Deposit Insurance

Explicit deposit insurance, limited to deposits up to a certain sum, is a common feature in many banking systems. This is a way to protect small depositors, limit the risk of contagion, encourage closure of insolvent banks, make the threat of closure more credible to bad bankers and, thus, deter moral hazard. A growing number of countries have introduced this concept in their banking systems. The European Union has gone so far as to make it a mandatory mechanism for its member countries and also mandatory for all banking institutions in each country. No moral hazard seems to have ensued. Actually, mandatory membership is becoming a common feature of deposit insurance.

Deposit insurance mechanisms are financed by private financial institutions in most systems, which is a type of self-insurance. But when this funding proves insufficient, governments may have to join in and cofinance deposit protection through or outside this institutional channel.¹ Financing is generally provided as a periodic contribution, annual or more frequent, by each institution as a part of its overhead. In some countries it is only provided as needed, not “ex-ante.” The periodic contributions vary for each country and for each particular situation and are frequently established as a proportion of deposits. The range may go from 0.05 percent to 0.3 percent. A range of 0.1 percent to 0.2 percent is more frequent. It can be lowered or raised over time, as needed.

Academics and government officials have widely debated whether the size of premiums should be risk-based—and therefore be different for each bank—as an incentive for good management. But very few countries have yet introduced this concept, for a variety of reasons. Two of them can be mentioned here: First, lack of strong supervision and the difficulties of having a permanent, simultaneous, and realistic diagnosis of the risk involved in

the different banks may lead to unfair treatment, with a lot of potential implications, including legal ones. Second, the establishment of different risk-based premiums implies publicity about the existence of risky banks. When no proper resolution mechanisms are in place, such publicity may trigger a loss of confidence and make the situation worse. However, as a concept, risk-based premiums are generally accepted and are likely to be gradually established internationally, as the supervisory systems become stronger.

The deposit insurance mechanism may adopt several institutional modalities: First, just a fund, normally with the Central Bank, which receives financing from member banks and pays off the insured deposits. Second, a public legal person, governed by public or by private law. No matter who finances the insurance scheme, the responsibility for establishing the premiums and managing the scheme lies with the government, most frequently with the Central Bank or the supervisory institution if it is separate from the Central Bank. After all, deposit insurance is inherent to the good functioning of the financial system. Management is ensured through a board whose membership may vary. Government representatives are always present and should have the deciding power. Private bankers and other professionals may also be represented on the board.

Deposits are protected up to a limit, which may be established as a multiple of the minimum wage (generally 5–15 times), as a proportion of the total sum of deposits to be protected in the system, based on stratified statistics for different levels of individual deposits, or as is the case of the United States, just as a lump sum (up to US\$100,000 per account). The European Union standard is ECU20,000—or about US\$23,000. Creditors, holders of subordinate debt, and investors and managers involved in the bank’s deterioration are generally excluded from protection. Some countries also exclude term deposits and those deposits with a remuneration that is 2 percent or more above the average remuneration of deposits in the system.

A very important question, however, is what to do when the funds accumulated in the insurance institution are insufficient to pay off insured deposits of banks to be closed. The worst thing to do would be delaying closure. We all know by now the implications of no action. Better alternative options, of uneven merits, are:

- Increasing the periodic contributions of the member banks.
- Assessing a special levy from member banks, as an advance to the institution or as a loss.
- Having the institution issue debt to be covered by the public or, more likely, by all its members or by a number of them.
- Lending by the Central Bank to the deposit insurance mechanism, no matter how heretical it may sound. It would not be the first time; this procedure has operated successfully in the past, particularly when the insurance scheme was instituted after the accident—the crisis—has blown up.
- Last but not least, particularly if the government also decided to protect uninsured depositors, making exceptional budget appropriations might have to be considered. It would not be the first time this was done, either.

In some countries, as will be mentioned when dealing with case-by-case restructuring, this institution, other than its deposit-protection function, accumulates one or more of the following responsibilities:

- a) bank restructuring, including capital injection, clean-up, and disposal of bad assets;
- b) arranging for the sale or merger of insolvent banks;
- c) ensuring “bridge” management and ownership until a sound new owner is found and an acquisition is arranged.

This approach has proved effective in a variety of countries, because funding and decision-making mechanisms are common. In such cases, government funding becomes practically unavoidable. In the author’s view, the deposit insurance institution, even if combined with a restructuring function, should never have a last-resort lending function, so that illiquidity and solvency-funding have very a clear distinction, both conceptually and institutionally.

Another remark: The deposit insurance institution should not have a supervisory function in order to avoid confusion and poor coordination with other supervisory bodies. In fact, the supervisory function should always remain with the supervision authority—before, during, and after restructuring operations, including those of state-owned banks. Also, state-owned banks should not form part of deposit insurance mechanisms, because the banks’ depositors are explicitly or implicitly protected by their owner—i.e., the state.

As mentioned in Section IV, full deposit protection is by no means recommended. Neither is lack of any deposit protection, which often leads to full implicit protection. Both foster moral hazard all-around, as they make bank closure or restructuring more unlikely. This does not mean that, when full protection exists, it should be suppressed overnight, especially when the system is shaky. That could prove to be a shock to confidence. Rather, it should be phased out over a few years and be replaced gradually by limited and explicit deposit protection.

Choice No. 3: Bank Restructuring

The R.O.M. Principle

Bank restructuring is an alternative when failing banks are not closed and their assets are not liquidated after bankruptcy or similar condition. It can be addressed by a variety of procedures and institutions. But successful restructuring requires the application of what we can call the R.O.M. principle: R for Recapitalization; O for ownership; and M for Management.

Recapitalization of the bank, or compensation for the difference between assets and liabilities, occurs when new owners are expected to buy the bank or its balance sheet.

Ownership means the exit of previous owners and entry of sound new ones. Systems and even individual banks could be bailed out, but bankers should not be.

Changing *Management* should ensure good governance; the previous board and managers leave the bank, and the new owners name replacements.

The recapitalization should take care of the past problems, while the new ownership and management are expected to avoid future ones: Ensure good governance, make good profits—and end up paying good taxes. It is not always easy to treat those three areas of bank restructuring thoroughly and simultaneously, but if there is political will and realism, a satisfactory level of efficiency could be reached.

Two Typical Models: A Summary

The above objectives can be reached through different arrangements. The most relevant ones are as follows.

GOOD BANK/BAD BANK

The legal shell—i.e., the shares of the insolvent bank—keeps its assets and liabilities, as well as its staff. The equity capital is written off, and an adequate level of capital is injected by a special restructuring mechanism. The capital write-off is supposed to deprive previous investors from ownership and control. As a result, the bank's management will also be removed. But when insolvency is deep, huge losses still remain in the bank after the write-off, both in terms of stock and flows. Thus, in order to complete the recapitalization, the restructuring mechanism will have to carve out the bad assets and even assume other remaining losses to the extent necessary to make the capital true and make the bank profitable as well. The bad assets and the package of potential losses constitute the so-called BAD BANK. The bank that has been cleaned up becomes the GOOD BANK.

The BAD BANK will have to be subject to strong recovery action, which can be taken by a government restructuring institution, by a private assets management corporation, by the GOOD BANK itself (if commissioned to perform the recovery task), or by specialized private agents operating in the market

A modality of BAD BANK takes place, just organization-wise, when bad assets are not carved out of the bank. They remain within the bank, and form a special "Work-Out Department," with separate management and separate financial statements, for monitoring and analytical purposes. But under this arrangement the loss problem is not solved, as it remains within the bank and will have to be balanced with new capital.

The government has to put the GOOD BANK up for sale or merger as early as possible, ideally through auctions or tenders. More flexible procedures can also be used to effect the sale, as long as they ensure sufficient publicity, competition, and neutrality. If this process takes long, some institutional "bridge" arrangements will have to be made to ensure temporary ownership and to monitor the bank management, while a new owner takes over. "Bridge" arrangements will be covered later in Sections VIII and IX of this paper. Because of the blurred lines between individual and widespread insolvency, and between widespread insolvency and systemic crises, both widespread insolvency and systemic crises will have to be treated not only with a mix of across-the-board measures, but also with many of the instruments and procedures described later in this paper for case-by-case resolution.

Purchase and Assumption

This formula presupposes that the shares of the failing bank are under the government's control. We may be talking about:

- a) a state-owned bank,
- b) a previously insolvent bank whose ownership has been taken over by the government through a special restructuring institution, or
- c) a bank whose ownership rights have been legally frozen and whose balance sheet has been passed to a restructuring agency for receivership and liquidation.

Whatever the form of control of the bank, sale of ownership of the shares to new institutions or to the public does not occur, although the bank's assets can be purchased and the matching liabilities assumed by a private institution. The assets purchase may cover only the good assets with matching liabilities. It may also cover all the assets, good or bad. If the latter is the case, the loss contained in the bad assets should be compensated by the restructuring mechanism. Otherwise, the buyer could not meet the liabilities assumed without incurring a loss.

The purchase and assumption arrangement is easier to implement in developed countries. In less-developed countries, agreeing expeditiously on the market value of the assets or relying on independent market appraisers may prove risky or just impossible.

Recapitalization: Objectives and Initial Attempts

The objective of recapitalization is twofold: First, the new capital in the books should become real (i.e., not eroded by hidden losses) and reach an adequate level as a proportion of risk assets. Second, profits and flows should become positive and real—i.e., not the result of fictitious accruals. This requires a thorough identification of the real losses, both stock and flows. This task is not easy to achieve from outside the bank through external audits or initial examinations and may prove to be a gradual and time-consuming discovery process. It only becomes an easier task once the previous bankers have gone or as a result of the bank's liquidation.

The owners of an insolvent bank are primarily responsible for its recapitalization. New solvent partners can also do it instead, provided they are screened by the government as fit and proper. This could happen when supervision is strong, capital erosion is identified at an early stage, and mandatory corrective action can be imposed gradually.² This includes recapitalization of small capital "holes."

But experience says that, most of the time, the flaws in supervision do not make it possible to identify insolvency at an early stage, but only when illiquidity or fraud appear and the reality cannot be hidden any longer. By then, the equity capital has been depleted several times. If so, the previous owners will hardly be able or willing to fill in the gap, and no desirable new partner (strategic or otherwise) or potential acquirer will be willing to inject new capital or acquire the bank without a previous clean-up of the losses. This is where recapitalization through special mechanisms becomes a must. Before or simultaneously, governments must try other procedures:

Stopping decapitalization must be the initial recapitalization measure. To that end, transparent accounting should lead the bank to discontinue payment of dividends and taxes. Loss-making entities should not pay them. Loss-making bankers should leave, and conservative ones should be appointed to take their place.

Freezing or netting bad borrowers' deposits against part of their bad loans may also help. Of course, this measure can only be taken if there are any such deposits left in the bank at the time failure is identified.

Having uninsured depositors take a part of the hit or swap their short-term deposits for longer-term ones is possible but not necessarily recommended. It would certainly diminish the direct cost of a particular restructuring operation in the short term, but it may also trigger detrimental consequences system-wide, such as demonetization and capital flight. It may all depend on the size of the bank.

Creditors can take a part of the hit, through partial write-offs or swaps of short-term for longer-term debt or for capital. The former will help diminish the losses. The second will reduce short-term liquidity needs. The latter will reduce both the loss and the liquidity needs. But there are concerns with this measure, too, especially as regards creditors' reaction for the future. This is one of the numerous reasons why it is so important to differentiate the treatment of shallow insolvency from that of deep insolvency.

Capital Injection by Government Institutions

This is essential to any satisfactory solution to banking crises if the previous attempts fail. Illiquidity may be reined in with last-resort lending. You may even put in place another kind of longer-term lending. But, if insolvency is deep, the answer to a real capital loss is a real cap-

ital injection or removal of the loss. Capital injection should normally be done through a capital increase. Priority should be given to Tier I capital. In case of insolvency, subordinated debt is not a good replacement for capital, because, in fact, it is a loan. Even if convertible, until such time it is converted into capital, it is still a loan. And it always carries an interest rate, probably a high one. Removal of the loss from the bank happens when a restructuring mechanism purchases the bad assets and assumes their losses. The bad assets issue will be dealt with later in this paper.

When efforts to make the owners or new partners recapitalize the bank have been exhausted, the government should first attempt to obtain from the owners collateralization for the bad assets and thus reduce the losses it will have to incur. But if the bank has not yet been taken over, there is a risk that ultimately the collateral obtained will be financed by the bank while still under the owner's control. It is important here to avoid protracted negotiations or there may be deposit runs and last-minute fraud that may further weaken the bank.

If restructuring is addressed as a GOOD BANK-BAD BANK operation, an initial step to be taken is to have the equity capital written off. This will eliminate the previous owners' economic and political rights. Their control on the bank will disappear. They should be the obvious candidates to take the hit, other than the government. In addition to having the banker exit the bank, this measure will also write off the equivalent amount of losses. If this is not sufficient to solve the capital erosion, further recapitalization through assets clean-up will have to be done. At any rate, after the write-off, the bank's capital should be increased and replenished. The write-off followed by a capital increase is what many call an "accordion" or "concertino" operation, for obvious reasons.

How do you write off the equity capital? A strong and clear-cut legal mechanism that authorizes the government to order the write-off or freeze the political rights of the owners is a prerequisite. Otherwise, this formula may prove vulnerable. For lack of such legislation, several alternative procedures can be followed. Some of them proved effective in some countries in the past, but they are time-consuming and may prove legally vulnerable.³

Who should inject the new capital? The alternative to recapitalization by the owner or by a new solvent partner is recapitalization by a government institution. It goes with-

out saying that, when the state owns a bank, the capital injection should be done by the Treasury, whether insolvency is shallow or deep. The Treasury should also clean up any additional losses that may remain in the bank after the write-off, before privatization follows.

In privately owned banks, an initial alternative to consider is a deposit insurance mechanism, funded by the private sector, when given additional responsibility for recapitalization of banks. Its funds would then be used to pay off insured depositors in case of closure or to inject capital in insolvent banks when rehabilitation is considered to be a better choice. The Treasury, however, would keep a subsidiary funding role when a decision is made to protect uninsured depositors of closed banks, as a lesser evil, or when funding from the private sector proves insufficient to pay off depositors or undertake restructuring.

When this mechanism does not apply, but governments have to step in as a second-best alternative, the Treasury has to be the primary source of funds, both for the capital injection and for the assets clean-up. The funds should come out of the budget in a transparent manner.

Sometimes in the past, no matter how heretical it may sound, the capital was injected by the Central Bank directly or through a restructuring institution. This formula was successful in a number of cases,⁴ and if applied again, it may be done as a bridge to the budget.

There are, however, ways to have the loss shared by other players. Some of them have already been described and will just be listed now:

- First and foremost, the owners will have to lose their investment. In addition, they should be required to offer collateral of their own to reduce the loss derived from bad assets.
- Some uninsured depositors and creditors might on occasion take a partial hit.
- Delinquent borrowers will have to reimburse their borrowings to a larger extent than they expected, if proper assets-recovery mechanisms are established.

What do you do when there are no funds available?

Although the best ways to share the loss will have to be sought, the problem will still be so serious that governments should address it head-on and use special budget appropriations. Bridge loans from MFO's, foreign governments, foreign banks, the Central Bank, etc., could also be considered, because prompt funding of the restructuring operation becomes a must. Some reflections in this respect

were made in Section III, as a part of the dialogue between a government and an adviser, but are recapitulated here in a more structured manner:

- The loss is already in the system.
- If the government does not want to pay the bill today, it will end up paying a much more expensive bill in the future. The losses of insolvent banks keep growing, sometimes in a spiral, even if only by the refinancing of the previous stock of losses.
- While reluctant to recapitalize banks, many governments keep indefinitely incurring losses to help out problem banks through subsidies, liquidity support, hidden funding by official development banks, refinancing of bad debts to state-owned companies, etc. If such assistance is quantified, isolated, and put to better use for specific and well-organized restructuring operations, a part of the problem could be resolved. Otherwise, governments have the cost but not the benefit. Any loss is a good loss—if it is the final loss.
- A certain proportion of the losses incurred in successful bank restructuring by government will later be recovered if the banks return to soundness and start paying taxes.

How will the capital be paid for? Special care should be taken to limit fiscal and monetary disruptions.⁵ The most typical way to do so is to pay with government securities, so that those disruptions are limited to the interest payments during the securities' term. The redemption of the principal will have an additional impact on maturity. If maturity of the whole principal is left for the end of the term, the impact will be one-shot and could be difficult to take. If the size of the impact is large, governments may be tempted to extend the maturity period and even convert the securities into perpetual debt. Therefore, gradual redemption is advised, so that the hit is taken evenly over a long period of time, perhaps 10–20 years.

Ideally, the government securities should be tradable—at any time or over a previously established time schedule. The government may prefer not to have a diversified base of claimants upon maturity. But it should be recalled that insolvent banks are also illiquid, and they need liquid assets to recover their lending capacity. Once the restructured banks have been sold to sound investors, trading the securities for cash on the market does not seem to involve a special risk, but provides the bank with liquidity to resume normal lending.

Precisely because of the bank's need for liquidity, zero-coupon bonds are not effective instruments for bank restructuring. Also, holding payment of interest on those bonds until maturity of the principal may make the temptation to postpone the maturity date stronger. Therefore, interest rates should be paid in cash, periodically, one or more times per year.

Insolvent banks not only have a stock of losses, but also current losses. Therefore, interest rates should not be lower than market rates. If governments really want to have the banks and the banking system come back to soundness and be able to forget about those problems for good, they should not be shortsighted. These interest rates can have a variety of parameters:

- Same interest rate as the average deposits should be ruled out, because there would be no margin between those assets and the average liabilities.
- Treasury Bills rates is a very common standard and is conceptually correct. However, one has to consider whether the margin above the average cost of funding may be low or even negative—i.e., insufficient to turn the red figures into black. It is all a matter of proper financial analysis.
- Average lending rates applied to ordinary borrowers would definitely favor reasonable margins and would be consistent with the purpose of bringing the formerly failing banks back to normal. Of course, those rates could be slightly lower, because the government securities do not involve the same risk as ordinary borrowers.

The higher the rates, of course, the higher the fiscal and monetary impact. But economies should be considered in a long-term perspective.

Carving Out and Disposal of Bad Assets

Removing bad assets from the bank is, in fact, the key tool for recapitalization, because ordinary capital injection will seldom be sufficient to wipe out the stock of losses and make the bank profitable. Later disposal should follow, with one objective: to minimize the cost of the restructuring operation. Both functions are normally performed by special restructuring institutions.

Which assets should be purchased? Priority should be given to the largest and worst assets. By doing this, a large proportion of the loss will be removed, and the recovery institution can be better focused than if assets are small and

very diversified. Assets of any kind could be bought: loans, investments, fixed assets, foreclosures, and, for universal banks, even subsidiary companies. Responsibility for guarantees and lawsuits may also have to be assumed. Historically, real estate is, by far, the main bad asset to carve out and liquidate.

Three models have been successfully applied in a variety of countries for assets clean-up:

- **Bad assets are bought at book value, or rather at book value minus existing provisions.**⁶ Therefore, the size of the assets to be carved out is always higher than the remaining losses, because not all of those assets are a 100 percent loss. The unprovisioned loss hiding in those assets will have been removed. The law governing the restructuring institutions should make it clear that they are allowed to assume losses. Actually, they would not operate effectively if they did not make losses. That is what those institutions are there for. Otherwise, the losses would be left with the bank. Of course, these losses would later have to be minimized through effective recovery and liquidation.
- **Bad assets are bought out of the insolvent bank at market value by the restructuring institution, be it official or private, with the purpose of selling them at the best possible market price and trying to make a profit.**⁷ By buying the bad assets at market value, the losses are left with the bank. Then, as a part of the same package, another government arm, probably the Treasury, through special budget appropriations, will fill in the gap with capital. This formula mimics market mechanisms and has worked well in some developed countries. But, if applied in less mature societies with weaker institutional frameworks, the establishment of market value and the necessary due-diligence to be performed later could give rise to litigation with the previous owners, the potential postponement of urgent action, and even judicial decisions that may block the restructuring process.
- **There are cases where bad assets, with their hidden losses, were bought directly by the Central Bank at book value, against special government securities.**⁸ This is a very debatable procedure, because Central Banks are supposed to stay away from financing restructuring operations. However, this move stemmed the bleeding of the system and, while not without problems, made the banks' recovery pos-

sible. The bad assets were taken directly by the Central Bank, but their recovery was left to the cleaned-up banks. And a condition was set: No such bank could pay any dividend until it had repurchased the unrecovered bad assets from the Central Bank out of its profits.

Who should pay for the assets clean-up and how? All that was said about capital injection applies here.

Institutional arrangements. This function is usually carried out by the same institution that handles asset disposal. A brief description of the most common alternatives follows:

- **The deposit insurance institution** is one choice, when it is given additional responsibility for bank restructuring, including capital injection, clean-up, and disposal of assets (see Section VII, Choice 2). To avoid repetition, this arrangement is just enunciated here, but has worked satisfactorily in a number of countries.
- **Another special restructuring agency, separate from the deposit insurance institution,** may be set up to carry out one or two of the following functions:
 - To inject capital and also to buy and dispose of bad assets. This model tends to be embodied in government institutions. Since decision-making and the source of funding are common, bad assets should be bought at book value minus reserves, in order to limit capital injection to a commensurate capital adequacy level.
 - Just to purchase and dispose of bad assets, but not to inject capital. Asset purchase and disposal can then be done by either a government institution (such as the RTC in the United States) or by private asset-management corporations, supervised by the government. In the latter case, assets are bought and disposed of at market prices. The staff is given incentives for successful recovery, and these companies are liquidated when they complete their task.
- **A special private company** may be set up by a bank or a group of banks to locate their bad assets in its balance sheet. Such a company is actually a subsidiary of those banks. Its purpose is to segregate those bad assets from their own balance sheets, to have a specialized recovery function isolated from their ordinary banking activities, and perhaps to facilitate the follow-up of the

financial performance of this function. So far, so good. But to the extent that those bad assets in the new company are financed by the mother bank(s) from their own resources (through capital or loans), the loss is not carved out of those banks and financial restructuring is not achieved. Actually, it should be consolidated in their parent banks' accounts.

Assets disposal, other than by a special agency, can also be performed by:

- The insolvent bank, when the bad assets remain in its portfolio and the loss is made up for by the government with just capital injection.
- The insolvent bank, when commissioned by the restructuring institutions, for reasons of effectiveness and against an incentive.
- Market players—specialized investment bankers and recovery institutions—that may have bought the bad assets from other players or may have been commissioned by them to perform that task.

Principles on assets disposal. Effective assets disposal is a very important part of bank rehabilitation, in order to minimize its cost. Here are some principles:

Doing it from an institution that stays away from the bank and is staffed with skilled recoverers will make it easier to resist borrowers' pressure—especially pressure from state-owned, well-connected, or large borrowers—for further lending and soft debt rescheduling. This formula will also allow the new management to concentrate staff and managerial time on the future.

Conventional bankers or easy-going lawyers and mere administrators are not necessarily good recoverers or liquidators.

Contrary to the doctrine whereby insolvent banks should keep the bad loans and swap them against the borrowers' capital, as a way to be active or even lead the borrowers' restructuring and thus diminish the bank risks, **let banks be just banks.** Actually, experience says that: (a) the borrowers' capital is not necessarily a lower risk than its ordinary debt, because, by itself, the swap does not improve the borrowers' operational health; (b) being a participant in the borrowers' capital and on its board may lead to a higher risk, because the bank "gets involved" and is likely to be tempted or pressed to extend new lending facilities in order to avoid further "difficulties" on the part of the borrower; and (c) bankers are not necessarily the best industrial managers or supervisors and may prove poor restructurers.

Avoid to the maximum extent possible new financial facilities by governmental restructuring institutions to enhance the bad assets. Those institutions are there to achieve recovery and make bad assets liquid, within as short a period of time as possible, not to embark on entrepreneurial activities. This may lead to incurring further risks. The case may be different for private restructuring companies, if they can find proper private funding.

Give priority to time over price for disposal purposes. If they are in conflict, give consideration to the compound cost of financing frozen assets for a long period of time. Projections on the potential favorable evolution of prices, unless short-term and done very well, are just projections. And avoidance of lowering market prices by dumping a mass of given assets—real estate, for instance—is not the problem of the restructuring agency.

Debt rescheduling should be aimed at improving the recovery prospects, not at just kicking the problem forward. Therefore, it should be conditioned to: (a) simultaneous payment of a part of the debt, (b) reinforcement of guarantees, and (c) corporate restructuring on the part of the borrower.

Commissioning recovery of bad assets to the bank where they were purchased from can be a satisfactory exception to the principle of carrying out assets disposal away from the bank. In this case, give incentives to the bank for effective recovery. This exception can be applied in the following cases: when the restructuring agency is not strong enough and the new owner is properly staffed and managed; when assets are very small and diversified and recovery by a branch network may prove more effective; and when the former relationship between the borrower and the bank was not “cozy,” but strictly business-like.

If there are competent investment banks or other specialized private institutions on the market that can assist in the disposal process, seek their assistance. They can play a role through well-restructured work-out plans, careful monitoring, assets securitization, and handling of liquidation. But contractual conditions should watch over the assets owner’s interests in an effective manner.

Maximizing recovery is a basic goal, but one should have no illusions about quick and profitable disposal of bad assets, except for the best ones. As a rule, they are of poor quality and have serious documentation problems that delay liquidation considerably.

The government should not make write-offs mandatory, be it for specific borrowers or across the board, for given economic segments or types of borrowers. Mandatory write-offs involve “moral hazard,” both for the borrowers who profit by it directly and for other present and future borrowers. They are given a perverse incentive to borrow more money than they need and not to repay it. Write-offs should be left to the good business judgment of the recoverer, to the extent they make recovery of the remaining debt easier.

VIII. New Management: A Key Element for Good Governance

If a government really means to reconstruct the soundness of a bank or of its banking system, recapitalization should go hand in hand with change of management. This will have to be done for the sake of justice, to avoid repetition of the past bad practices, to ensure good governance in the future, and to avoid moral hazard in the restructured bank and in the system overall. Change of ownership (see Section IX) is a very frequent prerequisite for new management, except, of course, in state-owned banks. As was said before, recapitalization will take care of the past. Change of management and ownership will take care of the future.

Initial and Final New Management

A lot of changes may have to take place as soon as the insolvent bank is taken over. Starting in the key positions: The board and the chief executive officer are the top priority. If the new ones are good, the rest of the required changes will probably follow, although other changes—in such positions as internal controller, chief accountant, chief lending officer, and chief recovery officer—also should be given priority.

What kind of new managers are best for the initial stage? Except for short-term tasks, avoid inspectors, interveners, or conservators. They may be good administrators, but they are not real managers and might freeze the banks. Focus instead on professional managers, but not on conventional bankers. Rather, the new managers should be “war generals,” oriented toward restructuring, because there is a lot of internal “surgery” to be done. And special courage is needed. Disclosing the real losses, strong recovery, branch closing, discontinuing unprofitable products, laying off personnel, reducing other operational costs, changing interest-rate strategy, etc.—all require a special personality.

Only after these measures have been successfully applied can you aim at ordinary good governance to be applied by “peace generals”—i.e., conventional managers.

Final new management is to be ensured by the acquirer or strategic partner of the GOOD BANK in a restructuring operation or by the acquirer of assets and liabilities in a purchase and assumption one. When a state-owned bank is privatized, the government should make sure that good management has been put in place before and has proved to be stable for a reasonable period of time.

Where to Find New Management

In countries where banking is a mature sector and there is a good and deep banking managerial class, new managers can easily be found on the banking market. But when the professionals available on the market are scarce, there is a problem. If so, recourse to a variety of solutions is needed, in isolation or as a combination. Remember, though: There are always some good bank managers on the market. These are some categories in which to look:

- Expatriates or just foreign bank managers.
- Managers from the industries or service companies or even from the government, to a limited extent.
- Middle managers up from the ranks from the very restructured banks.
- Individuals acquired through management contracts or twinning arrangements with sound banks. This has been tried in former socialist countries in Europe. These arrangements can be offered to good banks, against a fee and against the chance to observe the bank, the financial system, and the economy before they get more involved. The results have been uneven.

The real way to implant good management is to sell the recapitalized bank to a sound investor—if possible, to a bank. A sound new owner will be very keen on appointing good management in self-interest.

Bridge Caretaking

Other than final management, initial new management, as described above, may also be ensured by an acquirer of a GOOD BANK or by that of assets and liabilities, when the take-over operation takes place shortly after insolvency is addressed by the government. But most frequently there is a time lag until new owners come in. This interim situation may “freeze” the bank and cause serious damage to its assets value and to its future commercial development, if

reactivated. Putting in place interim arrangements to ensure bridge caretaking and, thus, good management becomes a must.

Let us briefly describe a variety of arrangements and pass judgment on them:

Keep previous managers, but send inspectors with veto powers. Physical presence and veto powers involve a very serious responsibility, but they cannot avoid wrongdoing by the previous owners, even if they sit next door to inspectors. It is also obvious that this arrangement does not involve recapitalization by itself.

Have interveners or conservators replace former management. They may help set accounts and internal controls in order and even administrate the banks. But appointment of interveners and conservators should not be considered as a solution in itself. First, they are not managers and should only be in place for a short time. Otherwise, after a while, the bank may deteriorate further. Also, this measure by itself does not involve recapitalization either.

Temporarily nationalize. This measure is included under the “bridge caretaking” concept because it has been used by some countries in the past as a lesser evil to address insolvency temporarily. But this measure does not necessarily bring about effective management results and goes against sound competition and modern banking. If nationalization were to occur at all, it should last for a very short period of time. Actually, holding ownership of banks might prove an attractive situation for some governments and some ministers. It means power and may prove enjoyable—like having a toy.⁹ That is why reprivatization should be addressed as soon as possible.

Have new board members and managers appointed and supervised by the government. This is probably the best solution. In theory, the appointment may be made by either the Ministry of Finance, the Central Bank, the Bank Superintendency, or the Restructuring Agency, as may be established by law. If the new management is strong and reliable, just some remote-control and normal banking supervision are required. But some qualifications should be made about the different government institutions that can perform it.

- **The Ministry of Finance** should appoint boards and managers only in state-owned banks. But Ministries of Finance are not necessarily good management monitors. Additionally, they may also feel the temptation

to assume a supervisory function, while, on the contrary, prudential supervision should be applied to these banks by the supervisory institutions.

- **The Central Bank** may have legal powers to appoint new board members and managers in private problem banks. But central bankers are not necessarily good at bank management. They may not even be supervisors. And, as a matter of principle, Central Banks should stay away from involvement in bank management.
- **The Superintendency of Banks**, be it located within or outside the Central Bank, could also be responsible and capable of appointing new boards and managers. They are not managers, but they can do some reasonable monitoring work. There may be conflicts of interest between appointing management and controlling their performance from a supervisor's perspective. This is a constraint, but not necessarily an impediment, when there are no alternative arrangements.
- **The Restructuring Agency**, including the deposit insurance institution, when given restructuring powers, proves a good choice, when they assume temporary ownership of the problem bank through capital injection. Handling ownership and management together makes sense. Also, these kinds of institutions have more flexibility to be staffed with bankers. If so, they could monitor the banks' management properly. They could also ensure that uniform "surgery" measures and best practices are applied to the different banks under restructuring.¹⁰

IX. New Ownership

Exit of Former Owners

As has just been said, the key to lasting new management and good governance is change of ownership. Anyway, the first thing to do—before recapitalization by government institutions—is to have the former owners exit the bank, which is always a difficult task. The ideal model is writing off the capital based on proper legal grounds. This can be achieved:

- By mandatory instructions from the government.
- By approval of a shareholders' meeting. The former owners are unlikely to convene such a meeting. This will probably have to be done by an interim board appointed by the government.
- By freezing the owners' rights while the banks are being liquidated or sold to new owners.

Other models are also applied, for practical reasons, if legal or factual difficulties for a write-off operation cannot be overcome. But, in a way, they are shareholder-friendly and should not be given priority. Here are some of them:

Capital dilution is a scheme by which capital is not written off, but a large capital increase is approved, at government initiative, and the previous owners are not allowed to participate. The previous owners keep their previous shares, but the value of their investment and the proportion of their voting rights drop sharply. They lose control of the bank.

Acquisitions of insolvent banks by solvent ones, before restructuring, can also be an effective way to see the former owners exit and lose control. If the bank is insolvent, the price should be negative, but in order to see the operation materialize and see the bad banker exit, a nominal price may have to be agreed to by the buyer. What about good will? Loss-making banks are not supposed to have any good will. Anyway, these acquisitions should be monitored and authorized by the supervisory authority. The acquirer bank should inject new capital into the acquired bank, but the government should clean up the bad assets to avoid serious problems for the sound bank. An exception to full clean-up, as a prerequisite, could be considered when the buyer bank is sound and large and the acquired insolvent bank is very small.

Mergers before restructuring can be another way to see the former owners of insolvent banks lose control, provided that the other merging bank is larger and solvent and that proper management agreements are reached between the two partners. If realistic terms for the exchange of shares are established, the former owners of an insolvent bank should lose a considerable part of their investment share. This is a further reason why these agreements should also be monitored and authorized by the government. Recapitalization—including assets clean-up—should also go hand in hand with any merger where one or two of the players are insolvent, along the lines that have been mentioned for acquisitions. Otherwise, a bigger problem will be created.

Entry of New Owners to Replace the Previous Ones

The ideal candidates for entry should be institutions, ideally banks. Insurance companies can also be considered. Non-financial concerns are not the best choice, because of potential conflicts of interest, which, particularly in the

decline of economic cycles, may lead to loan concentration, lending to related parties and, often, to solvency problems. As the outcome of a restructuring operation, the new investors will normally come into the picture through mergers or acquisitions managed by the owner institution and monitored by the supervisory authority. But being a bank is not enough to be a good candidate. The good candidate should be large enough, fully solvent, and well-managed. It is only when these features are in place that the acquirer will be able to introduce synergies, change the bad business culture, and solve financial, legal, labor, and other problems that always remain in the failing bank, even if well recapitalized. Therefore, it is important to make a proper selection.

In order to attract sound investors, the government should make sure that the former insolvent bank is really clean. Affluence is not required, but capital should be adequate and real, with a high Tier I proportion. And results and flows should really be in the black. Further improvement through synergies and good governance should come from the new investor. By contrast, if restructuring does not achieve an adequate level of real capital and positive flows, no sound investors will be attracted to buy an insolvent bank. Candidates for acquisition most probably will be undesirable bankers. Setting a very high price for the sale may also attract those undesirable investors. If the bank were expensive and not profitable, such new owners could obtain a "return on investment" through dividends based on cosmetic accounting and, most probably, through self-lending. The old problems may repeat themselves and even compound. Let's not forget that the objective to sell banks under government control is to forget about the problem—in other words, to ensure the prosperous future of what used to be a problem bank or a problem system.

The above hypothesis can easily be applied if the market is large and there are plenty of sound banks. But what if there are few candidates to buy the failed banks? Actually, when the market of buyer banks is limited, you may have serious difficulties.

The search for good acquirers will be time-consuming and the insolvent bank may deteriorate while waiting. Between takeover and sale, you need "bridge" management arrangements, as was described in Section VIII. But the government will have to undertake a very thorough case-by-case approach. Sometimes, once you manage to sell the first one or two banks, there is a demonstration effect and

other potential acquirers become gradually interested in similar operations. In view of the difficulties, institutions other than banks, particularly financial institutions, as well as individual investors will have to be considered as candidate buyers. But, generally speaking, foreign banks will probably have to play a significant role. They should, of course, undergo the same tests for size, soundness, and fit-and-proper management. But foreign banks should be welcome, because, more often than not, they improve competition, have better internal controls, good technology, and good products, and they may set an example for good governance. Now, what is the right proportion of foreign banks within a banking system? There are no set rules. Some governments will accept just a few foreign banks. Other governments, for lack of domestic solutions to solve their failures, will accept a higher number of foreign banks, but they will consider that ownership of the largest banks is a matter of national sovereignty. Still other governments may bend to the harsh reality and accept participation of foreign banks even in the largest financial institutions.

What about individuals? In the author's view, individual investors can be considered as a second best solution. But, what kind of individuals?

Employees are not very good candidates to acquire a restructured bank. Elimination of staff redundancies is probably one of the pending actions the new owners will have to undertake. If the new owners are the bank's staff, few if any redundancies will be eliminated. Access to ownership could, however, be given to employees, if in a limited proportion and if the controlling shares are given to a strong investor.

Industrialists or businessmen are not very promising candidates. Actually, international experience shows a high number of cases where excessive lending to the owners of their companies was the reason for serious problems for the banks.

What about the *public at large*? This is a typical alternative in privatization of state-owned banks. It can also be considered for the sale of insolvent banks after government intervention, for lack of better alternatives. The public could be a candidate, but the government should make sure first that a strong management has been in place for some time and ensures stability. Otherwise, there may be worrisome situations, such as the emergence of the former "wrongdoers" or businessmen as core investors, or no-man's-land situations, where any management team, good

or bad, may take full control of the bank. Even the previous team that led the bank to insolvency may emerge again. However, if the public shares ownership with a good bank, which controls management and plays the role of a strong strategic partner, this can be a satisfactory solution.

Offering *free shares* is not a good solution. If you do not pay, you do not care. Actually, when shares are offered to employees or to the public for nothing or with privileged fiscal credit facilities, the buyers are not very likely to care about the bank's governance or may sell their shares on the market and cause serious disruptions.

Bridge Ownership

As was said in the section on new management, the entry of new owners of the banks or of their assets and liabilities is likely to lag behind government intervention, if the buyers' market is not large. In case of purchase of assets and assumption of liabilities, because the previous owners maintain ownership of the legal shell, only bridge management will be needed, as described in Section VIII. When restructuring conveys the transfer of the shares' ownership, there is need for a bridge ownership arrangement. This role of bridge owner is, logically, played by the institution that injects new capital in the bank. As has been explained before, the two main recapitalizers are the Treasury, directly, or a government restructuring institution, be it a deposit insurance agency or a separate agency. But bridge ownership should be as brief as possible in order to avoid commercial damage to the bank. Some laws establish a limit of one or two years to put the bank up for sale. Of course, these sales should be supervised by the regulator to make sure that prices are adequate and that the final owners ensure fit and proper governance.

X. Other Areas to be Covered

This paper does not attempt to cover all possible topics related to crises resolution. Indeed there are other areas to be covered. Among others:

- How do you restore confidence?
- How do you build political consensus?
- Should you wait until the economy has recovered from depression before restructuring banks?
- Should you redesign the size and structure of the banking system or restructure the banks first?
- What should be the role of banking supervision before, during, and after restructuring operations?

- When general bank insolvency is interlinked with general enterprise insolvency, which of the two areas should be addressed first, and how?

A full answer to each of these question marks may deserve other papers.

XI. Summary Principles and Guidelines

The present systemic crises in Russia and East Asia, including Japan, added to those of the mid-'90s in Latin America, provide a unique background for governments and the international community to take banking crises resolution seriously. A basic guideline should be emphasized: Last-resort lending may prove indispensable, but deep insolvency—i.e., deep capital deficiency—is what lies behind and has to be solved with capital, not with loans.

Because there is always a "next time," governments should make sure that prudential regulation and supervision reduce the risk and the size of potential banking crises in the future. But proper laws should be in place to deal with banking crises resolution. Otherwise, prudential regulation and supervision, no matter how strong they are, serve little purpose. They would be discredited, and problems would grow more and more serious.

Deep insolvency is the key problem when individual banks have a crisis, as well as in widespread and systemic ones. Systemic crises have an added element: deep illiquidity. The line between the different kinds of crises is often blurry, and their treatment will have to contemplate a proper mix of across-the-board and case-by-case measures.

Insolvency of individual banks should be treated case by case. But because the line is blurry, both across-the-board and case-by-case measures will have to be applied to both widespread and systemic crises. This should be done in a proper sequencing, possibly along the following lines: First, build political consensus. Second, close the worst banks, particularly those that were already insolvent before the macro-upheaval occurred. Third, apply last-resort lending to the rest of the banks that are illiquid. Fourth, apply other measures across the board to them, among those listed in this paper. And fifth, apply case-by-case treatment, as legal evidence of individual insolvency becomes apparent.

Primary responsibility for reconstructing an individual bank, as well as for recapitalization and change of management, lies with its owners. But, if the owners do not take these measures, the government will have to close the bank or step in instead for restructuring purposes.

When the previous owners and creditors fail to recapitalize the bank, bank closure is the first option. When banks are closed, an explicit deposit insurance scheme that would protect depositors up to a limited amount may prove very useful to limit the danger of contagion and encourage bank closure and, thus, the exit of bad bankers. Full deposit protection—whether implicit or explicit—should be avoided, since it does bring about moral hazard all around—for bankers, depositors, creditors, borrowers, and supervisors. If it is in place, it should be phased out over a few years and changed into an explicit and limited system.

In actual fact, only small banks and sometimes medium-sized banks are closed. Large banks are very rarely closed. The alternative to closure is restructuring. Therefore, governments should be prepared to face it in terms of ordinary laws and regulations. Systemic crisis may require special laws.

The three legs of the stool in restructuring deeply insolvent banks by the government—other than last-resort lending whenever needed—are **R**ecapitalization, **O**wnership change, and **M**anagement change. If one of them is not applied, the others will probably fail. Recapitalizing a bank by the government, while leaving the same ownership and management in place, may lead to the perpetuation of the same problems and to moral hazard. On the contrary, if recapitalization goes hand in hand with the exit of the previous bankers, there are no reasons for moral hazard. When few alternatives exist on the market to find fit and proper investors and managers, a variety of solutions will have to be sought, including foreign banks and bridge ownership and management, until a final solution is arranged.

Recapitalization requires a good diagnosis of the stock and flow of losses. A poor diagnosis may lead to no action when there is need for action. It may also lead to treating systemic crises as if there were no individual failures, and widespread insolvency as if it were only a problem of just a few isolated cases. Worse, it may lead governments to try to solve insolvency with ineffective instruments. Identification of the real losses may take time; it is a gradual process. An initial effort should be made to have a basically accurate picture as soon as possible, but you should avoid initial “analysis-paralysis.”

Effective recapitalization of deeply insolvent banks requires a third party to inject injections and purchase

assets. Lending operations, subordinate debt, and debt-equity swaps are unlikely to fill in the gap. Real capital is what is needed, and it is needed to the extent necessary to reconstruct the equity capital and turn the profits and flows from red into black. Profits and flows are more important than equity. If results and flows keep decreasing, the capital would be further eroded and restructuring would be a failure. In such cases no phase-out of rules on capital, provisions, and income-recognition should ever be accepted.

Reducing redundant labor and operational costs to a proportion that is in line with the bank’s size and makes profits possible must be considered as a key part of the recapitalization package. Good governance overall is expected to be brought in by new institutional owners, if properly selected, which is basic to successful restructuring.

Capital injection and purchase of assets can be funded by the financial system through a restructuring institution, including a deposit insurance institution, when it is given the responsibility for the recapitalization function. If the financing by the banking system does not suffice or if such private arrangement does not exist, the Treasury will have to take the hit in one way or another, be it directly or through special government or mixed restructuring institutions.

The fiscal and monetary impact should be minimized, but not at the cost of half-way restructuring and subsequent “muddling through.” Remember the old saying: “Bread for today but hunger for tomorrow.” They should also be spread over a number of years, but the recapitalization funds must be supplied on D-Day, probably at the time the previous bankers exit the bank. The spreading is most frequently achieved by the issuance of government securities. Reduction of other government expenditures, a proper handling of reserve requirements, a good functioning of the open market, and serious tax reform, including improvement in tax collection, may also mitigate or compensate for those distortions. A thorough restructuring would also require the securities to be gradually redeemable or tradable, with interest paid in cash at market rates.

Provided that effective alternatives can be used, asset disposal should take place as far away from the bank as possible, so that the new bankers can concentrate on the future, rather than on the past. In mature societies, this function can be carried out by private companies, according to market principles. But more often it is carried out

by a government institution or even by the restructured banks, when they have strong management and are commissioned by the government to do so. If disposal is a government function, good rules of thumb could be: Do your best not to put new money on the bad assets, with a view to obtain a better price; just try to recover or liquidate as much as you can from the state at which the assets are. For disposal purposes, give priority to early realization over expected price, if they are in conflict.

If, other than the banking sector, the government has to incur losses, they should be shared with other players, primarily the previous owners. Bad borrowers as a whole should also share the loss. Uninsured depositors and creditors may also be considered as candidates for loss-sharing, but due attention should be paid to the risk of contagion.

Sound investors should be given priority as potential new owners or partners over less sound ones, even if the latter offer a higher price. What matters is the future soundness of the system. Its future potential to pay taxes should also count, as a return on the investment that was made by the government with taxpayer funds.

Lack of well-established legal mechanisms, improvisation, imperfections, and “groping in the dark” for solutions are frequent features at an initial stage. That is why bank restructuring needs strong and well-coordinated institutions. A lot of money can be saved. The institutional framework would perform a variety of activities, such as deposit insurance, recapitalization, assets clean-up, temporary ownership and management, handling of sales or mergers, and assets disposal. This can be done through different and separate institutional arrangements, as described in this paper. But good coordination and economy of efforts make unification of those functions in a simple institution worth considering.

Remember: The business of bank restructuring is not made for perfectionists. In actual fact, many “nasty” things have to be done to achieve effective solutions. But they are certainly “less nasty” than their alternatives.

Any loss is a good loss, if it is the last loss.

Endnotes

1. In 1977, Spain instituted deposit insurance in the midst of a crisis and therefore decided that the Central Bank should initially share 50 percent of the financing, in order to avoid a further weakening of the system. In 1998, the Central Bank discontinued financing the insurance mechanism because the crisis was over and the

ordinary financing by the private institutions was expected to suffice to solve future problems.

2. This is the objective pursued in the United States in the 1990s by the Federal Deposit Insurance Corporation Improvement Act, which, if successful, would reduce the number of failures and the cost of their resolution.

3. As it shows several of the alternatives used in practice, the mechanisms used in Spain in its crisis of the 1980s and in the case of Banesto, in 1994, are described here:

For smaller banks, where one or a few investors had the majority control through the ownership of a large package of shares, the restructuring agency (Fondo de Garantía de Depósitos) negotiated with those investors. The objective was to have them sell their shares at a nominal price of 1 peseta per share. Negotiations were always harsh. Investors normally claimed that their bank was not insolvent and that the government’s figures were utterly wrong. Faced with the evidence of hard figures, they ended up accepting the transaction. The growing illiquidity and headlines full of bad news, which began to leak, softened the investors’ position. Once the restructuring agency owned controlling shares, a small board and new management were appointed. The bank was then run by common commercial law, and the capital was written off.

When ownership was widespread and acquisition of a smaller package of shares could not make a majority in shareholders’ meetings, the Central Bank would remove the board of directors and appoint other bankers as new board members—a move for which the law had given it clear power. The new board, in coordination with the Central Bank, would then convene a shareholders’ meeting, explain the real situation of the bank, and obtain approval for the capital write-off, followed by a capital increase, to which the previous owners would have limited or no access. Since it was rather hard to ask the minority shareholders to vote for an action in which they would lose their capital entirely, some kind of “sweetener” had to be found—namely reducing the value of each share—not to zero, but to a fraction of its par value. This, plus announcing the restructuring plans and inviting the shareholders to participate in a more promising future than closing the bank, worked the miracle. The proportion of the original shareholders’ stake in the bank capital would suffer an overwhelming dilution.

4. Spain applied this formula and went so far as to have the loss taken by the Central Bank. Of course, the Treasury ultimately took the loss from the Central Bank, by way of lower dividends.

5. There are countries where, contrary to this statement, the recapitalization of failing banks that were not closed, including the assets clean-up, was paid in cash, through a restructuring agency. This was the procedure applied in Spain to solve its banking crisis of the 1980s, as well of that of Banesto, the fourth largest Spanish bank, in 1994. Because of its fiscal and monetary implication, this procedure is not to be recommended, unless other measures are simultaneously taken to spread it over time and compensate inflationary effects. Such measures were taken in Spain. The restructuring funds were available on D-Day, in cash, but the fiscal loss was spread over a period of 13 years and inflation diminished. How? The restructuring agency was funded 50-50 by annual contributions paid by the

banking system and the Central Bank, plus loans from the Central Bank. But these loans were fully reimbursed by the agency with the proceeds of assets recovery and with the surplus produced by annual contributions, after the crisis was over. The Central Bank losses, then, materialized in its annual contributions over a number of years. As for the monetary implications, while large sums of last-resort and restructuring funds were poured in the market (from 1978 through 1985), inflation went down from 25 percent to 9 percent. An effective open-market operation mopped up excess liquidity on the market, and tax reform and better collection procedures were put in place, which considerably increased income for the Treasury. Also, budget adjustments and a rise of reserve requirements, except for banks under restructuring, helped.

6. This is the Spanish model.

7. This is the Scandinavian model.

8. This happened in Chile in the mid '80s.

9. In Spain, the Rumasa Holding company, which was owned by a single family, owned 20 banks that went insolvent. Because the usual restructuring procedures could not be applied to the holding company or to 20 banks, the government decided to nationalize the holding company. By doing that it took over the whole banking group plus the holding company's more than 200 non-financial subsidiaries. A special emergency law was required to permit this move. This law also required that the nationalized entities would have to be privatized in a short period of time. Privatization of all banks took place a year and a half after the date of nationalization.

10. This is the formula that was applied in Spain in the 1980s to ensure effective management of the 49 banks that were taken over and restructured until they were sold. It was called the "bank hospital" by the press.

Comment

PATRICIA ARMENDARIZ

ARISTÓBULO DE JUAN'S WORK, FROM THE PERSPECTIVE OF MANAGING THE MEXICAN banking crisis, can be interpreted in only two ways: Either de Juan takes his inspiration for a large part of his recommendations from the way in which the Mexican crisis was handled, or the actions taken in Mexico followed nearly to the letter the recommendations of this famous expert in banking crisis resolutions.

In this short presentation, I will comment on the principal recommendations and principles of de Juan that have been most relevant to the handling of the Mexican banking crisis.

I. Gradual Measures in Resolving Banking Crises

The first recommendation in de Juan's work that we find to be highly relevant for the Mexican case is as follows: "*In a situation of widespread insolvency, trying to resolve it with a one-shot approach may turn out to be more costly than a gradual operation over a period of perhaps three to five years....*"

And it really is dangerous when facing a situation of widespread crisis to be tempted by simplistic recommendations, some of which were recommended for resolving the Mexican crisis. For example, it was recommended that the government take control of the entire banking system in one swipe and hand it over

to new investors. In this way, went the argument, problems of moral hazard for the original bankers would be avoided.

Implementation of such recommendations would have multiplied many times the social and economic cost of the Mexican crisis. First of all, Mexico doesn't have—nor does any other country—the institutional and legal framework or the human resources required to take corporate control of an entire banking system in one swipe. And even if this were possible, doing so would have entailed systemic consequences with imponderable effects.

Neither is there a group of investors ready to assume risks that they did not take in the first place.

In addition, it is important to point out that even if taking over control of a bank might minimize the problem of

the bankers' moral hazard, we face the moral hazard of borrowers, who, when they realize that their assets are the government's responsibility, develop non-payment attitudes that multiply the social and economic cost of the crisis.

It is certainly necessary, then, to have a gradual approach, with a sequence as recommended by De Juan, which I would like to briefly describe in terms of how it happened in the case of Mexico:

1. Close first the worst banks.

For successful handling of the Mexican crisis, it was essential to identify poorly managed banks, because the worst incentives in a crisis are those created for poor managers. If they hadn't been contained, they would have contributed

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to worsening the condition of the banks they were managing and would have continued to engage in fraudulent activities that would have continued to contaminate the system as a whole.

Identifying bad management in the Mexican banking system was the first task. Even before the crisis exploded, four financial groups involved in fraudulent practices had been audited.

It should be mentioned that once the "initial cleanup" was carried out, this cleanup work continued until reaching the current structure, which is radically different from the original structure (Table 1).

2. Then apply instant lending.

As is well known, banking runs manifest themselves in numerous ways. In Mexico, although the banking run in the peso market could be controlled, there was actually a run on dollar loans with Mexican banks, provoking a situation of illiquidity that had to be alleviated by Central Bank loans. If this had not been done, it would have provoked a widespread problem of demanding payment from those

TABLE 1

Consolidation of the System

INITIAL STRUCTURE	INSTITUTION	CURRENT STRUCTURE	
1	BANAMEX	1	MEXICAN BANKS
2	BANCONER		
3	PROMEX	2	
4	UNION		
5	SERFIN	3	
6	BITAL	4	
7	ATLANTICO		
8	BANCRECER	5	
9	BANORO		
10	BANORTE		
11	BANPAIS	6	
12	BANCEN		
13	PROBURSA	7	SUBSIDIARIES OF FOREIGN BANKS
14	ORIENTE		
15	CREMI		
16	INVERLAT		
17	MEXICANO		
18	CONFIA-CITIBANK	10	
19	OBRERO		

who held dollar loans from the banks, which would have had adverse effects on the economy and on employment, as many companies would have had to close.

To alleviate the dollar liquidity problems of the Mexican banks, the Bank of Mexico made dollar loans to these banks, with rates high enough and strict guarantees so that this window was used solely to meet extreme requirements.

The dollar liquidity window was closed in August and the financial institutions have extended the average term of their liabilities and reduced their financing cost.

As soon as financing was stabilized, the Mexican banks returned to the international markets under competitive conditions similar to those that preceded the crisis (see Figures 1 and 2).

3. The next step could be the application of across-the-board measures.

In Mexico, it was obvious that lack of information on the financial systems causes investors to adopt measures that are much more conservative than when they have more information, so that allowing lack of transparency in a banking system in crisis can turn out to be highly counter-productive. It is for this reason that in Mexico, from the beginning of the crisis, investors were given minimum signs and information that kept the investment funds from being withdrawn in greater amounts and for longer periods, which would have postponed the economic recovery. The four most important measures adopted were:

- a) Establishment of minimum provisions regarding the banks' mature portfolios.
- b) Recapitalization of the institutions with the greatest problems through a temporary system of capital contributions from the government.
- c) Establishment of internationally accepted accounting measures.
- d) Redoubling of supervision efforts.

All these measures not only provided security for the markets through better knowledge of the banks' situation, and minimum solvency, but also created the accurate perception that the financial authorities were "in control of the situation," as various analysts and investors remarked at the time.

4. Lastly, follow the checklist of principles to solve each bank's individual problem.

In effect, a widespread crisis ends up by being resolved bank by bank. Of the list of principles developed by de

FIGURE 1

Foreign Currency Liabilities: Multiple Banking System Financing Costs

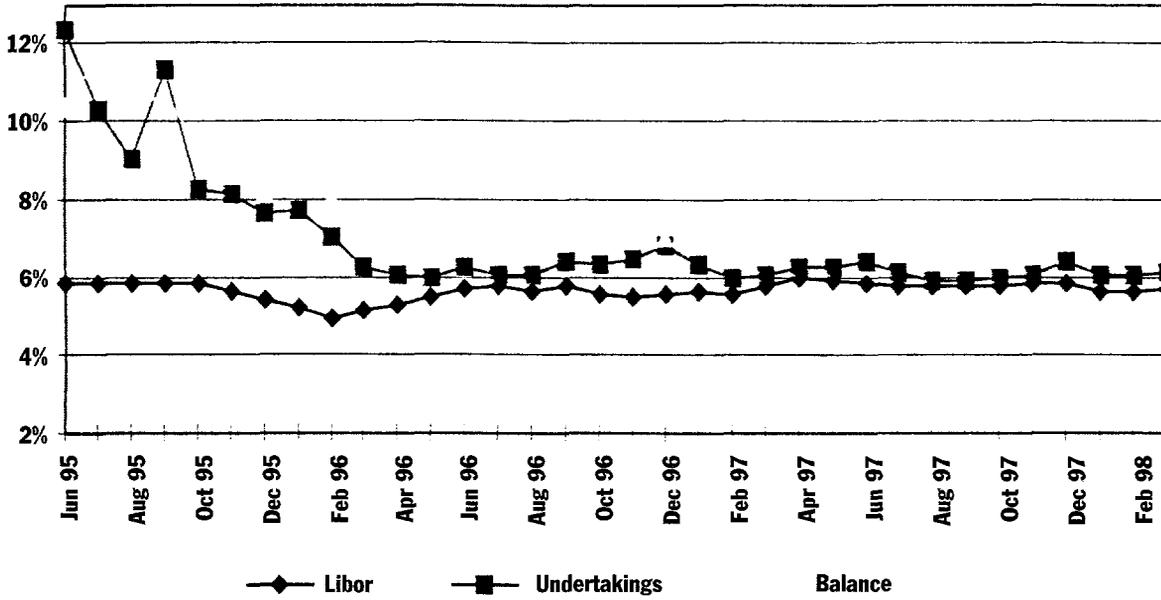
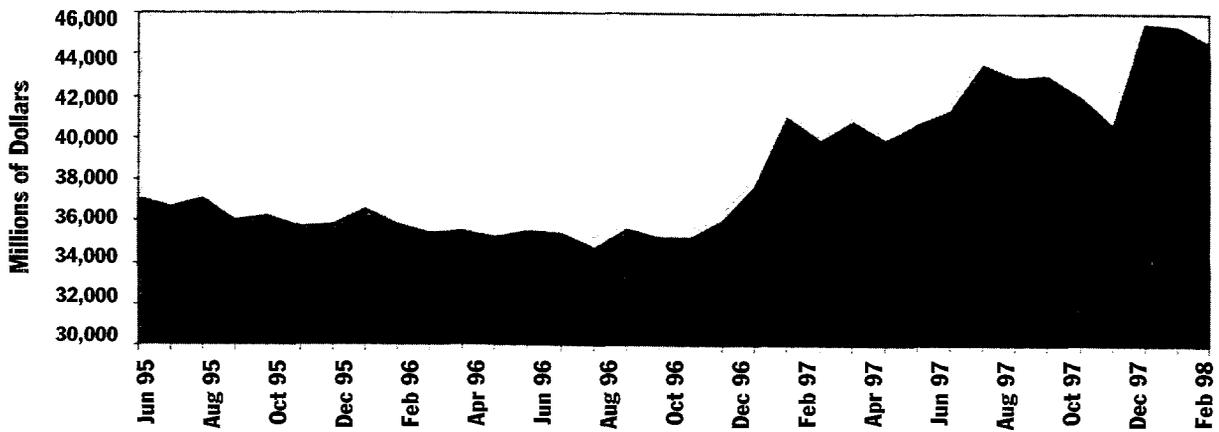


FIGURE 2

Foreign Currency Liabilities of the Multiple Banking System



Juan, the principles that were decisive in the Mexican case were as follows:

a. The sooner the government acts, the less costly resolution will be.

In Mexico, strict adherence to this principle has meant having to act in a way that could be interpreted as discretionary, which has led to criticisms from some people. However, we know that designing rules for crisis resolution may look good on paper, but might actually cost a lot of time. And in the end many of these rules are not applicable at the time when there is an urgent need to resolve problems of banking insolvency. Rather, the rules are quite useful for taking *preventive* measures, but in managing a banking crisis common sense is needed as well as principles that, although strict, provide sufficient flexibility for acting expeditiously. In the Mexican case, the central principle consisted of trying always to keep in line the incentives of the banks' shareholders, the government, the depositors, and the borrowers; all in order to minimize the economic and social costs.

b. Primary responsibility for reconstructing a bank as well as capitalization lies with the owners.

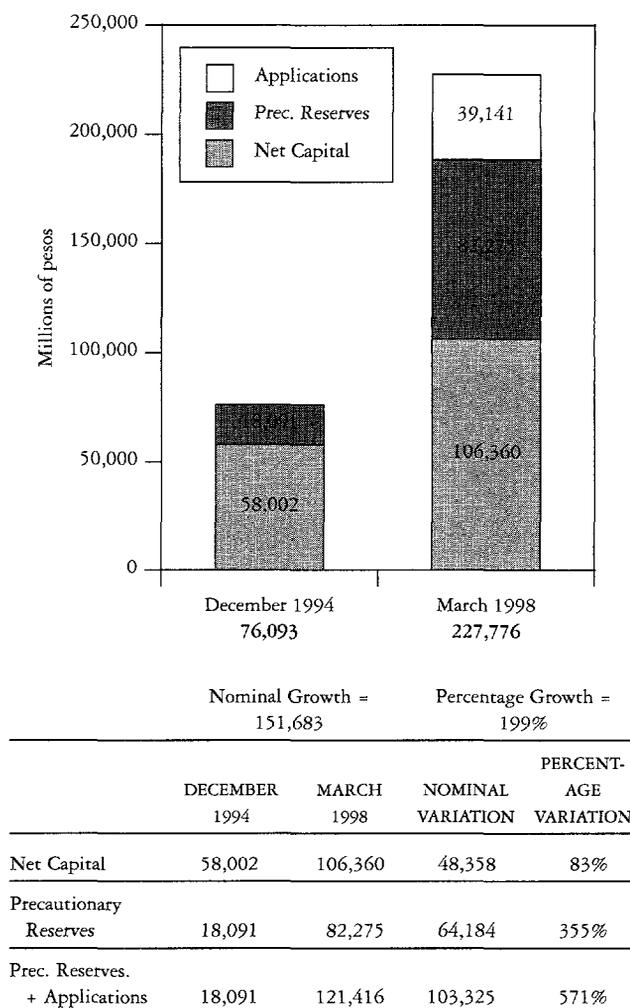
c. Government losses should be shared with other players, primarily previous owners.

These principles contained in de Juan's work represent the foundations of the restructuring of the Mexican banking system. In Mexico it is a fact that the original shareholders, regardless of the specific bank, lost all the capital originally contributed and the capital accumulated up to the crisis. In effect, the contribution of the original shareholders to absorbing the costs of the crisis has been equal to twice that amount of capital, as measured by the level of losses taken and reserves set up (see Figure 3).

Even more, in only five of the 19 cases of privatized banks will the original shareholders have been allowed to retain control. These cases have reflected certain conditions such as:

- The banks were generally well-managed.
- There was capital available to recapitalize the institutions.
- In some case, provisions in effect prevented some banks from passing to the control of foreigners.
- This solution was less costly than other alternatives.

FIGURE 3
System without Intervened Banks



The original shareholders have better information for valuing the assets of their banks less aggressively than a new investor, and they also have knowledge of their customers and thus retain competitive advantages for maximizing the value of the bank as compared with new investors. This means that for the government, in some cases, it is less costly to restructure some banks by using the incentives of their original shareholders, even though part of the costs of restructuring have been shared with the government and with the borrowers.

In the Mexican case, as we know, this shared cost was handled through schemes for purchase of the bank's portfolios by the Banking Fund for Savings Protection (Fondo Bancario de Protección al Ahorro—FOBAPROA), and through programs for debtors that gave them incentives to continue paying, contributing in turn to reducing losses.

II. Close or Restructure?

The answer to this question posed by de Juan depended on two factors in the case of Mexico: 1) the viability of the bank, and 2) the interest of and/or availability of capital among the original or new shareholders.

A bank is viable if its operations are supported by a sufficiently wide base of both stable deposits and customers. In Mexico, some banks did not pass the viability test and have thus been merged with other institutions. In other cases, despite the financial authorities' perception that the bank was viable, there were no investors interested in acquiring some institutions as independent units, in which case sales of branches or mergers with other prevailing banks were proposed.

III. Types of Restructuring

De Juan suggests various ways to restructure banks—for example, the division of a bank into GOOD BANK and BAD BANK, or the assumption of assets and liability by another institution. On this subject, the Mexican experience has indicated that the type of restructuring adopted doesn't matter, provided that the remaining risk on the assets is assumed by whoever acquires the institution to be restructured. This strategy may in principle seem more costly than the possible alternative of the government's retaining part or all of the assets, in the case of new investors who seek to minimize risk by requiring high reserves on the portfolio assumed.

However, the Mexican experience indicates that there is no substitute for private ownership for the appropriate management of a portfolio. It is for this reason that in Mexico the schemes originally proposed for management of the portfolio by investors have been undergoing revision so as to open up the way for other schemes in which those who acquire the bank purchase the portfolio, although this may be with apparently high reserves. To cover the risk of over-reserving, schemes have been established in which the purchaser agrees to return the reserves to the government if they are not used. As an incentive to save these reserves, the purchaser is granted a percentage of the reserves not utilized.

IV. The Importance of an Adequate System of Supervision

Everyone knows that sufficiently prepared and effective supervision prior to 1994 would have contributed in part

to making the Mexican crisis less severe. On the one hand, the timely establishment of basic principles and procedures of supervision, together with equally effective systems for compliance with auditors' observations, would have prevented the banks from expanding credit so rapidly without adequate systems of control and risk-management. It also would have been possible to avoid the concentration of credit in risky sectors and sectors with associated segments. In addition, adequate supervision would have detected poor quality capital in time and would have prevented its being used to prop up risky operations.

The recognition of these deficiencies has made it possible to strengthen supervision in priority areas, which has in turn contributed significantly to better management of the crisis. Better supervision has permitted the timely detection of risky activities, as well as bad management and practices and inadequate controls. Better supervision has also allowed for better diagnosis of the banks and better design of corrective measures for each of them.

Each of the banks that remain in the Mexican banking system maintains plans designed to improve each identified weakness, as well measures of supervision to evaluate the progress of such plans.

V. Future Challenges

Although it can be said that the worst of the Mexican crisis is behind us, it is also true that there is much yet to do to prevent the recurrence of such events. In particular, the following steps must be taken:

1. The Mexican banks that remain must continue with their capitalization efforts, both internally and through capital contributions.
2. The banks have to continue with significant efforts for recovery of their existing portfolios, in order to allow them to improve their financial situation and redirect resources that could be lent for productive investments.
3. A decisive factor for the above to take place is a strengthening of the legal and judicial system so as to strengthen the rights of creditors, as well as their opportunities for exercising them.
4. Banking liquidity has to improve through conversion of the debt of the Banking Fund for Savings Protection (FOBAPROA)—issued to reorganize the banking system—into governmental debt. This will allow the banks to recycle or finance that debt in the markets.

5. If we want to avoid recurring crises, we must adopt the measures necessary so as not to lose the progress that has been made in the area of supervision and to continue strengthening this area. This belief has led the President of the republic to propose to the national Congress that the National Banking and Securities Commission be given autonomy—autonomy that is necessary to continue forming supervising teams with sufficient technical training, as well as with competitive opportunities that give them institutional stability.

6. The moral hazard of bankers and their credits must be reduced, and the supervision of the market must be strengthened by limiting the coverage of deposit insurance.

In conclusion, it is clear that the most important factors that have contributed to achievements in the handling of the Mexican crisis are fundamentally consistent with the recommendations of Aristóbulo de Juan. But it is also true that some of these recommendations must be strengthened still more in order to prevent the recurrence of something that has been so costly and traumatic for the people of Mexico.

Comment

AUGUSTO DE LA TORRE

ARISTÓBULO'S WORK IS REALISTIC—BRUTALLY REALISTIC—AND THUS PROVOCATIVE. It emphasizes the need for greater dialogue and understanding between economists and those non-economists and policy-makers who, like Aristóbulo, have worked on and continue to work on the processes involved in cleaning up the bank insolvencies that occur frequently in our region.

Aristóbulo stresses the complexities characteristic of systemic banking crises, and he describes and analyzes some of the specific policies and mechanisms used to deal with them once they have come to light. However, implicit in his analysis is a set of suggestions relating to prior arrangements, both organizational and regulatory, that should be permanently in place if banking system problems are to be managed effectively rather than on a hastily improvised basis. In short, Aristóbulo's work invites us to reconsider the legal framework, instruments, policies, and procedures associated with the "termination" of non-viable banks.

It is true that the optimum situation is not to have an excessive number of firefighters and fire trucks in a city to deal with possible fires. It is equally obvious that the emphasis should be placed on fire prevention (e.g., housing and construction codes prescribing minimum standards that reduce vulnerability to fire) and

on early detection and remedial action (e.g., alarms and the kinds of detection devices that automatically activate sprinkler systems in hotels). However, it does not follow from these considerations that fire trucks and firefighters are unnecessary. The same goes for regulations governing the closing down of insolvent banks. Again, the emphasis should be on prevention—in the form of judicious start-up demands, capital and liquidity requirements, and monitoring by the market to supplement the monitoring performed by official supervisory agencies. Equally necessary are systems for early detection of banking problems and regulations to provide the basis for prompt and stringent remedial action. However, prevention, early detection, and prompt corrective measures cannot eliminate the need to

have effective mechanisms in place for the dismantling of non-viable banks.

Most countries in Latin America and the Caribbean are seriously deficient in instruments for resolving and handling the closing of insolvent banks. In my view, this is no accident. In reaction to the misuse of Central Bank and Treasury resources during the crises and bailouts of the 1970s and 1980s, these countries adopted legal reforms that introduced Draconian schemes for closing banks—schemes limited exclusively to the automatic liquidation of banks with structural problems when their owners, or third parties, were unable to restore their viability within short periods through reliance on private mechanisms. I believe it is valid to say that Chilean banking legislation in

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the mid-1980s played a pioneering role here. Those statutory provisions caught the imagination not only of multi-lateral institutions like the World Bank and the IDB but also of academics and policy-makers, with the result that Draconian schemes (like Chile's) for closing down nonviable banks spread rapidly, instituted through legal reforms in the other countries of the region. The healthy objective of these reforms was to avoid, at all costs, exposing Central Banks or Treasuries to the potential losses involved. A key difference, however, was that Chile introduced its legislation after having restructured its banking system, while many of the countries that imported it did so before restructuring their systems and while still prey to the consequences of weak supervision, deficiencies in accounting and disclosure standards, absence of established capital markets for bank securities, etc.

Despite the laudable intent behind such reforms, they seem in practice to have provoked delays in closing banks that should have been closed. This result, not anticipated at the time the reforms were being drafted, is tremendously significant, since it erodes the quality of the incentives, discipline, and "governability" of the banking system. Why do delays tend to occur in closing non-viable banks under the type of scheme we have labeled "Draconian"? There are many reasons, but a major one is that the authorities feel, with very good reason, that traditional liquidation, characterized by slow, cumbersome, and inefficient processes, and usually associated with extensive litigation, tends not only to cause excessive erosion of the assets of the failed bank, but also to destabilize and erode confidence in the banking system itself. Consequently, they see a high risk of contagion if either a large bank or various mid-size banks are put into automatic liquidation as a result of enforcement of the existing prudential regulations.

It is consistently noted that traditional liquidation works well in the case of small banks whose importance to the payment system is not significant. The authorities who regulate and supervise the banking systems in our region have generally not shied away from the liquidation of small banks, even in countries without effective small-depositor insurance systems. Not surprisingly, such liquidations have proved not to be traumatic and could be said to have added discipline to the banking systems. However, there is a marked contrast at the other end of the spectrum. When the insolvent banks are large, or when structural problems

affect a substantial segment of the banking system, the authorities tend to become paralyzed. This is reflected in a phenomenon frequently observed in the region, the "zombie-bank syndrome," where large, insolvent banks operate with the tacit approval of the authorities.

In these cases, a totally perverse situation occurs, one of "bad equilibrium," as we economists would say, in which the authorities take no action even though the managers and majority owners of decapitalized banks retain control of them and, as a result, have powerful incentives to gamble wildly with depositors' funds and even to plunder the banks. In the worst of cases, individuals participating in the market know that these large banks are not going to be forced to go the conventional liquidation route, and that neither are their difficulties resolvable by other means, given the want of appropriate legal provisions. Thus, they operate on the assumption that there is implicit insurance for *all* the liabilities of insolvent banks, as well as an unlimited subsidy net for their directors and legal owners. Neither the creditors of these banks nor their directors or owners pay a cent for this universal insurance or guarantee.

If there is a clear perception in the market of an implicit and universal government guarantee for large banks, we might ask why the authorities do not take advantage of it by assuming control of these banks when they detect their insolvency, *without closing them*, but removing their owners, replacing their directors, and injecting the necessary capital. The perception of a guarantee on the entire liability of these banks would presumably prevent a run on other large banks. But why aren't the authorities acting accordingly? Apart from the natural concern that the degree of moral hazard would escalate, there are at least three explanations: (1) the presence of economic policy restrictions; (2) the absence of a legal basis on which the state can take control of insolvent banks and cover losses explicitly and transparently from the national budget; and (3) the lack of unassailable legal means by which the regulatory authority can rapidly eliminate the property rights of the shareholders of a non-viable bank.

The search for solutions to the shortcomings in the laws governing termination of non-viable banks leads us to a sphere where there are no internationally recognized "minimum standards" or core principles, as there are for other aspects of banking regulation and supervision. Because the Basle discussions have not yet dealt systematically with policies and regulations on the closing down of non-viable

banks, it is very controversial to make pronouncements about what constitutes best practice in this field.

The third chapter of the recently published work Guillermo Perry mentioned earlier, *Beyond the Washington Consensus: Institutions Matter*, outlines institutional arrangements that would make it possible to manage the problem of the elimination of non-viable banks more effectively. This work serves as the inspiration for some suggestions I would like to put forward briefly in concluding.

First, if the many small depositors cannot be appeased immediately when a bank, particularly a mid-sized or large bank, closes its doors, their resistance to remaining silent increases exponentially. It is thus no coincidence that in Latin America, where explicit and limited deposit insurance systems were virtually nonexistent 15 years ago, interest in them has blossomed mightily.

Second, as I indicated earlier, a regulatory framework for the termination of non-viable banks that is limited solely to crude and inefficient liquidation is counterproductive. It is necessary to establish, even through legal reforms, alternative mechanisms that facilitate their closure without needless destabilization of the banking system as a whole or excessive erosion of the value of their assets. With this in mind, it seems very useful to provide clear criteria for application of the so-called "GOOD BANK/BAD BANK technique," whereby "good" assets and deposits are cleared from the balance sheet of the non-viable bank so they can be quickly transferred to another healthy bank or banks,

thus leaving only a "residual" or "bad" bank as the focus of the liquidation process.

Third, the legal instruments governing bank closings must provide incontrovertible means of extinguishing the property rights of an insolvent bank's shareholders, with no room left for discretionary action that could lead to abuse on the part of the regulatory authority. Banking laws in Latin America typically empower the regulatory authority to adjust the book value of a bank's assets, a process that can result in a negative equity position. However, the transition from such a position to extinction of the shareholders' property rights tends to be very complicated in many of our countries. This should be corrected, although any legal reform that seeks to strengthen the hand of the authorities in this area must expect to meet with resistance from certain powerful segments of the banking industry.

Fourth and last, the design of a regulatory framework to govern the closing out of insolvent banks inevitably runs into a trade-off between moral hazard and risk of contagion: The greater the priority given to reducing the risk of contagion, the less successful the effort to reduce moral hazard. It would be naive to think that an easy formula exists for finding the perfect balance, and it is clear that any optimum state of balance, if there is one, would not be independent of the circumstances in which the banking system finds itself in the first place.

Thank you.

Comment

S T E F A N I N G V E S

FIRST OF ALL, THANK YOU VERY MUCH FOR GIVING ME THE OPPORTUNITY TO COME ALL THE way here to talk about these issues. A few of the other speakers have pointed out there is a difference between economists and practitioners. I am both an economist and a practitioner, but what I am saying comes out of my head, not out of books; I have done what I am talking about.

Actually, it takes several years to learn the tools of this strange trade, and I could talk for hours about most of the issues that Aristóbulo touched on in his paper, but given the time constraints, and since everybody wants to get out and have coffee, I have to be very brief.

I am going to do two things. First, I am going to comment on some of the issues that are listed in the paper, and second, I am going to add a few issues that I also think are important, although they have not been mentioned in the paper. When I am talking about these things, I am not talking about small disasters. I am talking about major disasters, and that is important to keep in mind. I am not dealing with one or two small savings banks. I am talking about when the whole system is in deep trouble. When that happens, whether we like it or not, we have to deal with it, and it doesn't really help to start talking about bank reform. Bank reform you can talk about during calmer periods. At this stage it is too late. We need

to deal with bank restructuring, although as is mentioned in the paper, this is something that people most of the time do not really deal with a lot.

We must, first of all, come up with views on what to do and what not to do, and second, think about what machinery to put in place to deal with these issues. This can be dealt with basically in two ways. One alternative is to muddle through, don't say a thing, and use plenty of regulatory forbearance. However, this does not work well, particularly if you have a lot of foreign borrowing. It does not work at all sometimes, because then everybody is heading for the door and wants to get out of that market immediately. Nowadays, with international capital flows and an increasing demand for information, whether you

like it or not you usually end up having to deal with these issues up front. Dealing with these issues up front in a transparent and immediate way is basically what is suggested in the paper, and this is a method that I strongly support.

What we are talking about is how to deal with this situation once disaster has happened, how to get out of the mess. Who does what, when and why, and who is going to pay? One conclusion that others have mentioned and that I also strongly support is that you need a legal and a regulatory infrastructure to deal with these issues, and it helps a lot to put it in place before disaster strikes. It is very difficult to write up the rules while you are playing this difficult game; I have done that, and I know how hard it is.

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There is a lot to be gained if you can think about these things a little bit in advance.

Second, whether you like it or not, governments tend to get involved in these issues. You can talk a lot about the private sector, but when disaster has struck, there is going to be a severe lack of equity capital in the financial sector, and you are probably not going to find anybody around wanting to come up with the cash when you really need it. In that sense, whether you like it or not, governments tend to be involved in these processes. One way of looking at the government route is to say that the government ends up being the insurer of last resort. This happens when a disaster has struck of such a magnitude that there is a non-insurable risk in the private sector.

When you have to deal with these issues, it is very important to keep in mind that we are talking about two stages. One way of putting it is to say the following: A banking crisis is an *event*, one in which everybody wants to get the cash out of the bank. Bank restructuring is a *process*, and using the insurance-company comparison, you can say that a banking crisis is the accident, and bank restructuring is the damage control. This is often very ill-understood in the market.

It is very important when you deal with these issues to keep in mind that in most cases it takes several years to get out of the mess. If you want to make a proper due-diligence of a major bank, it takes more than six months to make a loan-by-loan, bottom-up analysis. For this reason, it is never going to be easy and often almost impossible to get out of a mess in a couple of weeks, although sometimes it is described in the papers as if it were possible to do it that way. In reality, there are serious physical constraints to doing it, since literally hundreds of people have to deal with this technical work.

Once you start dealing with bank restructuring, it is also important to keep in mind, as has already been pointed out here, that the loss is already in the system. Bank restructuring deals with how to distribute that loss and see whether it is possible to get some of the money back. But the loss is already there, and it is not going to disappear even if you decide to sit under the table with your fingers in your ears and don't want to hear about it. The loss does not disappear once disaster has struck.

When you start dealing with these issues, I strongly agree with what has been said earlier about who is to pay, because when things have gone wrong, it is very natural to

make sure the shareholders are the first to take the hit. It is very simple. Then, you change the management, and the board, because ownership gives control. If you don't do that, you are not going to be in charge, and you don't have a clue about what is going on. Don't kill the value of the franchise, because if you kill the value of the franchise, you lose the upside completely.

If there is a major crisis, it is probably impossible to make only the shareholders pay. Depositors and taxpayers usually end up paying part of the whole package, too, and this can be handled in many different ways. First, you can lose your deposits, but if there is a systemic problem, it is usually not advisable to use that solution, because you will end up with a total run on the system, and you will lose the payment system as well.

What is left is to have the government pick up part of the bill, and ultimately, at the end of the day, this is going to lead to increased government borrowing and, sooner or later, higher taxes. But in the end, there is no other way around it. If you don't want to do it that way, you will have to print money, and for other reasons, that is not very advisable, because that is going to create inflation, which is not a good thing.

When you are dealing with these issues, once you have decided that something has to be done, basically you have to deal with three types of flow processes, as I have chosen to call them. First, you have the financial flows that the government has to deal with. Second, you have a whole set of different corporate flows. And third, you have to have different skill sets depending on what stage of the restructuring process you happen to be in.

When it comes to the financial flows, what do I have in mind? Usually, the Central Bank starts with some sort of liquidity support. Very soon you realize that it was not liquidity support. Basically, we are talking about insolvency, and very serious insolvency. I am not talking about zero net worth; I am talking about how many times over—four, five, six times—you have used up all the equity capital in a bank. In the end, the government ends up holding equity. Once you hold the equity, you have to think about how to make that equity as liquid as possible, and in the end you sell the bank in order to get the cash.

Once you start dealing with these flows, you also end up holding a whole set of different corporations. First, you start with the bank. If it is a major disaster, it is highly likely that you end up holding an asset-management com-

pany, which in the early stages is a finance company. Then you own a lot of companies, just general corporations producing goods and services in various parts of the world. You need to restructure these companies, and, finally, you try to sell them as quickly as possible in order to get the cash. So you have a whole flow of various types of corporations that you end up having to deal with.

Finally, when it comes to the skills, in the early stages of the process you need bankers, then auditors, then what I call “loan transformers”—people who go out there and seize the collateral. Bankers usually want to keep their customers. Loan transformers don’t need customers; they need the collateral as quickly as possible. Consequently you need people with very different minds to do these things. After this you need corporate specialists to restructure the corporations you end up owning, and finally you need investment bankers who can deal with the sales process.

If you don’t have these skills, make sure you get them from somewhere, because otherwise you are going to make some terrible mistakes in the process. These skills need to change continuously, and that is what makes bank restructuring a difficult process. At the same time, you define success as “closing shop.” So if you employ somebody, you tell them you are very successful if you lose your job as quickly as possible, and that also creates some very special incentive problems. If you don’t think about these flows, it is likely you will end up creating a mess, because you are going to use the wrong skills at the different stages in the process.

One point that hasn’t been touched on very much in the paper, which I think is very important, is information.

During a crisis, there is a high premium on proper information. For what reason? Well, you can argue that information is a sort of second-best. If you cannot get your money back immediately, at least you would like to know when you are likely to get it back later, and for that reason there is always going to be a very heavy demand for proper information. If you refuse to inform, particularly in the international capital markets, you are going to end up paying a high premium or even end up being unable to borrow at all.

I know, because I went to New York, and I went to Boston, Frankfurt, and other financial centers. It is a hard thing to stand in front of several hundred people and say, “We made a mess, but this is how we are going to fix it.” But if you stay at home, it is going to be even more difficult. If you refuse to inform, you are actually going to create more problems. When you start informing, make sure you have a credible story, because if you do not have a credible story, and you are not able to deliver later, it is going to be even more of a problem, and people in the end are going to be even more suspicious.

In addition to what has been said in the paper—and I actually support almost everything in it—I think it is important to stress that once you are active in the international capital market, you must not forget to inform, and you must not forget to think about what sort of a story you are talking about, and make sure you come up with a credible story. Otherwise, it is going to be very difficult, and it is probably going to take years before you get out of the mess.

V. Institutional Investors and Securities Markets

Institutional Investors and Securities Markets: Which Comes First?

D I M I T R I V I T T A S

I NSTITUTIONAL INVESTORS INCLUDE PENSION FUNDS, INSURANCE COMPANIES, AND MUTUAL funds. Of the three, pension funds have traditionally been the most important component, with resources exceeding 50 percent of GDP in a score of countries around the world. Insurance company assets, especially life insurance assets but excluding any pension fund assets managed by insurance companies, rarely exceed 30 percent of GDP, while mutual fund assets have until recently been well below 20 percent of GDP in most countries.

Recently, mutual fund assets have grown at a very fast rate in the United States and many other countries. In fact, assets of U.S. mutual funds now exceed 50 percent of GDP, although some of these represent investments by company pension funds. Moreover, with the recent growth of personal pension plans, the traditional distinction between pension and mutual funds has been blurred considerably. In 1996, retirement plans of all kinds accounted for 35 percent of total mutual fund assets in the United States, while retirement plans invested in mutual funds accounted for 19 percent of all retirement assets (Investment Company Institute 1998).

Although retirement-linked mutual funds have a longer horizon than ordinary mutual funds, the ability of savers to switch across funds and the increasing use of commingled funds for both retirement and

other purposes suggests that pension funds and mutual funds increasingly have the same policy implications for securities markets irrespective of the purpose for which they are held. Historically, however, company pension funds had different structures and objectives and their policy implications may have differed from those of mutual funds.

The Sequencing Issue

Implicit in the title of this paper lies an important policy question: Should a country promote the creation of private pension funds, insurance companies, and mutual funds in the absence of well-developed securities markets?¹ The

answer to this question varies for each type of institutional investor.

With regard to pension funds, the policy question can take two forms. The first and stronger form asks whether a country should undertake systemic pension reform with a compulsory fully funded pillar in the absence of well-developed securities markets.² The weaker version asks whether a country should offer tax incentives for the voluntary creation of funded pension schemes.

To address the stronger form first, consider an imaginary country that lacks all the fundamental elements of a well-functioning financial system: no solvent banks and insurance companies; no mutual funds and securities mar-

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kets for bonds and equities; no long-term financial instruments and annuity products; no experienced regulators and supervisors; no bankers and actuaries; no accountants and lawyers; and no rating agencies. Should such a country reform its pension system and introduce a mandatory retirement savings scheme? Normally, my answer would be a firm no. Such a country should not even have a traditional unfunded social security system, and if it happens to have one, it is virtually certain that it will be malfunctioning, suffering from evasion, incomplete records, administrative inefficiencies, and strategic manipulation.

There are, however, three preconditions whose fulfillment would allow even a country lacking all the essential elements of a well-developed financial system to consider undertaking systemic pension reform: a strong, long-term, and persistent government commitment to implement a successful pension reform; introduction of effective arrangements for the safe custody of pension fund assets (to prevent theft and misuse of assets); and free access to foreign expertise. These preconditions are not easy to fulfill. The first implies a holistic approach to economic reforms and a willingness to proceed with banking, insurance, and capital market as well as macroeconomic and fiscal reforms. It also implies that successive governments, even if they come from different political parties, would be committed to the success of pension reform. Openness to foreign expertise implies a willingness to see large foreign financial institutions play a leading part in the funded pillar, ideally in joint ventures with large local groups, and by extension in the domestic financial system. Ensuring safe custody of pension assets also implies reliance on institutions with the large financial resources and advanced technical capabilities that are required for providing an effective custodial service.

Very few, if any, countries satisfy these unlikely sets of conditions. Countries that lack all the essential elements of well-functioning financial systems would also be unlikely to show the strong commitment to holistic reform, effective safe custody, and free access to foreign expertise. For the majority of countries that are characterized by somewhat weaker commitments and somewhat better-developed financial systems, the important financial preconditions for systemic pension reform would include commitment to macroeconomic stability and presence of at least a small number of sound and well-functioning banks and insurance companies. Prior development of securities markets would not be necessary, although willingness to

implement capital market reforms and openness to foreign expertise would be essential for the long-term success of pension reform.

Thus, to determine a country's readiness to implement systemic pension reform, it is more important to assess the commitment of the authorities to a holistic reform program than to evaluate the state of development of its securities markets. A basic reason for this is that the creation of private pension funds involves a gradual accumulation of long-term financial resources. This provides sufficient time to a reforming government to take all necessary steps for establishing robust and well-regulated securities markets.

In fact, in cases of systemic pension reform involving a gradual accumulation of assets, the most pressing issue in implementing the reform program may well be ensuring a sufficient technical capability for collecting contributions and keeping records rather than an adequate supply of long-term financial instruments. Initially, at least, the relatively small resources of pension funds can be invested in treasury bills and bank deposits. As pension fund assets increase, a growing proportion can be allocated to longer-term government bonds and corporate securities. Technical constraints as well as political opposition and the burden of the transition cost are usually greater obstacles to systemic pension reform than the state of development of securities markets. This is in some sense ironic, because among the main benefits of systemic pension reform are the positive externalities associated with the development of securities markets.

If the answer is affirmative to the stronger form of the question, it will also be affirmative to its weaker version. In the absence of well-developed securities markets, voluntary employer-sponsored pension funds will invest in book reserves, effectively non-marketable equity of the sponsoring employers. This was widespread practice in all countries, including Anglo-American ones, prior to the 1950s, but has persisted into the present in Germany and some other European countries. Book reserves can be combined with holdings of government bonds and bank deposits. Over time book reserves have been replaced, especially in Anglo-American countries, with marketable government and corporate securities.

The argument in favor of private pension funds counters a long-standing criticism of traditional social security experts against funded pension schemes. The criticism was that in the absence of well-developed capital markets, funded pension schemes would fail because they would be

used as captive sources for financing large budget deficits at negative real rates of interest. The traditional criticism of funded pension schemes was probably valid before the 1970s, when government policies in most developing countries were inflationary and financial market development was not an important objective of government policy. But it overlooked the dynamic interaction that could develop between pension funds and capital markets once government policies focused on maintaining financial stability and on removing obstacles that inhibited the development of markets. The experience of several OECD and, more recently, Latin American countries shows that both private pension funds and capital markets can thrive under the right macroeconomic policies, meaning low inflation (or moderate inflation with indexed instruments), small budget deficits, and positive long-term real rates of interest.³

Insurance reform is also sought primarily for its own sake, as insurance business is underdeveloped in most low- and middle-income countries. In addition to achieving macroeconomic stability, reforming the insurance sector implies the removal of repressive regulations that impede competition, innovation, and efficiency. Insurance sectors in developing countries are often dominated by state-owned entities with limited participation by private or foreign companies and are characterized by inadequate capital; high operating costs; limited product innovation; low investment returns; lax control over brokers; high levels of receivables; extensive fraud; unduly large claims by some insured but otherwise low claims and settlements for the majority of customers; protracted disputes and long delays in settlement; and generally widespread mutual mistrust between insurance companies and the insured.

Improving financial returns is only one of many actions that can be taken to enhance the performance of the insurance sector. Because insurance companies have a smaller accumulation of financial assets than pension funds, the impact of insurance reform on capital market development is also less extensive. In contrast, improving financial returns is more central for pension funds, which specialize in offering long-term capital accumulation accounts. Nevertheless, insurance reform may be an essential element of systemic pension reform because of the derived demand for term life and disability insurance by active workers and of annuity products by retiring workers.

The situation of mutual funds is different. Passing mutual fund legislation and creating an enabling environ-

ment for their establishment is usually an integral part of measures to promote capital market development. But mutual funds specializing in particular instruments are unlikely to thrive unless the markets for those instruments are also well-developed. In many developing countries, the mutual fund industry is dominated by funds investing in government bonds or bank deposits, with only a small part accounted for by equity funds. In most cases, this is probably explained by the usually high level of real interest rates on debt instruments and the continuing lack of confidence in equity markets. Whatever the reasons, this experience suggests that mutual funds *follow* the development of securities markets—unlike pension funds, which often predate them, and insurance companies, whose development is often unrelated to the development of securities markets.

Dynamic Interaction

The sequencing issue—namely, whether different types of institutional investors lead or follow the development of securities markets—is an interesting question, but it is less important than the interactive issue. Experience from Anglo-American countries suggests large potential benefits from the interactive process between institutional investors and securities markets. Institutional investors can act as a countervailing force to the dominant position of commercial banks and thus promote competition and efficiency in the financial system. They can also stimulate financial innovation, modernize capital markets, enhance transparency and information disclosure, and strengthen corporate governance. The efficiency gains from these qualitative changes in the functioning of financial systems may far exceed the growth effects from the quantitative development of banks and securities markets that have been documented in recent years (Levine and Zervos 1996). Although empirical quantification of these efficiency gains remains to be done, there is considerable evidence attesting to the enhanced efficiency of the financial system.

The efficiency gains from the development of institutional investors are not automatic. They are less likely to materialize if institutional investors are required to invest only in non-marketable government securities, as has long been the case with the national provident funds of Singapore and Malaysia. Although these funds have avoided the fate of provident funds in African countries, where high negative real rates of return have eroded the real value of

fund balances, they have failed to provide a direct stimulus to the development of domestic securities markets. In similar vein, although to a much lesser extent, institutional investors in continental European countries have been constrained by quantitative investment limits and by conservative investment policies from exerting a beneficial effect on capital market development. In contrast, in Anglo-American countries institutional investors have made a stronger contribution to capital market development. Operating under the "prudent person" rule, they have also been able to earn higher rates of return than in countries with quantitative investment limits (Davis 1997).

The emergence of institutional investors as large financial institutions is new to developing countries. The remainder of this paper examines the impact of institutional investors on the U.S. financial system, with occasional references to the experience of other Anglo-American countries as well as Chile and Argentina, two reforming countries where institutional investors have started to have an impact on financial market structures and practices. It is important to remember, however, that the interactive process between markets and institutions that is emphasized in this paper takes considerable time to come to fruition. Patience and persistence are strongly recommended.

Countervailing Force

One of the main benefits of the growth of institutional investors is the intensification of competition in the financial system. The development of new sources of finance, whether from new entry of foreign banks, access to foreign markets, or the growth of institutional and other non-bank financial intermediaries (such as leasing and factoring companies), forces dominant commercial banks to become more competitive and to start seeking out their customers rather than waiting for prospective borrowers to visit them. In the United States this change in bank behavior seems to have taken place in the 1940s and 1950s, followed within a decade or so by other Anglo-American countries, and in subsequent years by most developed and developing countries.

In the United States the process was stimulated not only by the growth of institutional investors but also by a notable change in the investment policies of life insurance companies, a group of institutions that commanded a significant share of U.S. financial assets since the beginning of

the century. Life insurance companies controlled 11 percent of the total assets of U.S. financial institutions in 1900, against 66 percent for commercial banks. This rose to 17 percent by 1929 and to 25 percent by 1940, when commercial bank assets had declined to 55 percent (Krooss and Blyn 1971). In the 1940s and 1950s insurance companies substantially lowered their holdings of government bonds and agricultural mortgages and increased their holdings of non-farm mortgages and especially of privately placed corporate debt (Calomiris and Raff 1995). Private placements were favored by borrowers who had limited access to the public bond market and for whom the total issue costs of private placements were lower than those of public placements (Calomiris and Raff 1995; Carey, et al., 1993). The growth of insurance-company lending to industrial and commercial companies increased competition to bank loans.

The development of institutional investors also contributed to the advent of competitive bidding for corporate issues of securities. Historically, new-issue business was highly rigid and hierarchical. Investment banks were jealous of their syndicate positions and their ranking in particular issues. The large investment banks cultivated close relations with large corporate issuers, acted as sole managers for new issues, and organized large syndicates for underwriting and distributing them. Relative positions in these syndicated issues were rigidly respected (Chernow 1990). Although the SEC promoted the use of competitive bidding through regulatory means in the 1930s and 1940s, the market impact was limited. The SEC first required sealed bids for new issues of corporate securities in the 1930s and then implemented Rule 50 on competitive bidding in 1940. But because of strong opposition from investment banks, this was only applied on bond issues by large utility companies and railroads. Issues by industrial and commercial corporations as well as private placements, which had the largest issue spreads, were exempted (Carosso 1970).

But what was not achieved by regulatory fiat was brought about by the growth of institutional investors, the resources of which reached critically large levels in the 1970s. While traditional investment banks maintained unrivaled close relations with large corporations, new investment banks that specialized in trading rather than issuing and underwriting securities developed close relations with institutional investors. The greater availability

of financial resources encouraged corporations to place new issues directly with institutional investors, to replace sole management of their public issues with several joint lead managers, and to set up "Dutch auctions" for their new issues and invite competing syndicates of underwriters.

In the 1980s and 1990s, institutional money fueled the operations of corporate raiders, the use of leveraged buy-outs, and the growth of high-yield securities, all of which contributed to greater competition in financial markets and facilitated the corporate restructuring that took place in the 1980s and 1990s. Institutional investors have also supported the growth of venture capital funds and the provision of private equity, both of which help finance new and expanding smaller firms.

Another benefit of the growth of institutional investors was the decline in both new issue and trading costs. The first was not just a result of the countervailing force of institutional investors, but it also reflected lower marketing and monitoring costs of issues targeted at institutional investors. Studies report narrower spreads for new issues by companies in which institutional investors are large shareholders (Hansen and Torregrosa 1992; Hansen and Pinkerton 1982). The fall in trading commissions was associated with the rise of bloc trading that was prompted by the growing importance of institutional investors. Trading commissions for large trades fell by 40 percent after the abolition of minimum commissions in New York in 1975 (Chernow 1990). Large trade commissions also fell in London after the stock exchange reform in 1986 and in many other stock markets, which have followed in the steps of New York and London.

Financial Innovation

The past three decades witnessed major new financial innovations as well as a large expansion of the financial services industry. Most of the innovations in the 1970s were prompted by the increase in the level and volatility of interest rates, but institutional investors, and especially pension funds, were major forces stimulating this innovative process (Bodie 1990). Financial innovation was also influenced by regulatory changes.

The response of most lenders and borrowers to the high and unpredictable interest rates of the early 1970s was a move to the use of floating rate debt, including adjustable-rate mortgages, a process that had already taken place in Britain during the 1960s. However, pension legislation

enacted in 1974 codified the liabilities of U.S. private pension funds and imposed minimum funding requirements. This created a strong demand for long-duration fixed-income securities by pension funds and contributed to the emergence and growth of both zero-coupon bonds and mortgage-backed securities.

It is interesting to note that mortgage securitization did not take off until another unrelated and ill-advised regulatory change provided a strong incentive for the supply of securitized mortgages. This regulation allowed thrift institutions to sell their low fixed-rate mortgage loans in the early 1980s, when market interest rates were very high, and to amortize the losses over a longer period (Barth 1991). Mortgage securitization also facilitated the regional diversification of mortgage portfolios of U.S. commercial banks and thrift deposit institutions. Securitized mortgages, and especially collateralized mortgage obligations with their successive maturity tranches, provided an attractive outlet for the long-term resources of institutional investors, who now hold about one-third of all outstanding agency securities in the U.S. financial system.

The immunization strategies of pension funds also promoted the use of derivative products, such as index options and futures contracts, while pension funds also spurred innovations in the equity markets. The first indexed (or index-tracking) mutual fund was created for pension funds in 1971, in response to the growing realization that active investment management failed on average to achieve higher net returns than a fund that was passively invested in a market index. The first index-tracking fund for retail investors was established in 1976 (Bogle 1994). Since then there have been several additional innovations with index-tracking funds for bonds, mid-cap and small-cap equities, value and growth equities, and international equities.

More recently, in response to the growing popularity of defined-contribution retirement plans and the demand for a more effective management of investment risk, new synthetic investment products have been developed. These minimize the downside risk of equity investments (by providing a floor on the value of investments over some period of time), while allowing some participation in the upside potential of the equity market (Bodie and Crane 1998).

Financial innovation in developing countries that have implemented systemic pension reform has been faster and more directly linked to the creation of private pension funds. In Chile, which reformed its pension system in

1981, pension funds supported the development of both mortgage and corporate bond markets (Diamond and Valdes-Prieto 1994). The outstanding volumes of mortgage and corporate bonds grew from negligible levels in 1981 to 9 percent and 4 percent of GDP, respectively, by 1993, while government bonds and central bank securities amounted to 28 percent of GDP in 1993. Pension funds and insurance companies (which benefited directly from the pension reform program) held more than 95 percent of each category of these bonds.

In Argentina, which reformed its pension system in 1994, financial innovation has allowed pension funds to invest in synthetic products with a more attractive risk/return trade-off than either bank deposits or marketable securities. For example, the vast majority of bank deposits (covering 23 percent of total assets) were placed in December 1997 in certificates of deposit with a variable return linked to an underlying bond or stock-market index. Although these innovations involve products with embedded options that are difficult to price, they benefit pension funds by limiting their downside risk, while allowing them to share in the upside potential of the underlying index. Nevertheless, they expose them to counterparty risks, which can be very large if the financial institutions offering such instruments are not consistently and at all times properly hedged. However, the banks offering such synthetic products to the Argentine pension funds are large international banks that have the expertise and internal control systems to ensure their ability to honor these contracts. Argentine pension funds also invested in securitized instruments based on credit card and other receivables. In both Chile and Argentina, the private pension funds have also been able to invest in the securities of privatized enterprises.

Market Integrity

Most investors are concerned about market integrity and fair prices, which depend on the timely disclosure of meaningful information and the protection of minority shareholders from market manipulation and other exploitation by controlling groups of shareholders. Institutional investors, which are managed by trained professionals, are usually more aware than ordinary investors of the potential conflicts of interest and agency problems facing corporate management and are better able to insist on investor-protection legislation that will ensure market integrity.

Investor-protection rules cover prohibition and penalties on insider trading and reporting of insider positions as well as rules on self-dealing, takeovers and changes in corporate controls, asset valuation, prospectuses for new issues, and disclosure of audited consolidated statements on public companies. Investor-protection rules are better developed in countries where large institutional investors hold diversified minority positions in a large number of companies than in countries where institutional investors are either underdeveloped (e.g., Germany) or tend to hold large controlling positions in a small number of companies (e.g., South Africa). At the same time, a stronger legal protection of minority shareholder rights may have contributed to the earlier and larger-scale diversification into equities of institutional investors in Anglo-American countries compared with continental European countries.

Mindful of the need to protect the long-term interests of workers affiliated with the new private pension funds, the authorities in Chile, Argentina, and other reforming countries have taken measures to strengthen investor protection, especially in the areas of insider trading, self-dealing, and takeover rules. The publication of consolidated statements following internationally accepted accounting and auditing standards is not yet fully implemented, although pressures for the disclosure of timely and meaningful information on corporate performance are mounting.

Pension reform led to the development of an effective risk-classification system in Chile under a committee comprising public officials and representatives of the private pension funds. This committee rates various instruments for their suitability as pension fund investments. They screen ratings prepared by private rating agencies and thus avoid to some extent the problems caused by an alleged low quality of private ratings. The quality of private ratings is also raising concerns in Argentina. In both countries competition among a large number of rating agencies seems to have resulted in a lowering of standards. This may, however, be a temporary setback. The quality of ratings is likely to improve once a consolidation of rating agencies takes place and higher quality standards are adopted.

Modernization of Market Trading

Institutional investors also exert pressures for modern and efficient trading facilities. This covers not only the trading activity per se but also clearing and settlement facilities, as

well as the creation of central depository agencies. Efficient trading systems are characterized by low transaction costs, high transparency, high liquidity, and low volatility. There is often a trade-off between these characteristics and especially between high liquidity and low volatility on the one hand, and low transaction costs and high transparency on the other.

Although there are several different ways in which trading systems can be organized, institutional investors have contributed to the development of more efficient trading systems. As already noted, the use of bloc trading led to the abolition of minimum commissions and the restructuring of stock markets in many countries around the world. Institutional investors have also played an important part in promoting more efficient clearing facilities and establishing central depository agencies that facilitate the move to book-entry systems and provide safekeeping services. And they have exerted pressure for modern efficient and reliable back-office operations that have suffered in all countries with emerging securities markets as existing facilities could not cope with fast growing trading volumes.

The impact of institutional investors on trading and market liquidity depends on their investment policies and the extent to which they actively trade their portfolios. Newly established private pension funds tend to adopt a policy of "buy and hold." This is often explained by the gradual but steady increase in their financial resources at the start of their operations. Any rebalancing of their investment portfolios can easily be effected by redirecting new inflows of funds, without requiring large sales of existing holdings. The limited supply of suitable securities is also another reason behind such "buy and hold" strategies.

In this respect, it is instructive to note that a similar pattern was followed in the United States and the United Kingdom when corporate pension funds started to place their reserves in corporate equities. For instance, the trust department of Morgan Guaranty advocated a "buy and hold" strategy in the early 1960s (Chernow 1990). Morgan Guaranty had the largest trust department among commercial banks and was one of the designated managers of the pension fund of General Motors, which had decided in the early 1950s to allocate up to 50 percent of its pension reserves into equities. Similarly the Imperial Tobacco Pension Fund diversified into equities in the late 1940s and followed a "buy and hold" strategy while it was building its equity portfolio.

The initial and amply justified "buy and hold" strategies delay the beneficial impact of institutional investors on market liquidity. However, they do not justify the conclusion that the development of a fully funded pension system is unlikely to develop local stock markets per se (Reisen 1997). Over time, pension funds and their asset managers are likely to adopt more active trading policies, enhancing the liquidity of markets and leading to higher efficiency and lower transaction costs.

Corporate Governance

The role of institutional investors in corporate governance has evolved in line with their growing importance as corporate owners. As long as their equity holdings were small and diversified in a large number of companies, and as long as they represented a small fraction of market capitalization, institutional investors adopted a passive approach to corporate governance. They tended to vote with management, and if they were unhappy with corporate performance, they could sell without suffering a big fall in market price.

But with continuing growth in their accumulated assets, institutional investors became collectively dominant shareholders of many non-financial corporations. Among large U.S. corporations, in 1988 institutional investors owned 86 percent of the equity of Amoco, 82 percent of General Motors, 74 percent of Mobil, and 70 percent of Citicorp (Coffee 1991). With such dominant positions, they could no longer exercise the "exit" option without disrupting the market and suffering big falls in market prices.

Recent attempts to develop effective means for exercising "voice" in corporate affairs are a response to the decline of the "exit" option. In addition, institutional investors have been adopting investment policies based on passive indexation as an effective strategy for achieving diversification with market returns and low transaction costs. Passive indexation policies have limited their ability to divest from poorly performing companies and have increased pressures for more effective monitoring of corporate performance and for increasing the accountability of corporate managers.

Faced with the persistence of poorly performing corporations, some institutional investors increased their public criticism of overambitious expansion plans, excessive managerial compensation, and anti-takeover defenses that entrenched the position of incumbent managers at the expense of shareholders. Open public criticism has been instrumental in mobilizing collective action by disgrun-

tled shareholders and in raising the threat of regulation and legislation to prohibit the alleged abuse and misbehavior.

In the United States, public criticism of poor corporate performance has been led by public pension funds, such as the California Public Employees Retirement System (CALPERS) and the New York State Common Retirement Fund, which were independent of corporate management. But another effective way of voicing public criticism has been the use of formal associations of institutional investors (such as the Association of British Insurers and the National Association of Pension Funds in the United Kingdom) or ad hoc groupings of interested institutional investors (such as the Institutional Shareholders Committee in the United Kingdom or the Council of Institutional Investors in the United States). The last-named group was created 14 years ago and is a forum for big institutional shareholders to discuss corporate problems. It regularly publishes a list of the 50 least-performing companies and thus exerts pressure on the offending corporate managers without exposing any individual shareholder or pension fund manager to the threat of corporate retaliation.

Institutional investors have also emphasized the importance of strengthening corporate-governance structures and especially of increasing the accountability of managers, a process that is ongoing. In the United Kingdom three high-level committees have published reports recommending various measures to strengthen corporate governance, while in the United States two codes of corporate governance were issued recently, one by CALPERS and the other by the Council of Institutional Investors.

The measures that are contemplated to strengthen corporate-governance structures and improve the effectiveness of corporate boards include the following: separating the functions of chairman and chief executive officer and appointing non-executive chairmen in all companies above a certain size; electing independent external directors; using cumulative voting for board elections; opening the proxy process to allow greater communication among shareholders; using confidential voting at board meetings; expanding the role of board committees that are independent of executive directors; disclosing the amount and rationale of managerial compensation; and opposing anti-takeover defenses that are designed to protect incumbent managers at the expense of shareholders.

Of these measures, the use of cumulative voting for board elections seems to be the most powerful tool for

allowing institutional shareholders to elect directors who are truly independent of corporate managers and play an active part in protecting the interests of shareholders. Also of major importance is the increasing use of board committees consisting of non-executive directors to select and appoint chief executive officers (to avert the perpetuation of the business policies of incumbent management); vet managerial compensation (to prevent excessive packages unrelated to performance); approve major expansion plans (to check managerial tendencies for empire-building); and evaluate and respond to friendly and hostile bids (to ensure that shareholders receive maximum value from takeovers).

It is, however, too early to assess the long-term effectiveness of recent initiatives. Non-executive directors and collective bodies may over time be captured by corporate management. Institutional investors are not interested in second-guessing management, and they may well have a preference for liquidity rather than control. But their involvement in corporate governance may facilitate the forced replacement of underperforming managers. Over the past decade or so, several large U.S. corporations, including American Express, General Motors, and IBM, replaced their managements in response to pressure from large institutional shareholders (Monks and Minow 1995).

Financial Regulation

The development of securities markets and the growth of institutional investors require robust and effective regulation. Most developing countries lack a robust regulatory framework, although copying laws and rules prevailing in more advanced countries is not a major exercise. The real challenge is the shortage of experienced supervisors and the absence of a strong tradition favoring compliance with the rules and discouraging regulatory forbearance.

The complex issues encountered in designing an effective regulatory framework are not addressed in this paper. However, three important points may be made. First, the gradual increase in the assets of institutional investors allows time for intensive training of regulators and for developing a more sophisticated regulatory regime as the needs of institutional investors and securities markets evolve and become more complex. Since its pension reform of 1981, Chile has considerably strengthened the regulation and supervision of both financial institutions and markets, and other reforming countries in Latin America and Eastern Europe have engaged in long-term programs of

upgrading their regulatory systems. Second, given the absence of long traditions in institutional investing, developing countries may start by adopting a strict regulatory framework and then proceed to relax it as the supply of financial instruments evolves and the case for adopting the more flexible “prudent person” rule becomes more credible (Vittas 1998). Third, involving foreign institutions in the operation of institutional investors lowers the importance of strict regulations and effective supervision, because large foreign institutions have both the resources and the expertise to operate prudently and effectively. And large foreign institutions also have their reputations at stake.

One regulatory policy that has caused considerable controversy is the imposition of investment limits on the portfolios of institutional investors in newly reforming developing countries, and especially the prohibition or very low limits applied on holdings of overseas assets. In the long run, all types of financial institutions should be encouraged to hold diversified portfolios, which for institutional investors, especially pension funds and insurance companies, should include equities and overseas assets. In the short run, imposing some investment limits may be advisable given the small volume of accumulated resources and the need to develop asset-management expertise, although the latter constraint may be overcome by encouraging use of internationally diversified local or foreign mutual funds. Any investment limits are unlikely to be binding, given the strong “home bias” of institutional investors (Brennan and Cao 1997). In the long run, regulatory policy should move toward adoption of the “prudent person” rule with an implicit or explicit requirement for adequate portfolio diversification and an emphasis on the fiduciary duty of asset managers to serve the interests of investors.

One final point before concluding this paper concerns the role of asset managers of institutional funds that are part of large financial conglomerates. If asset managers belong to the same group as large commercial banks (as is often the case in both developed and developing countries), why would they act as a countervailing force to their affiliated companies? There is clearly the possibility that group policies may steer asset managers away from undermining the competitive position of commercial banks. However, experience has shown that asset managers promote the development of new products and practices that weaken the relative role of traditional banks. This may be attributed to different objectives and constraints facing asset

managers, especially the fiduciary duty imposed on them, or to differences in the relative importance of asset managers and banks in particular financial groups, or to the existence of some independent asset managers. But it may also be explained by the complementary nature of bank and non-bank types of financial services, which would imply that both banks and asset managers (as well as other parts of financial groups) benefit from the development of new products and services. However, given the recent nature of these developments and the continuing trend toward consolidation and conglomeration, the long-term impact of institutional investors on the behavior and performance of financial groups is an open question.

Concluding Remarks

This paper argues that the promotion of private pension funds and insurance companies should be pursued for their own sake and their potential economic, fiscal, and financial benefits and should not be dependent on the prior development of securities markets. The situation of mutual funds is different since mutual funds are unlikely to thrive unless the markets for the instruments in which they specialize are themselves well-developed.

The limited supply of suitable financial instruments should not be a major obstacle for the creation of pension funds and insurance companies. These institutions will accumulate their long-term financial resources on a gradual but steady basis, providing ample time to reforming governments to develop their securities markets. A far more important factor than the state of development of securities markets would normally be the existence of strong political commitment to a holistic reform program that would need to cover not only pension and insurance reform but also broader macroeconomic, fiscal, banking, and capital market reforms.

Given this commitment, institutional investors can provide a strong stimulus to the development of securities markets. They can act as a countervailing force to the dominant position of commercial banks, stimulate financial innovation, modernize capital markets, enhance transparency and information disclosure, and strengthen corporate governance.

The second half of this paper examines the impact of institutional investors on the U.S. securities markets, noting the advent of competitive bidding for corporate securities, the development of mortgage securitization and deriv-

ative products, the introduction of indexed funds, the modernization of trading and related facilities, and the use of collective bodies and specialized monitors for strengthening corporate governance. Some developments in the United Kingdom as well as Chile and Argentina are also noted.

The paper emphasizes that it takes time for institutional investors to reach the critical level that would allow them to play a catalytic role in capital market development. Several of the practices now found in developing countries also characterized the U.S. market in the 1940s and 1950s when institutional investors were about to come of age. Nevertheless, some of the beneficial effects of institutional investors are taking place faster in developing countries because of the experience gained in advanced countries and because of the transfer of financial expertise that electronic technology and globalization make possible in modern times.

References

- Barth, James R. (1991). *The Great Savings and Loan Debacle*. Washington, DC: American Enterprise Institute for Public Policy Research.
- Bodie, Zvi (1990). "Pension Funds and Financial Innovation." *Financial Management*. Autumn.
- Bodie, Zvi, and Dwight B. Crane (1998). "The Design and Production of New Retirement Savings Products." *Harvard Business School Working Paper #98070*.
- Bogle, John C. (1994). *Bogle on Mutual Funds: New Perspectives for the Intelligent Investor*. New York: Dell Publishing.
- Brennan, Michael J., and H. Henry Cao (1997). "International Portfolio Investment Flows." UCLA, mimeo.
- Calomiris, Charles W., and Daniel M. G. Raff (1995). "The Evolution of Market Structure, Information, and Spreads in American Investment Banking." In *Anglo-American Financial Systems: Institutions and Markets in the Twentieth Century*, Michael D. Bordo and Richard Sylla eds. New York: Irwin Professional Publishing.
- Carey, Mark, Stephen Prowse, John Rea, and Gregory Udell (1993). "The Economics of Private Placements: A New Look." *Financial Markets, Institutions, and Instruments*, 2:3, 1–67.
- Carosso, Vincent P. (1970). *Investment Banking in America: A History*. Cambridge, MA: Harvard University Press.
- Chernow, Ron (1990). *The House of Morgan: An American Banking Dynasty and the Rise of Modern Finance*. New York: Simon & Schuster Inc.
- Coffee, John (1991). "Liquidity vs. Control: The Institutional Investor as Corporate Monitor." *Columbia Law Review*.
- Davis, E. Philip (1997). "Regulation of Pension Funds." OECD, mimeo.
- Diamond, Peter, and Salvador Valdes-Prieto (1994). "Social Security Reforms." In *The Chilean Economy: Policy Lessons and Challenges*, Barry Bosworth, et al, eds. Washington, DC: Brookings Institution.
- Hansen, Robert S., and John M. Pinkerton (1982). "Direct Equity Financing: A Resolution of a Paradox." *Journal of Finance*, 37, pp. 651–65.
- Hansen, Robert S., and Paul Torregrosa (1992). "Underwriter Compensation and Corporate Monitoring." *Journal of Finance*, 47, pp. 1537–1455.
- Investment Company Institute (1998). *Mutual Fund Fact Book*, 38th edition. Washington, DC: Investment Company Institute.
- Krooss, Herman, and Martin Blyn (1971). *A History of Financial Intermediaries*. New York: Random House.
- Levine, Ross, and Sara Zervos (1996). "Stock Markets, Banks, and Economic Growth." Washington, DC: World Bank, mimeo.
- Monks, Robert A.G., and Nell Minow (1995). *Corporate Governance*. Cambridge, MA: Blackwell Business.
- Reisen, Helmut (1997). *Liberalizing Foreign Investments by Pension Funds: Positive and Normative Aspects*. Technical Paper 120. OECD Development Center.
- Vittas, Dimitri (1996). "Sequencing Social Security, Pension and Insurance Reform." *World Bank Policy Research Working Paper 1551*. Washington DC: World Bank.
- Vittas, Dimitri (1998). "Regulatory Controversies of Private Pension Funds." *World Bank Policy Research Working Paper 1893*. Washington, DC: World Bank.
- World Bank (1994). *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*. New York: Oxford University Press.

Endnotes

1. The term securities markets is used here to refer to both equity and debt instruments, although traditional concern was often focused on the underdevelopment of equity markets.
2. The merits and demerits of systemic pension reform, which involves a move away from complete reliance on an unfunded public pillar, are not discussed in this paper. For a comprehensive review of the arguments for systemic pension reform, see World Bank (1994). Vittas (1996) provides a more succinct overview.
3. The interaction between securities markets and pension funds may materialize even if private pension funds represent a small, but significant, part of the pension system. It is not necessary to implement a complete privatization of social security to obtain the capital market benefits of private pension funds. In fact, a mixed private/public pension system may be preferable as it allows a diversification across providers and may offer better protection against the long-term volatility of capital markets (Vittas 1996).

Comment

T O M G L A E S S N E R

I AM GOING TO MAKE MY REMARKS IN ENGLISH IN KEEPING WITH THE NOTION THAT WE HAVE TO do this quickly.

It is a great pleasure to be here. As I start out, let me quickly note that the program suggests that I am with the “Foundation.” We have a foundation. I am not part of the foundation. I have gotten a lot of calls from people due to the fact that this was on the Internet, and I just want to correct that. I have to try to make the money; others in our organization, including our chairman, try to be very philanthropic. Having said that, I am beginning to wish I were part of the foundation, given where emerging markets are today.

With that introduction, let me say that few people providing public policy advice today combine the practical with what economic theory and economic history teach us. I believe Dimitri has always been very capable of this, and the paper obviously reflects his abilities in that area.

In considering the role of institutional investors, I want to offer some comments on each of the major headings in Dimitri’s paper, and because time is limited, I am going to try to focus briefly on the sequencing question, with a couple of additional comments, although much of what is said in there I have to say I wouldn’t tremendously object to.

Second, I want to talk a little bit about the dynamic interaction and efficiency gains, a little bit from the perspective of my new job. As you know, I was before on one side of the fence and now have to think a little more about how to make money and how to evaluate investments that we may undertake.

And finally, I want to say very, very quickly something about financial regulation and its design, an area that is popular these days, but still, practice and theory need to be better combined.

On sequencing, I have really got two points to make: First, I think the points that Dimitri makes about infrastructure are important—about custody systems and, actually, about the need for political will in the case of pension

reform. However, I think that one point he does not make is—and it is something that I wrote about two years ago with one of the people on the panel, Mr. Valdes—is that when you come right down to it, there are four interesting aspects to this, and I think maybe they are worth mentioning, since a lot has been made of the fact that the institutional infrastructure has to be so developed.

Point number one, we felt that the infrastructure needed to support pension services can be radically reduced by permitting what we have thought of as competitive importation of certain services that can allow a small country to rely more on the financial sector laws and financial supervision framework of an offshore-providing country. That is something we can talk a bit more about.

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Second, we felt that the greater tendency for lack of competition in small countries due to a small contribution base and a lack of sufficient independent interest in asset management can be mitigated by greater international trade in such essential components of pension services as data processing, investment management, and what we call longevity insurance.

Third, allowing for investments in foreign currencies as part of pension investments raises the issue of convertibility guarantees over very long-term horizons. This is an issue that people don't focus enough attention on, and it is one where actually, the multilateral institutions could think deeply about the question, even in the context of perhaps thinking about how their guarantee product might be used in this context.

The last area is that given the lack of independent interest in many emerging markets of small size, there can be the need to mandate, in our view, offshore investments for some funds in addition to permitting greater foreign competition in the provision of investment management services.

Let me come to the second point on sequencing, which I think is a little bit more fundamental, and maybe it is an area where I wouldn't completely agree with the way the question is phrased in the paper. It has to do with how we think about the industrial organization through which financial services are provided. And actually, Dimitri hinted at this in the last part of his presentation when he talked about conglomerates. In a wide variety of countries, financial-industrial conglomerates or groups provide a bundle of financial services that are being cross-sold via branches as well as through outlets or stores in the so-called non-financial entity.

Hence, given this increasing conglomeration in the provision of financial services, the question I would ask is, Are we really focusing on the right public policy question when we talk about institutional investors in a kind of vacuum? I think the question we really ought to be asking is whether public policy-makers should be taking stock of how existing regulations, laws, and conventions—and the organizations through which financial services are provided—can be made more efficient and contestable across a whole array of banking and non-banking services provided by a conglomerate.

Now, what am I really saying here? It is a very simple concept, really. If you think about the improvements in technology that are occurring today, it will be difficult to

go back to a situation where you develop "capital markets" by thinking about totally separate "institutional investors" per se—that is, there is a separate legal demarcation. I think you want to allow for scope for both types of structures, and certainly in the world today in terms of our doing our evaluations on lots of financial institutions, we really look at them as groups inclusive of industrial and financial entities, so that you get a sense for why I am raising this question.

Hence, I think that before pension reforms are designed, people have to come to grips with thinking about the actual industrial organization through which they want services to be provided. The fact that they ignore looking at the legal and regulatory framework in its own way creates what amounts to a situation where people then design their organizations to either deal with tax loopholes or, in some cases, escape adequate regulatory supervision. So I think that a lot can be said for sitting down systematically and looking at the entire legal and regulatory framework before you design a pension reform. The Chilean case is a fine example of where in fact that was done, both prior and during the implementation of the reforms.

Let me quickly go into a few comments on dynamic interaction effects. Here, the point is made that, basically, institutional investors act as a countervailing force; they create more competition for banks and other financial-service providers. My only point on this would be that we should think about institutional investors more broadly. What I mean by that is that they are not simply local investors, and increasingly, the line between local and international emerging-market investing is becoming grayer. The point is simply that this countervailing force may be just as easily in place via the existence of offshore markets. Today, nondeliverable forwards are actively traded in New York between different parties. These are basically bets on the same price variables that we see in the domestic economies. Therefore, that is also an important consideration.

Second, as I noted earlier, the very structure through which financial services are provided suggests that there need to be sufficient pressures upon financial industrial groups to develop these non-banking services in ways that create more competition. I think that is a very interesting area to consider for more research, because the reality is that the actual measurement of efficiency gains in terms of the actual cost savings is something that is done in a very casual way. We heard the analysis of spreads, and I can't say

enough about my concurrence with the remarks by Mr. Carstens in his comments on that paper.

Let me quickly say one thing about market integrity. It is our view that one of the most important things that would improve the integrity of the market and would allow us to go into countries and more quickly do what we call outside evaluations of a particular financial services entity would be for there to be much better processes for consolidation.

Now, having said this, what we are finding is that in almost all emerging markets and in many developed countries, the practices that are currently carried out to actually present consolidated accounts are still far from where they need to be. I think this is an area that deserves a lot more work and attention.

Finally, on the issue of liquidity, which is of great concern to us, the paper that Dimitri has written touches on this, but only very briefly, and I have just one last comment to make on that. As an open-ended fund, for us liquidity is of paramount importance, and I'd like to define that concept as the ability to sell a significant amount of a security

without triggering large movements in the price of the security.

Today, the class of equities and debt instruments in emerging markets that really have this property, although expanding, is still not large. In fact, there can often be an inherent conflict in design to contain risks of market participants in the market—short sale restrictions, prohibitions on borrowing and lending securities, leverage requirements, and even, in some cases, forced investments that are required of these institutional investors. These things basically hinder the liquidity in the domestic market.

I am not suggesting that you ought to relax this in one afternoon, but I am saying that as part of the maturation process, it will be extremely important that these types of regulations be examined, and that, as Dimitri has properly pointed out, a gradual approach to the relaxation of these restrictions would be extremely important so that the local markets become more liquid and act as a more important shock absorber when there are important macroeconomic shocks.

Thank you.

Comment

SALVADOR VALDÉS - PRIETO

I WANT TO THANK THE WORLD BANK FOR INVITING ME TO THIS CONFERENCE. I FIRST CAME TO El Salvador in 1988 with professor Arnold Harberger. I must report that this country has progressed enormously during this decade, achieving both peace and economic progress at very fast rates, improving the lives of millions. It is a pleasure to be here.

The paper by Dimitri Vittas poses a very important question for economic policy: Should a country promote the creation of privately managed pension funds in the absence of well developed securities markets? As Dimitri explains, traditional social security experts argued that funded pensions would fail because they would be abused by governments that would use them as captive sources of finance at negative real interest rates.

This is indeed what happened in El Salvador and other Central American countries, where the real return on pension funds of the two main social security institutes in El Salvador, ISSS and INPEP, fluctuated between minus 10 percent and 0 percent in real terms for decades.

So, has anything changed? Dimitri gives us a hint: if the government has a strong, long-term, and persistent commitment to successful pension reform, and also focuses on maintaining macroeconomic stability, then a process of dynamic interaction will develop, in which both pension funds and capital markets will thrive.

I wish to add another complementary answer: that privatization of pension markets alters the political equilibrium and makes it likely that successive governments remain committed to both pension reform and to improving securities markets.

Privatization of pension choices and service supply matter politically because of at least three facts:

1. Because hundreds of thousands of voters chose to switch to the new system, as has happened in El Salvador during the past two months, democratic parties from all political stripes will avoid being blamed for damaging the new pension system.
2. The fact that the new pension system is of the defined-contribution type, where the rate of return is

crucial in determining the level of benefits, means that the media focuses its attention on the rate of return. Any government that attempts to use pension funds as a captive source of finance is likely to see its re-election chances seriously damaged.

3. Last but not least, the private companies that manage the pension funds are a serious political actor prepared to lobby each and every parliamentarian, and to offer campaign financing if needed, to obtain a persistent commitment to the success of pension reform.

A major difference between these new lobbies—the Administradora de Fondos de Pensiones (AFP)—and the old lobbies that supported traditional state-managed pen-

sions, such as labor unions and political parties, is that the old lobbies were too powerful.

- They could rely on future taxes to be levied on future generations to finance any extravagant policies. For example, El Salvador's ISSS offered a pension with 80 percent replacement for 35 years of service (i.e., at age 55), in exchange for a contribution of 3.5 percent of declared salary. The AFP cannot do this.
- They supervised themselves. When a political party tried to attract more votes by offering to reduce the pension age for teachers to 42 (as in Costa Rica), it did not have to pass the test of an independent authority, because the parties approved the law themselves and public opinion was not well-informed and alert. The AFP cannot raise commissions without provoking an outcry in the media, in Congress, and in the Superintendency.

One conclusion from this line of argument is that a requirement for the success of pension reform is the presence of democratic politics, free media, and a lively public opinion. Let me connect this with the development of securities markets. Using an example from El Salvador, I will show how its pension reform will force the authorities to widen and deepen the securities markets.

In the new AFP system in El Salvador, AFP's costs include the insurance premium for disability and death, which is an average of 1.32 percent of wages (the average excludes AFP PORVENIR, which pays a variable premium). However these premiums are just 0.7 percent of wages in Argentina, Chile, and Uruguay. I will argue that

any government that develops the market for CPI-indexed long-term bonds in El Salvador will reduce this cost to the lower amount (0.7 percent). This cost reduction adds to US\$26 a year per worker, or US\$10.9 million a year in total for the expected number of contributors to the new system.

Article 134 of El Salvador's new pension law says that the disabled member and survivors have the right to obtain an annuity equal to the replacement rate promised by law from the life insurance company that insured disability and death. This article also required this pension to be indexed to the local CPI, or to be set in U.S. dollars.

As survivors and invalids may live for decades, this creates a long-term liability to the life insurer. However, the local financial market does not include long-term CPI indexed bonds, and it remains to be seen whether the authorities will allow Salvadoran life insurance companies to invest abroad in the new long-term CPI indexed debt issued by the U.S. Treasury. The impossibility of hedging this risk explains most of the extra cost of insurance in El Salvador.

My point is that the authorities have a strong political incentive to develop the market for long-term CPI-indexed bonds, either at home or abroad, because this could save voters millions of dollars. In the old, state-managed system, the authorities could solve this problem by simply legislating the benefit structure they wanted. In the new privatized systems, the authorities must develop the securities markets. This helps to explain why the old ISSS and INPEP of El Salvador did not generate capital market externalities, and why the new AFP system will do so.

Comment

A L F R E D S T E I N H E R R

THIS PAPER BY DIMITRI VITTAS HAS AN EXTREMELY IMPORTANT MESSAGE, AND I FULLY concur with it and with the analysis he has proposed to us. It flies a little bit against perceived wisdom that one may beneficially start with the reforms of institutions such as pension funds and insurance companies before financial markets are already sufficiently developed. But I think the arguments that he presents are very convincing. In addition, there is the additional support provided by Ricardo Hausmann this morning, saying that, on a continent like this one, institutional investors could create a virtuous cycle: By making the wealth of a large and growing part of the population dependent on political liberation and market support, governments will find it difficult to adopt anti-market policies, thereby making investments more attractive, thereby drawing even more people into the pool of investors, and so on.

Dimitri is, of course, careful to list three very important preconditions, and I just wish to underline that they are perhaps more demanding than the paper suggests. First, he says that what one really needs is a government that is deeply committed on a long-term basis to a liberal financial market in order to provide confidence for the operations of such institutions. That is, of course, easier said than done, and, if we look around in the world, we cannot see more than a handful of such governments. I do not think it is an

accident of history. The very simple reason why other developed economies, such as the European economies, have not been able to create efficient capital markets is only partly related to their size, although size is important—think only of liquidity—but in Europe, as in Latin America, there has been a history of political change from right-wing to left-wing parties, and parties along the ideological spectrum had different views of what markets, institutions, and distribution of income are supposed to be.

In a way, to create credibility for sustained market development, it is not sufficient to have a government that speaks a different language from its predecessors. What is required is a government that really demonstrates it is serious about financial reforms. Ultimately, the real test is a

change in government with different parties forming the majority to demonstrate that these commitments survive the particular government that has launched them. So I think that this first condition is an extremely demanding one, and I am not so sure that it can easily be met. Of course, it could well be that history is treacherous. With free markets now virtually universally accepted as an unsailable paradigm, things have become possible all over the world that were not possible in the past. Perhaps in this sense, one should give lesser weight to history. On the other hand, it is useful to remember that paradigms are not forever.

The second point he makes is that one needs the necessary institutional reforms. Institutions, again, are not just

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the product of a particular political will at a certain moment in time. I would argue that countries have the institutions they are able to produce and maintain. Institutions are not exogenous to a society, so that the feasibility of more efficient institutions depends on other societal changes.

The third point is openness. Dimitri has said there are two dimensions to openness. One is to allow foreign institutions to operate in the country, because they provide the transfer of knowledge and the necessary competition, which may be very important, particularly at the beginning, when such institutions are being developed domestically. But, of course, it is difficult politically to accept that a country's pension funds are being managed by Citibank. There will always be important and even reasonable political resistance to such ideas.

The second dimension of openness is equally difficult but perhaps even more important, and that is to allow domestic institutions to invest abroad. That is the point that Dimitri has already made. Small countries, very open to the rest of the world, with an economic structure that is not very widely diversified, need diversification and, as long as the capital market is not developed, they cannot diversify internationally by investing in domestic firms that operate abroad. So they have to put part of their assets abroad.

We see now in Asia, for instance, how nice it would have been if savers in Asian countries had diversified. But they didn't, partly because regulations prevented them from diversification, but mainly because times were so good. For the last 30 years, a Thai investor didn't think of investing money in the United States because Thai growth performance was so superior and, above all, it was to last forever. The point here is that it is extremely important to make sure from the beginning that risks are diversified. To be able to diversify risk is the greatest gain from internationalization. But, again, it is probably not easy to push that through politically.

Let me now focus on a few queries. We are living through times that make us all extremely optimistic. We have seen more than 10 marvelous years on Wall Street, so it is easy to be for a market solution, it is easy to be in favor of investing money or pension funds in the stock market. I just want to remind you that perhaps such glorious times should not be extrapolated too far out into the future. Even in the United States, with its highly developed capital

market, the market stumbled for 15 years not too long ago; it didn't reach its 1972 level in real terms until 1987. Just imagine: If you had invested your pension money in 1971, you would have had to wait for 15 years for any real returns. I think most people would probably lose a bit of confidence. And this is, of course, not a single, exceptional story. Think of those Japanese that had invested at the end of the 1980s on Japan's stock exchanges, or think of those Asians who had entered their stock markets a few years ago, before markets collapsed.

One associated question is about basic strategy of institutional investors. Another question, not mentioned in the paper, is to what extent institutional investors contribute to market volatility and how regulations could dampen volatility. There is some evidence that as these institutions are being regularly funded, and because they have to invest their money somewhere—in the bond market, in the stock market—they generate a continuous flow that supports the growth of the market. Unfortunately, that may easily contribute to overshooting. Conversely, when sentiments reverse, there may be a mutually reinforcing tendency where everybody is doing essentially the same—that is, getting out of the market and moving into another market segment, or, if there is international openness, going abroad.

Several studies suggest that specific institutional investors such as hedge funds, while in general operating in such a way that equilibrium will be established more quickly, do, however, increase market volatility tremendously. Similar evidence is available for other specialized types of funds, such as funds that provide portfolio insurance.¹

Although volatility is of concern even in highly developed markets, this is even more the case in little-developed markets. Dimitri avoided the issue by comparing no markets with efficient markets. In between these extreme cases is the normal case for any Latin American country: a nascent market that is neither perfect nor illiquid, in which institutional investors will have a much greater influence on market volatility than they could possibly have in developed markets, and this could be quite a source of concern.

A last point that was perhaps not sufficiently stressed in the paper: I think it is very important that the regulatory framework include measures to ensure consumer protection. At another conference an observer compared mutual

funds to tour operators. He said, "When I look at the prospectus of a mutual fund, I always see the Royal Suite, but not the room they will really give me, and I always see pictures with splendid sunshine. What I really get, however, is often a great disappointment."

So I think that what needs to command priority is a framework that ensures better information and comparability and legal responsibility of those funds that underperform any reasonable (or self-chosen and announced) benchmark. I say that because there is substantial research

available that shows that about 80 percent of mutual funds underperform any reasonable performance indicators. Now, for 80 percent to underperform is not easy, but that is a fact.

So I think there are a number of things that one should be a little bit concerned about before launching wide-ranging private pension schemes.

Endnote

1. See, for example, A. Steinherr, *Derivatives: The Wild Beast of Finance*. London: Wiley, 1998.

Comment

FERNANDO SOLIS

FIRST I WOULD LIKE TO THANK THE ORGANIZERS FOR THEIR INVITATION. IT IS A GREAT privilege for me to share ideas with such distinguished personalities. On this occasion, I was asked to comment on Dimitri Vittas' paper, which starts by asking what should come first, well-developed financial markets or institutional investors promoting good operations in still-developing markets?

What Dimitri examines in his paper is the possible impact of financial markets on three major institutional investors: insurance companies, mutual funds, and pension funds. From their perspective, a developed capital market is not a necessary prerequisite to carry out reforms in regard to pension funds or insurance companies. In fact, he concludes, these two institutional investors promote the development of capital markets, and only mutual funds would result from these markets. Subsequently, from a historical point of view, based on facts mainly in the United States and referring to the cases of Chile and Argentina, we find that institutional investors have indeed had a significant impact.

As expressed by Dimitri in his discussions, when competition is increased in the financial system, particularly in the banking sector, there is a reduction in brokerage costs in the primary and secondary markets, new investment instruments are created, and there is increased integration in financial markets. All this is

translated into a premium that is fairer in relation to the inherent risks of financing investment projects by providing the appropriate environment to protect minority equity shareholders from market manipulations.

Institutional investors, because of the large amounts of resources that they manage, affect financial instrument rates in primary and secondary markets, and, therefore, their objective is to have corporations act in their shareholders' best interests.

I find it difficult not to agree with what Dimitri Vittas points to in his article in regard to how positive externalities of the economy result from the emergence or strengthening of institutional investors because capital markets would develop and savings to investment financing would

be channeled more efficiently. But the paper states reasons why in some countries there is greater institutional-investor development than in others. I believe that several significant factors explaining the emergence and development of these investors are left out—the macroeconomic environment, the legal and judicial framework, and the regulation of financial activities.

Undoubtedly, what may help to explain the low level of development of institutional investors and issuers are unstable macroeconomic environments. If economic conditions are not right to foster savings and investments, there will be no savers demanding instruments or issuers requiring funds to loan. This way, irrespective of reforms to the pension system, regulation for the insurance industry, or

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legislation to determine mutual funds' performance, it would be crucial to consider fiscal sustainability as support so that future conditions would be right to offer financial instruments under convenient terms and rates.

Another basic element entails an appropriate legal framework and a judicial system ensuring compliance with laws. For example, in order to channel savings adequately, it is important that investors do not face too many difficulties during a recovery period. If it takes two days in one country and two years in another to recover a guarantee for a car loan, there will be more credit to consumers in the first country than in the second one. An area of economic activity particularly affected by the ease to recover guarantees is the construction industry, because if a debtor does not make payments on a mortgage, the creditor must invest a great deal of time and resources to recover the funds. This causes loan costs to be higher, and most people would face credit restrictions.

In addition to the macroeconomic environment and the legal framework, regulation of financial activities has an impact on the development of financial markets and institutional investors. For example, if regulation inhibits product development by imposing express bans or other measures such as price controls, it will diminish the financial markets' abilities to meet savers' needs and to adequately meet their risk-to-yield preferences. This in turn would also limit the issuers' abilities to obtain financing. Adequate regulations are important in allowing financial markets to develop—i.e., for institutional investors to be sources of lending funds.

I believe that one of the reasons I was invited to this event is to speak about some of the reforms that took place in the Mexican pension system. The law that gave life to the pension system came into effect July 1, 1997. Under this reform, 17 administrators exclusively manage institutions' accounts and workers' resources funds. In the formal labor market there are a total of 14.8 million active and inactive workers in Mexico. Of these, 12.6 million are currently subscribed or affiliated to a management institution.

Funds in individual pension plans at present amount to \$7.2 billion, \$3.7 billion of which, as mentioned by Salvador Valdés-Prieto, are managed by administrators, with the rest managed by housing funds. Thirteen insurance companies were established since the reform came into effect, selling term insurance policies that produced \$500 million to present. Funds deposited in individual accounts and in the insurance companies' technical reserves represent enormous money inflows to the financial markets.

I would like to point out that earnings paid out by pension plans last year were 200 points above base of the traditional investment funds, taking the average account holding of about \$300 for a typical worker as an indicator and comparing it with an average account holding \$30,000 in a mutual fund with similar characteristics. I insist that under the new system workers were paid 200 points base *plus*.

Finally, I must mention that in my opinion, Dimitri is correct when he states that there is no need to wait for reforms and favorable conditions to create and develop institutional investors in order to observe significant transactions in capital markets showing a specific level of development. However, in the specific case of Mexico, future impact on developing our capital markets will be a consequence of the new pension system's depending not only on our doing a good job vis-à-vis regulatory matters, but also in a very sensitive way, it will depend on the adequate implementation of the judicial system requiring deep changes in Mexico. As I was saying, it will also be necessary for public finances to set the course toward savings and investments.

All this said, I believe it is very important to reiterate that I fully agree with what the author said: It is not important to have sound determined capitals for reforms to occur on their own. I believe that perhaps what led Dimitri to write this article is that in the case of many countries, excuses are found not to do what we need to do. I believe the message conveyed is that, irrespective of the country's environment, we must stop looking for excuses and get down to do the job.

VI. Supervision of Financial Markets

The Structure of Financial Regulation

RICHARD DALE AND SIMON WOLFE

SEVERAL RECENT DEVELOPMENTS—NOTABLY, THE BREAKDOWN OF TRADITIONAL DISTINCTIONS between different types of financial activity, the globalization of financial markets, and increasing emphasis on systemic stability as a regulatory objective—have prompted policymakers to search for an “optimum” regulatory structure that is adapted to the new market environment. The radical overhaul of regulatory structures, along quite different lines in Australia, the United Kingdom, and Japan, and the ongoing deliberations within the U.S. Congress over structural financial reform have added impetus to this discussion.¹

This paper examines alternative ways of organizing the regulatory function in the context of the new financial market environment. The first section reviews the objectives, targets, and techniques of regulation; the second section describes the new market environment and the restructuring of the financial services industry; the third section assesses the implications of this new environment for the structure of regulation; the fourth section addresses the international dimension; and the final section provides a summary and conclusion.

I. Objectives, Targets, and Techniques of Regulation

Objectives of Regulation

The case for regulating financial institutions can be made on three broad grounds. First, there is the consumer-protection argument, which is based on the view that depositors and investors cannot be expected to assess the riskiness of financial institutions they place their money with, nor to monitor effectively the standard of service provided by such institutions. The consumer-protection rationale gives rise to three categories of regulation: (1) compensation schemes designed to reimburse all or part of losses suffered through the insolvency of financial institutions; (2) regulation in the form of capital adequacy requirements and

other rules aimed at preventing insolvency; and (3) conduct-of-business or market-practice rules intended to ensure that users of financial services are treated fairly. This last type of regulation reflects market imperfections arising from, among other things, asymmetric information, principal-agent problems, and the fact that the value of a financial product or service may only be determinable well after the point in time at which it is purchased.

The consumer-protection rationale for regulation is closely related to a second concern: If depositors or investors are to be reimbursed for losses incurred through the insolvency of financial institutions, then there will be little or no incentive to exercise care in the choice of depositor or investment institution. This in turn means that risky institutions will be able to attract business with the

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same ease and on the same terms as more prudently run firms, thereby undermining financial market discipline and increasing the incidence of insolvencies. The ensuing losses must be borne by the deposit-insurance scheme, investor protection fund, or, ultimately, the taxpayer. Prudential constraints on financial institutions' risk-taking then become necessary in order to limit such losses and to offset the regulatory incentives in favor of excessive risk-taking.

A third objective of financial regulation is to ensure the integrity of markets, embracing such diverse matters as money-laundering, market manipulation, price discovery, fairness (for instance, in terms of access to information), and, above all, transparency. Market integrity focuses on the organization of the market as a whole rather than on the bilateral relationships between financial institutions and their customers (i.e., conduct of business).

Among supervisors themselves the rationale for financial regulation that gives most cause for concern is systemic risk—that is, the risk that the failure of one or more troubled financial institutions could trigger a contagious collapse of otherwise healthy firms. It is, above all, their alleged susceptibility to contagious disturbances that distinguishes financial institutions from non-financial firms. In the words of a member of the Board of Governors of the U.S. Federal Reserve System:

It is systematic risk that fails to be controlled and stopped at the inception that is a nightmare condition.... The only analogy that I can think of for the failure of a major international institution of great size is a meltdown of a nuclear generating plant like Chernobyl. The ramifications of that kind of failure are so broad and happen with such lightning speed that you cannot after the fact control them. It runs the risk of bringing down other banks, corporations, disrupting markets, bringing down investment banks along with it.... We are talking about the failure that could disrupt the whole system (LaWare 1991, p. 34).

These, then, are the main considerations behind the regulation of financial institutions: consumer protection, moral hazard (a consequence of consumer protection), market integrity, and systemic risk. In addition it should be noted that a further major regulatory objective is to achieve competitive equality—between financial institutions from

different countries, between functionally distinct financial firms (banks, securities firms, and insurance companies) that carry on the same kinds of business, and between rival financial centers. Concerns about competitive equality do not provide an independent justification for financial regulation, but they do often provide an important impetus to international regulatory coordination initiatives. For instance, the European financial market directives have been framed with the explicit objective of achieving a "level playing field," and the original motivation behind the Basle Accord on minimum capital standards was the perceived need to avoid competitive distortions associated with uneven national capital requirements.

Targets of Regulation

Within a financial market regime characterized by specialized financial institutions conducting distinct financial activities, the main *targets* of financial regulation are banks, investment firms, insurance companies, fund management companies, and exchanges (incorporating clearing and settlement arrangements). The various rationales for financial regulation described above apply in different ways to these separate segments of the financial services industry, as described below.

Banks are characterized by short-term and unsecured value-certain liabilities (deposits) and illiquid value-uncertain assets (commercial loans). Banks are subject to deposit insurance and other forms of consumer protection, in part because banks' balance sheets are opaque and depositors are therefore not in a position to assess the riskiness of their deposits. Depositor protection, in turn, gives rise to moral hazard. But the case for bank regulation also rests heavily on systemic risk—that is, the alleged potential for destructive bank runs that can endanger not only individual institutions, but the stability of the banking system as a whole. According to this view, bank runs are caused by depositors seeking to withdraw their funds in response to the fear of bank asset losses that could lead to insolvency. Given the nature of the deposit contract (that is, a fixed nominal claim) those who run first can expect to be repaid in full, while those who delay withdrawals risk losing some or all of their deposit balances. Therefore, depositors have a (rational) propensity to run at the first sign of trouble.

Recent academic literature does not rely on any loss in the value of a bank's underlying assets to explain the occurrence of bank runs (see Diamond and Dybvig 1983, 1986).

The focus instead is on a bank's transformation services—specifically the conversion of illiquid assets (bank loans) into liquid claims (bank deposits)—and the fact that a bank's loan portfolio is worth significantly less in liquidation than as a going concern. All that is required to make a run possible—and rational—is that the liquidation value of the loan portfolio is less than the value of the liquid deposits. This approach explains how runs can occur even in the case of healthy banks, since the victim institution will be forced to dispose of its assets at liquidation prices, thereby threatening insolvency.

Investment firms, in contrast to banks, are characterized by short-term but (generally) secured liabilities and liquid assets whose value is transparent, albeit subject to fluctuations. For investment firms the case for regulation has traditionally rested on consumer protection—the idea that investors should bear the market risk associated with their investments but should not be fully exposed to the risk of default by the intermediary through whom they transact.

On the other hand investment firm failures are much less likely to have systemic consequences than bank failures. The assets of a non-bank investment firm consist largely of marketable securities, so there will be little difference between their value as a going concern and in liquidation, in marked contrast to banking assets—which, as I have noted, are worth considerably less in liquidation. This means that a troubled investment firm will generally be able to wind down its business in an orderly manner, meeting its obligations by prompt asset disposals at close to book value. On the liabilities side, too, investment firms are generally less vulnerable than banks, because much of their funding is secured and in any case cannot be immediately withdrawn, as can bank sight deposits. To the extent that funding is curtailed, an investment firm will generally be able to contract its way out of trouble. In short, investment firms are much less vulnerable to contagious liquidity and solvency crises than are banks.

Insurance companies are characterized by long-term liabilities of uncertain value and liquid value-certain assets. Among the major categories of financial institutions, this balance-sheet structure is least likely to give rise to systemic risk, liquidity transformation being in the reverse direction to that of banks. Regulation of insurance companies is based on consumer protection, reflecting the fact

that it is difficult for consumers to assess an insurer's financial strength in relation to its prices and quality of service. In addition, insurers may increase their risk after policyholders have purchased a policy and paid premiums. Therefore, in the absence of regulation, imperfect consumer information and agency problems may result in a socially excessive level of insolvencies. For similar reasons, conduct-of-business regulation is also an important aspect of the regulatory framework for insurance companies.

Fund-management companies invest not on their own account but on behalf of their customers. This agency role means that investors are protected from a management company's insolvency so long as funds under management are segregated from the latter's own assets. Regulation of fund-management companies accordingly focuses on conduct of business (advertising, disclosure, charges, etc.). Systemic risk is not generally a consideration here.

Securities exchanges, as distinct from exchange members, are regulated to ensure market integrity. In general, exchanges have not been viewed as a potential source of systemic risk, although, in respect of securities clearing and settlement, this perception is changing. On the other hand, wholesale interbank payment systems, as the linchpin of the banking system, have traditionally been subject to rigorous central bank scrutiny to minimize systemic risk (see, generally, Dale 1997).

In summary, systemic concerns have in the past tended to focus exclusively on banks and payment systems. Consumer-protection regulation, on the other hand, is applicable to all categories of financial institutions. While deposit protection (and hence moral hazard) has been a particular feature of banking, all institutions providing retail financial services have been subject to conduct-of-business regulation. Finally, market integrity is the primary regulatory objective for securities exchanges.

It may be noted that so long as the financial activities above are distinct and separate, regulation is both functional *and* institutional. This follows from the fact that particular functions are carried on within specialized financial entities: regulation of the function is tantamount to regulation of the associated entities and vice versa.

It is also worth noting that within the above framework, issues of regulatory neutrality between different categories of financial firms are *de minimis*. This is because there is relatively little business overlap between different categories of specialist financial firms.

Techniques of Regulation

While techniques of conduct-of-business regulation do not vary significantly across different categories of institutions, when it comes to prudential regulation there are important differences that reflect the different risk characteristics of banks, investment firms, and insurance companies.

Because bank failures can have systemic consequences, there is traditionally a strong emphasis on *protective* bank regulation in the form of lender-of-last-resort facilities and deposit protection (which in turn gives rise to moral hazard). In this context the extent of deposit protection may be well in excess of the protection offered by deposit-insurance schemes, reflecting policy-makers' preference for safeguarding banking institutions and not merely depositors.

Also reflecting the regulatory goal of sustaining banks as going concerns, *preventive* regulation, aimed at curbing excessive risk-taking, has tended to focus on capital adequacy requirements with assets, for this purpose, valued on a going-concern basis.

In contrast to the above, investment firms are regulated with a view to ensuring that they can wind down their business rapidly when they run into trouble. Accordingly, investment firms' assets are required to be liquid and marked to market. In addition, regulators typically require that customer assets be segregated from those of the firm. These key instruments of regulation—asset contraction and insulation of customers—sharply differentiate the traditional regulatory approach of securities and bank regulators.

Insurance companies are different still. Prudential regulation here focuses on long-term solvency based on actuarial principles, taking account of the uncertain value of long-term liabilities. In other words, solvency requirements have to address not only asset risk but also liability/underwriting risk.

Fund-management companies are not subject to extensive prudential regulation, and exchanges are typically self-regulated on the basis of membership capital requirements.

Assessment

In the traditional financial framework described above, the financial services industry is divided into separate pillars (banks, investment firms, insurance companies, etc.), each with its own distinct regulatory regime, reflecting differing regulatory objectives and techniques (see Table 1). Regulation is both functional and institutional because institutions are coextensive with particular activities. At the same time regulatory neutrality is not a major issue because the separate pillars within the industry do not compete directly with one another. This may be viewed as a dream world for regulators in which regulatory objectives, targets, and techniques are neatly compartmentalized and problems of regulatory interface do not arise. However, in the new financial market environment described in the following section, issues of regulatory structure and coordination become much more problematic.

TABLE 1

Targets of Regulation

OBJECTIVE	ASSETS	LIABILITIES	REGULATORY OBJECTIVE
BANKS	illiquid value uncertain (book values)	short-term, value certain unsecured (deposits)	moral hazard, depositor protection, systemic risk
INVESTMENT FIRMS	liquid, marked-to-market	short-term, secured	investor protection
INSURANCE COMPANIES	liquid, value certain	long-term, uncertain values	consumer protection
FUND MANAGEMENT COMPANIES	agency role		investor protection
EXCHANGES	counterparty risk		market integrity
PAYMENT SYSTEMS	counterparty risk		systemic risk

II. The New Market Environment

The compartmentalized model of the financial services industry and its regulatory framework has over the past decade or so been transformed by market developments. The traditional pillars of banking, securities business, insurance, and fund management are being displaced by a different industry structure in which hitherto discrete activities are conducted within the same financial services group.²

Functional Integration

The process of functional integration reflects the perceived benefits of the efficiency of combining financial services under one corporate roof. Such benefits are of two kinds: Firms may realize *internal* economies of scope through joint production and marketing of diversified financial services; and users of financial services may realize *external* economies of scale because they can more conveniently purchase several financial services at a single location or from a single firm (see Litan 1987, pp. 60–98).

There are various degrees of functional integration that

may be associated with different levels of efficiency gains. The first stage of integration is based on ownership linkages between financial firms conducting different types of business (see Tables 2 and 3).

The second stage of integration involves exploitation of economies of scale through, for instance, cross-selling financial services. Such efficiency gains may be significant where banks' branch networks are used to sell fund-management, insurance, and securities products, possibly under a single brand name.

A third, and crucial, stage of integration occurs when financial conglomerates adopt a centralized approach to risk management. The rationale for such a policy is based, first, on potential economies of scale and scope related to advanced computer technology and highly specialized skills in quantitative risk measurement, and second, on the ability to unbundle discrete categories of risk within different parts of an organization and then to monitor and manage those exposures on a consolidated basis for the group as a whole. In the words of Andrew Large, former Chairman of the U.K. Securities and Investments Board:

TABLE 2

Recent European Cross-Functional Mergers 1997/8

NATIONALITY	INSTITUTIONS	TYPE	SIZE
Dutch/Belgian	ING/Banque Bruxelles Lambert	Bancassurance/Bank	\$4.5bn
Belgian	Fortis Group/ Generale de Banque	Bancassurance/Bank	\$13bn
Swiss	Credit Suisse/Winterthur	Bank/Insurance	\$10bn
U.S./U.K.	Merrill Lynch/ MAM	Investment Bank/Fund Management	\$5bn
Belgian	Kredietbank/ABB Insurance	Bank/Insurance	
German	Dresdner Bank/Allianz	Bank/Insurance	
Italian	Banca Nazionale del Lavoro/Banco di Napoli/INA	Bank/Bank/Insurance	

Source: Based on White (1998).

TABLE 3

Recent U.S. Cross-Functional Mergers 1997/8

INSTITUTIONS	TYPE	SIZE
BankBoston / Robertson Stephens	Bank / Securities	\$800m
Travelers Group / Citicorp	Insurance / Banking	\$83 bn
U.S. Bancorp / Piper Jaffray Companies	Bank / Securities	\$730m
Fleet Financial / Quick & Reilly	Bank / Securities	\$1.6bn
First Union / Wheat First Butcher Singer	''	\$471m
NationsBank / Montgomery Securities	''	\$1.2bn
ING Barings / Furman Selz	''	\$500m
Swiss Bank Corporation / Dillon Read	''	\$600m
CIBC Wood Gundy / Oppenheimer	''	\$525m
BankAmerica / Robertson Stephens	''	\$540m
Bankers Trust/ Alex Brown	''	\$1.7bn

Source: Shearlock (1998), p. 17.

...over the past 5–10 years, the institutional deregulation initiatives in different countries have combined with huge advances in computer power and communications technology, to create a totally new breed of financial intermediary. [They] have embraced the theory of financial risk management which applies portfolio theory to the range of risks associated with the securities business.... The key characteristic of this approach is that it seeks out the common elements of risk wherever they may lie in a portfolio and manages them centrally. These firms no longer respect the traditional boundaries between markets or the old institutional boundaries between banking, securities and insurance. They are in the risk-management business pure and simple, and they operate on a large scale and on a truly global basis (Large 1994, p.1).

The final stage of functional integration is reached if diversified financial activities are conducted within the same legal entity and on the same balance sheet. This is the pure version of the “universal banking” model. However, in practice financial conglomerates generally have corporate structures that reflect broad product lines, although such subdivisions may be compatible with a centralized management structure.

Deregulation and Erosion of Boundaries

For the purposes of the present discussion, the key development is the integration of hitherto discrete segments of the financial services industry through a combination of ownership linkages and centralized risk management. However, there are other important considerations.

First, the commercial impetus toward financial conglomeration has coincided with a change of regulatory philosophy. The new thinking rejects activity constraints on banks and other financial firms as being inefficient and heavy-handed, and instead focuses on capital adequacy requirements to cover the risks associated with whatever financial activities a group chooses to undertake. The recent dismantling of Japan’s statutory separation of banks, securities firms, and trust banks, and U.S. regulatory relaxation of Glass-Steagall restrictions on banks’ securities activities, are examples of the new regulatory approach.

Second, quite apart from ownership linkages between different categories of financial firms, the distinctiveness of

the *business* of banking and other financial activities is gradually being eroded. For instance, on the liabilities side of the balance sheet, internationally active banks have been increasing their secured funding—a form of financing traditionally associated with investment firms.³ On the assets side of the balance sheet there is also convergence, with the proportion of loans to non-banks in total bank assets (a measure of banks’ illiquid assets) tending to decline. For instance, the Bank of England has calculated that for large, internationally active U.K. banks, the share of such loans is currently around 50 percent, having fallen from 65–70 percent five years previously, a decline attributable to the expansion of these institutions’ investment banking operations (see George 1997, p. 10). Furthermore, there is a trend toward increased secondary-market trading of bank loans, thereby blurring the traditional distinction between bank loans and securities. Finally, balance-sheet data understate banks’ securities activities to the extent that banks sell down their loans in the form of securitized assets; for instance, U.S. bank holding companies are estimated to have removed some \$200 billion from their balance sheets through the sale of securitized assets (George 1997, p. 10).

Finally, with the advent of new complex financial instruments, it is not possible to determine a priori whether these are banking, securities, or insurance products: for instance, derivative instruments may be categorized in different ways in different jurisdictions.

The above developments, involving financial conglomeration, centralized risk management, and the blurring of traditional distinctions between banking and other types of financial activity, have prompted regulators to adapt their approach to supervision. Alan Greenspan, chairman of the U.S. Federal Reserve Board, put it this way:

Most large institutions in recent years have moved toward consolidated risk management across all their bank and non-bank activities.... it is likely that [new non-banking activities by banking organizations] would be managed on a consolidated basis from the point of view of risk-taking, pricing, and profitability analysis. Our regulators’ position must adjust accordingly, to focus on the decision-making process for the total organization. Especially as supervisors focus more on the measurement and management of market, credit, and operating risks, supervisory

review of firm-wide processes increasingly will become the appropriate principle underlying our assessment of an organization's safety and soundness (Greenspan 1997, p. 8).

Consolidated Supervision

Consolidated supervision is one key ingredient of the new regulatory approach. Under this regime the various entities within a financial conglomerate are supervised on a group basis, and capital requirements, actual capital, and risk exposures are subject to group-wide supervisory assessment. The Joint Forum on Financial Conglomerates, representing bank, insurance, and securities supervisors, has described consolidated capital adequacy assessment as follows:

[S]ubsidiaries are usually consolidated in full.... For prudential purposes, regulatory capital in excess of such a subsidiary's own regulatory capital requirements, and which can be regarded as in principle available to support risks in the parent company or other entities in the group should a shortfall arise, can be recognized in a group-wide capital adequacy assessment (Bank of International Settlements 1998, p. 11, paragraph 32).

In other words, under a consolidated supervision regime, both risk exposures and capital available to back those exposures are viewed as accruing to the group as a whole. Risks are no longer assessed on a legal-entity basis or on the basis of the category of financial activity being undertaken. This holistic approach is consistent with the trend toward centralized risk management within financial conglomerates noted above and brings regulatory risk appraisal into line with financial firms' own risk management practices.

Assessment

In recent years there has been a progressive erosion of the traditional demarcation lines that have separated banking from non-bank financial activities. This development reflects cross-functional ownership linkages between different categories of financial firm, the blurring of distinctions between banking and non-banking business through "securitization" and other forms of financial innovation, and the dismantling of legal constraints previously applied to banking organizations. At the same time large diversi-

fied financial groups have tended to adopt a centralized approach to risk management that ignores traditional boundaries between different financial activities.

In the new financial environment it is no longer possible to identify separate sets of regulatory objectives, targets, and techniques covering banking, securities business, insurance, and fund management. Banks are no longer "special" in the sense of being uniquely exposed to systemic risk because their activities and risk exposures have become intermingled with non-bank financial business. The regulatory objective of systemic stability now extends to investments firms, to securities and derivatives clearing and settlement systems, and even to insurance⁴ and fund-management entities, dramatically underlined by the recent debacle over Long Term Capital Management (LTCM), a \$100 billion U.S. hedge fund.⁵ The need to curb moral hazard through regulatory action similarly embraces all those activities undertaken within a conglomerate that may benefit, directly or indirectly, from the availability of lender-of-last-resort support.

The targets of regulation are no longer distinct because corporate entities and groupings are no longer coextensive with identifiable lines of business. At the same time, the consolidated supervision of financial conglomerates, as described above, explicitly recognizes the interdependence of risks and capital resources within diversified financial groups. Furthermore, the techniques of regulation are no longer business-specific. Reflecting recent developments in financial technology and risk measurement, regulators are moving away from static, point-in-time balance-sheet analysis and focusing instead on the *process* of risk management. This entails an assessment both of management's risk models and internal control procedures. Since the new approach to regulatory risk assessment applies across different categories of financial activity—banking, securities, and insurance businesses—there is no longer a clear justification for separate regulation of these activities on grounds of regulatory specialism. On the contrary, a convergent approach to regulation across functions, together with the observed trend toward centralized risk management, points in the opposite direction. To quote Alan Greenspan again:

One could argue...that regulators should only be interested in the entities they regulate and, hence, review the risk-evaluation process only as it relates to

their regulated entity. Presumably, each regulator of each entity—the bank regulator, the SEC, the state insurance and finance company authorities—would look only at how the risk management process affected their units. It is our belief that this simply will not be adequate. Risks managed on a consolidated basis cannot be reviewed on an individual legal entity basis by different supervisors (Greenspan 1998, p. 10).

It may also be noted that the new market environment creates a mismatch between functional and institutional regulation—since previously distinct functions now flow over institutional boundaries. In other words a purely institutional approach to regulation would inevitably have to combine different types of financial activity under one regulatory agency; while a purely functional approach would require regulatory agencies to cut across institutional demarcation lines.

Finally, whereas under the segmented financial structure described in Section I competitive equality is not a primary concern, within the more fluid competitive environment of overlapping financial activities (e.g., banks competing with investment firms in derivatives markets) regulatory parity becomes a major issue.

III. Implications for Regulatory Structure

In considering institutional structures for financial regulation it is necessary to assess alternative models in terms of economies of scope, regulatory parity (the “level playing

field’), and (in respect of prudential regulation) what might loosely be termed “prudential logic.” Prudential logic refers in particular to the importance of aligning the remit of the regulator with the risk management function of the regulated organization, so that in the case of centralized risk management of diversified activities, the regulator’s perspective is the same as that of management. A mismatch between the regulator’s unit of assessment on the one hand, and management’s on the other, is likely to lead to trouble (as suggested in Section II above).

In the traditional segmented financial structure described in Section I a regime of functionally specialized prudential regulators makes sense because different sets of regulatory objectives, techniques, and targets are associated with different financial activities. For instance, a traditional-style regulatory framework covering the main areas of activity is summarized in Table 4 below:

Within this segmented industry structure there are no obvious economies of scope to be gained, nor is there any prudential logic, in combining specialized prudential regulatory functions within a single regulatory agency. Furthermore, regulatory parity is not a serious issue. On the other hand, conduct-of-business regulation is concerned primarily with fair treatment of retail depositors, investors, and savers. Because in this case regulatory objectives and techniques are similar across different categories of financial activity there is an arguable case for a single conduct-of-business regulator in terms both of efficiency and regulatory neutrality—regardless of the structure of the financial services industry.

TABLE 4

Traditional Style Regulatory Framework

	TARGETS		
	BANKS	INVESTMENT FIRMS	INSURANCE COMPANIES
OBJECTIVES	systemic stability neutralize moral hazard depositor protection	investor protection	consumer protection
TECHNIQUES	LLR/deposit insurance capital requirements (going concern basis) on-site examinations	liquid capital mark-to-market valuation (liquidation basis)	actuarial solvency
REGULATOR	central bank/bank regulator	securities regulator	insurance regulator

Within the new market environment described in Section II above very different considerations apply. Regulation may in this context be divided up in a number of ways, the most important alternative models being as follows:⁶

1. Functional regulation
2. Institutional regulation
3. Systemic versus non-systemic institutions
4. Regulation by objective
5. Wholesale versus retail

Under a functional regulation regime specialist regulators focus on the type of business undertaken irrespective of which institutions are involved in that business. Individual institutions might then be subject to several regulatory agencies; there would very likely be a mismatch between regulators' disaggregated approach to risk assessment and the centralized risk management adopted by financial firms; and consolidated supervision becomes problematical.

A more effective form of functional regulation might be envisaged, however, if regulators were to mandate a corporate structure for diversified firms that seeks to segregate risks associated with different financial activities. Financial conglomerates could be required to operate through a financial services holding company that would conduct its business through specialized operating subsidiaries separated by "firewalls." Those subsidiaries could then be subject to functional regulation by specialized regulatory agencies. An element of institutional regulation could then be superimposed in the form of consolidated supervision of the holding company. This model has in the recent past been incorporated into U.S. legislative initiatives to repeal the Glass-Steagall Act. However, the main drawback to such an approach—apart from inefficiencies arising from the mandated corporate structure—is that attempts to segregate risks within specialized entities may well prove ineffective and are in direct conflict with the observed trend toward centralized risk management.⁷

Institutional regulation, in contrast to functional regulation, demands that regulation be directed at financial institutions irrespective of the mix of business they undertake. It has been argued that under this regime "each institutional regulator would need to apply the business rules appropriate for every function—which would be hugely inefficient in terms of regulatory resources."⁸ However, this view may be overstated: in the context of a single mega-

regulator (such as the U.K. now has—see Appendix 3) all regulation is institutional in the sense that the diversified activities of each institution/group fall within the regulatory remit of a single agency that is also responsible for consolidated supervision. On the other hand, in a regime of multiple regulatory agencies specialized by function, "pure" institutional regulation becomes impossible for the simple reason that institutions are no longer synonymous with functions (although an element of institutional regulation may be introduced through the appointment of a "lead regulator" for diversified groups).

A third possible regulatory divide is between institutions that give rise to systemic risk and those that do not. Since banks are generally viewed as systemically sensitive this might involve a simple distinction between banks and non-banks. However, as explained in Section II, changes in the market environment have blurred the risk characteristics of banks and non-banks. An alternative approach would be to identify those institutions, whether banks or non-banks, which are of such a size that their default would pose a systemic threat. The difficulty here is that the failure of even small institutions can in some circumstances have systemic consequences. More generally, given the complexity and fluidity of the present market environment it is impractical to identify systemic risk with some specified subset of financial institutions. On the contrary, the interconnectivity between both institutions and markets means that a systemic threat may originate almost anywhere and be transmitted through a variety of institutional channels.

Another way of dividing up the regulatory function is according to regulatory objective. As noted in Section I, the relevant prudential objectives in this context are systemic risk, moral hazard, and consumer protection while to these must be added consumer protection in the conduct-of-business sense as well as market integrity. In assessing the merits of this structural model it is important to stress that there has been a convergence both of prudential regulatory *objectives* (in that systemic risk and moral hazard have become a feature of financial activities other than banking) as well as a convergence of prudential regulatory *techniques* (reflecting the new supervisory emphasis on value at risk models and internal management controls for all types of financial business). Therefore there is much greater congruence than previously in the prudential regulatory function as it is applied to banks, investment firms, insurance

companies, etc. The implication is that there are important potential economies of scope to be gained from combining the prudential regulatory function under one regulatory agency. Furthermore, a single prudential regulator embracing all financial business is consistent with centralized risk management practiced by diversified firms and the matching principle of consolidated supervision. Prudential logic therefore points to the desirability of a single prudential regulator that would also be in a position to apply consistent rules across institutions and activities, thereby ensuring regulatory neutrality.

The above is, broadly speaking, the “Twin Peaks” approach advocated by Taylor that would divide regulatory responsibilities between a single prudential regulator (Financial Stability Commission) and a single conduct-of-business regulator (Consumer Protection Commission).⁹ It may be objected that a single prudential regulator would be dealing with three different objectives, namely systemic stability, which calls for a *higher* degree of risk restraint than the market would provide even without an official safety net; moral hazard, which requires regulators to simulate the self-regulatory constraints that would exist in the absence of an official safety net; and consumer protection, which is one of the causes of moral hazard. However, since these objectives imply different intensities of prudential regulation, rather than different regulatory techniques, and since systemic risk and moral hazard permeate many areas of financial activity, it would seem neither efficient nor practicable to allocate the objectives to separate regulatory agencies.

It may also be objected that a single prudential regulatory agency would not offer efficiency gains because as a matter of practical necessity there would have to be specialist divisions within the unified agency. Such internal divisions (see for instance the FSA’s “functional” divisions in Appendix 3) might involve internal transactions costs equivalent to those incurred by separate agencies. While there is no doubt some force in this argument the key point is that where prudential responsibility lies clearly with a single authority the regulatory function and the group managerial function are much more closely aligned. In other words the *scope* of these two functions is precisely matched, even though the regulatory and managerial objectives may diverge.

Following publication of the findings of the Wallis Committee of Inquiry, Australia has adopted a regulatory

structure that closely resembles the Twin Peaks model described above.¹⁰ However, the Reserve Bank of Australia retains responsibility for systemic stability and is specifically responsible for safeguarding the payments system. Similarly, following the establishment in the U.K. of a single mega-regulator, the Bank of England retains responsibility for systemic stability.

A key question that arises in this context is whether a central bank that is deprived of prudential regulatory powers (except, perhaps, in respect of the domestic payments system) can meaningfully be responsible for systemic stability—other than in the narrow sense of crisis management. In any event, the supervisory interface between the central bank and the prudential regulatory authority under such a regime assumes great importance (see Memorandum of Understanding between the FSA and the Bank, summarized in Appendix 4).

Finally, regulatory responsibilities may be divided according to whether the financial activity concerned is wholesale or retail, on the grounds that retail users of financial services are in greater need of regulatory protection. The differentiation is particularly relevant for conduct-of-business regulation but since this distinction, too, relates more to the intensity of regulation than to differences in regulatory technique, there would appear to be efficiency gains in combining wholesale and retail business under one regulatory roof.

Assessment

It has been suggested that the convergence of prudential regulatory objectives and techniques relating to previously distinct financial activities has created potential economies of scope in the regulation of such activities. Furthermore, a single prudential regulatory agency is better equipped to conduct consolidated supervision that matches the consolidated risk management practiced by diversified financial firms. Finally, regulatory neutrality and consistency is best assured under a unified prudential regulator.

The housing of conduct-of-business and market integrity regulation within a single conduct-of-business regulatory agency similarly offers efficiency benefits. However, there is no obvious case for combining the prudential and conduct-of-business regulatory functions within a single all-purpose regulatory agency given that the techniques and skills required for those functions are very different.

Whether the central bank should be the single prudential regulatory agency for all financial activities is a different issue

altogether.¹¹ There have been various inconclusive analyses of the appropriate role of central banks in the regulatory process.¹² However, if, as is increasingly the case, the monetary authority is divested of its prudential regulatory role yet retains responsibility for systemic stability, the ability to exercise that responsibility depends very heavily on the central bank's working relationship with the prudential regulatory authority.

The argument in favor of a single prudential regulator must be modified to the extent that some financial systems, typically in emerging markets, retain the traditional institutional and functional distinctions between banking, securities business, insurance, etc.¹³ Furthermore in those systems where regulators seek to separate and subsidiarize

such activities carried on within diversified financial groups, there may be a case for preserving the traditional structure of regulation based on specialized agencies. Nevertheless, the predominance of the specialized regulatory agency model (see Table 5) does suggest that regulatory structures have yet to adapt to recent and on-going changes in financial markets.

IV. The International Dimension

The globalization of financial markets has been well documented. There are various dimensions to this process involving the growth of cross-border banking and securities transactions, the rapid expansion of the "borderless" Euro-

TABLE 5
The Structure of Financial Regulatory Agencies

REGULATORY STRUCTURE	TYPE	COUNTRIES
1. Mega Regulator Combined banking, securities, and insurance regulator	Commission	Denmark, Japan, Korea, Malta, Norway, Sweden, Taiwan, United Kingdom.
	Central Bank or Ministry of Finance	Austria, Singapore.
2. Combined Banking and Securities Regulator	Banking and Securities Commission Central Bank	Belgium, Finland, Mexico, Switzerland. Bermuda, Cyprus, Dominican Republic, Ireland, Luxembourg, Uruguay.
3. Combined Banking and Insurance Regulator		Australia, Canada, Colombia, Ecuador, Macau, Malaysia, Paraguay.
4. Combined Securities and Insurance Regulator		Chile, Czech Republic, South Africa.
5. Individual Specialist Regulator		
BANKING	Agency	Chile, France, Germany, Guatemala, Hungary, United States.
	Central Bank / Monetary Agency	Algeria, Barbados, Botswana, Brazil, Bulgaria, China, Costa Rica, Czech Republic, Egypt, Greece, Hong Kong, India, Indonesia, Israel, Italy, Jamaica, Jordan, Kenya, Netherlands, New Zealand, Nigeria, Pakistan, Philippines, Poland, Portugal, Russia, South Africa, Spain, Taiwan, Thailand, Turkey, United States.
SECURITIES	Agency	Argentina, Australia, Bolivia, Brazil, Canada, China, Columbia, Ecuador, Egypt, France, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Israel, Italy, Ivory Coast, Jamaica, Jordan, Kenya, Malaysia, Netherlands, New Zealand, Nigeria, Pakistan, Paraguay, Philippines, Poland, Portugal, Russia, Slovenia, Spain, Sri Lanka, Taiwan, Thailand, Turkey, United States, Venezuela, Zambia.
INSURANCE	Agency	Argentina, Belgium, Bermuda, Bolivia, Brazil, Egypt, France, Germany, Hong Kong, Hungary, Italy, Luxembourg, Mexico, Netherlands, Philippines, Poland, Portugal, Russia, Spain, Switzerland, United States.

Source: Taylor (1998), Goodhart et al. (1998) and Directory of Financial Regulatory Agencies (1996).

markets, the proliferation of multinational financial firms straddling numerous jurisdictions, and, most recently, a surge in cross-functional *and* cross-border financial mergers between banks, investment firms, insurance companies and fund management groups (see Tables 2 and 3).

The globalization of financial markets calls for international regulatory coordination for two reasons.¹⁴ First there are “externalities” in that financial disorders can no longer be confined to the jurisdiction in which they originate—as amply demonstrated by the East Asian financial crisis. Second, regulatory neutrality between competing financial centers as well as between financial firms of differing nationality has become a major issue in the new global marketplace.

These concerns about systemic risk and regulatory parity have been reflected in the evolution of the Basle Committee on Banking Supervision, the International Organization of Securities Commissions (IOSCO) and, more recently, the emergence of an embryonic cross-functional coordinating group in the form of the Joint Forum on Financial Conglomerates embracing the Basle Committee, IOSCO, and the International Association of Insurance Supervisors.¹⁵

Arguments about the institutional architecture of international regulatory coordination follow closely those relating to national regulatory structures. The dangers of having two separate international agencies covering banks and investment firms has, for instance, been illustrated by well publicized tensions in the recent past between Basle and IOSCO.¹⁶ In the area of prudential regulation, economies of scope, prudential logic, and concerns about regulatory neutrality again point to the need for an over-arching coordinating body to oversee the full spectrum of cross-border financial activity.

There is a particular problem here in connection with emerging financial markets, as underlined by the East Asian crisis. In the banking sector Basle sets the minimum prudential standards, but the International Monetary Fund is increasingly being drawn into a monitoring and enforcement role, both as part of its Article 4 surveillance process and in the conditionality associated with its stabilization programs. The question here arises as to whether the standard-setting and enforcement roles can be effectively discharged by separate international agencies.

Similarly, the IMF has de facto become the lender of last resort to countries experiencing acute liquidity problems.

As in the domestic context, some would argue that the lender of last resort function should be combined with responsibility for prudential standards. Under the pressure of recent events things seem to be moving in this direction, but there is a need to sort out the respective roles of Basle and the IMF.

Finally, there may be a need for a new supernational industry body representing the financial sector’s own interest and expertise in risk control. The Group of Thirty has, for instance, suggested that “core institutions”—embracing large internationally active banks as well as the largest securities firms—should establish a standing committee to work with supervisors in promulgating and reviewing global principles for managing risk. This proposal is based on the increasing scale, speed, complexity, and interconnectivity of financial transactions and the observation that “the global operations of major financial institutions and markets have outpaced the national accounting, legal and supervisory systems on which the safety and soundness of individual institutions and the financial system rely.”

In summary, the combination of globalization and functional integration of financial markets creates a dangerous potential for both cross-border and cross-functional financial contagion. This has been a painful lesson learned from the East Asian crisis where the channels for contagious disruption have been both geographic and inter-market (banking, securities, and foreign exchange). The implication is that international coordination of prudential regulation should, like domestic regulation, be organized on a multi-functional basis through a single prudential regulatory agency. Arguably, that single agency should be responsible for standard-setting, monitoring, and enforcement. Whether the same agency should also be the international lender of last resort is, however, a moot question.

V. Summary and Conclusion

The main considerations behind the regulation of financial institutions are: consumer protection, moral hazard (a consequence of consumer protection), market integrity, and systemic risk. In addition, regulatory neutrality is an important element in the design of any regulatory framework.

In what has loosely been described as the traditional model, the financial services industry is divided into separate pillars (banks, investment firms, insurance companies, and fund management companies) each with its own distinct regulatory regime. Since functions and institutions

are synonymous, regulation is both functional and institutional; regulatory neutrality is not a major issue; regulatory objectives, targets, and techniques are neatly compartmentalized; and problems of regulatory interface do not arise.

Over the past decade or so the traditional demarcation lines between banking and non-bank financial activities have been eroded. Ownership linkages between banks and non-banks, the blurring of distinctions between banking and securities business due to "securitization" and other forms of financial innovation, and the dismantling of legal activity constraints previously applied to financial institutions, have together transformed the financial landscape. In the new market environment banks are no longer uniquely susceptible to systemic risk and moral hazard; it is no longer possible to identify separate sets of regulatory objectives, targets, and techniques covering the main categories of financial activity; and there is an inevitable mismatch between the regulation of functions and the regulation of institutions (since function and institution are no longer synonymous).

A further key factor in the new environment is the centralization of risk management within diversified financial firms, using advanced statistical techniques that "unbundle" different types of risk at the individual entity level and reaggregate them (again by type of risk) for the purpose of centralized management at the group level. Regulators have meanwhile adopted the principle of consolidated supervision, which broadly aligns the regulatory approach to risk appraisal with that of management.

It has been suggested here that the institutional structure of regulation should be assessed in terms of economies of scope, prudential logic, and regulatory neutrality. On this basis the convergence of prudential regulatory objectives and techniques relating to previously distinct financial activities points to the need for a single prudential regulator. In this context there could be regulatory interface problems if the central bank is divested of its responsibility for prudential supervision but nevertheless retains responsibility for systemic stability.

There is a parallel, though less compelling, case for the housing of conduct-of-business (and market integrity) regulation within a single regulatory agency. On the other hand, there is no such argument for combining the prudential and conduct-of-business regulatory functions within a single all-purpose regulatory body, given the very different techniques and skills required for those functions.

Finally, arguments relevant to the design of the domestic financial regulatory structure apply with equal force at the international level. Indeed, it has been pointed out that the combination of globalization and functional integration of financial markets creates a dangerous potential for both cross-border and cross-functional financial contagion, as evidenced by the East Asian crisis. This in turn calls for cross-functional international regulatory coordination.

In terms of the present loose international federation of banking, securities, and insurance supervisory authorities, there is a strong case for a more integrated over-arching coordinating body whose remit is to oversee the full spectrum of cross-border financial activity. Furthermore, in place of the present divided responsibility for international standard-setting (Basle) and enforcement (IMF) a single agency should arguably be responsible for both functions.

References

- Bank of International Settlements (1998). "Supervision of Financial Conglomerates." Consultation document by the Basle Committee on Banking Supervision, Basle, February.
- Dale, R. (1992). *International Banking Deregulation: The Great Banking Experiment*. Oxford: Basil Blackwell.
- Dale, R. (1996). *Risk and Regulation in Global Securities Markets*. New York: John Wiley.
- Dale, R. (1997). "Controlling Risks in Large Value Interbank Payments Systems." *Journal of International Banking Law*, 12(II), pp. 426–34.
- Diamond, D., and P. Dybvig (1983). "Bank Runs, Deposit Insurance and Liquidity." *Journal of Political Economy*, 91(3), pp. 401–19.
- Diamond, D., and P. Dybvig (1986). "Banking Theory, Deposit Insurance and Bank Regulation." *Journal of Business*, 59(1), pp. 55–68.
- Directory of Financial Regulatory Agencies (1996). London: Central Bank Publications.
- Financial System Inquiry (1997). *Financial System Inquiry: Final Report*, Commonwealth of Australia, March.
- George, E. (1997). "Are Banks Still Special?" Speech at the IMF's Seventh Central Banking Seminar: "Banking Soundness and Monetary Policy," Washington DC, January 29.
- Goodhart, C., P. Hartmann, D. Llewellyn, L. Rojas-Suarez, and S. Weisbrod (1998). *Financial Regulation: Why, How, and Where Now?* London: Macmillan (forthcoming).
- Goodhart, C., and D. Schoenmaker (1993). "Institutional Separation between Supervisory and Monetary Agencies." London School of Economics Financial Markets Group. April.
- Greenspan, A. (1997). Remarks at the Annual Convention of the Independent Bankers Association of America, Arizona, March 22.
- Greenspan, A. (1998). Statement before the Subcommittee on Financial Institutions and Consumer Credit, Committee on Banking

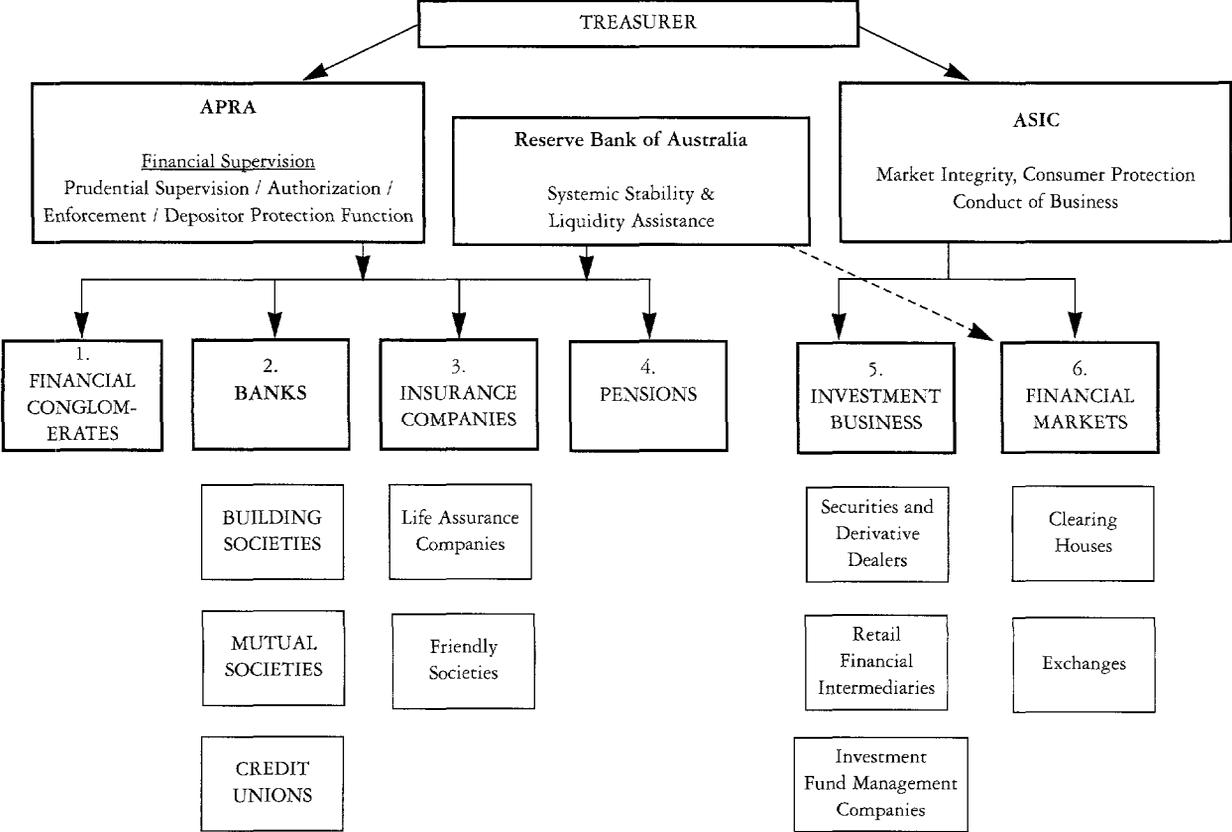
- and Financial Services, United States House of Representatives, February 13.
- Group of Thirty (1997). *Global Institutions, National Supervision and Systemic Risk*. Washington, D.C.
- Herring, R., and R. Litan (1994). *Financial Regulation in the Global Economy*. Washington, DC: Brookings Institution.
- International Organization of Securities Commissions (IOSCO) (1998). "Objectives and Principles of Securities Regulation." Consultation Draft, June 3.
- Large, A. (1994). Speech to IOSCO conference, Tokyo, cited in the *Financial Times Financial Regulation Report*, October.
- LaWare, J. (1991). Testimony before the Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs, United States House of Representatives, May 9.
- Litan, R. (1987). *What Should Banks Do?* Washington, DC: Brookings Institution.
- OECD (1997a). "Regulatory Reform in the Financial Services Industry: Where Have We Been? Where Are We Going?" *Financial Markets Trends*, No.67, June, pp. 31–96.
- OECD (1997b). "Recent Regulatory and Structural Developments in the Financial Services Industries of OECD Member Countries." *Financial Markets Trends*, No. 68, November, pp. 127–72.
- Shearlock, P. (1998). "The New Retail Model." *The Banker*, April.
- Tripartite Group (1995). *Report of the Tripartite Group of Banking, Securities and Insurance Supervisors on the Supervision of Financial Conglomerates*. Basle.
- Taylor, M. (1995). *Twin Peaks: A Regulatory Structure for the New Century*. London: Centre for the Study of Financial Innovation, December.
- Taylor, M. (1997). *Regulatory Leviathan: Will Super-SIB Work?* London: CTA Financial Publishing.
- Taylor, M. (1998). "Assessing the Case for an Integrated Financial Commission." Paper presented at the Third High-Level Group on Financial Sector Reform in Latin America and the Caribbean, Madrid, May.
- U.S. Treasury (1991). *Modernizing the Financial System: Recommendations for Safer, More Competitive Banks*. The Department of the Treasury, February.
- White, W. (1998). "The Coming Transformation of Continental European Banking." Bank of International Settlements, Working Paper No. 54, Basle, June.

Endnotes

1. For a summary description of the relevant regulatory structures see Appendixes 1–5.
2. See OECD (1997a, 1997b).
3. For JP Morgan and Bankers Trust the proportion of secured funding is as high as 25–36 percent compared with 55–80 percent for major U.S. securities firms (cited in George 1997, p. 8).
4. Insurance, however, should be differentiated for two reasons: First, as explained in the text, systemic risk is less in insurance than it is in banking and securities, and, second, it may not be appropriate to include insurance companies within group-consolidated capital adequacy assessment if under relevant insurance legislation capital cannot be transferred to other financial firms within the group.
5. Since 1990 the U.S. mutual fund industry has grown from \$600 billion to more than \$4 trillion today, while U.S. bank deposits over the same period have remained static at \$2.2 trillion. Investment actions by mutual funds could conceivably give rise to systemic instability. See *The Banker* (April 1998), p. 17.
6. See Goodhart et al. (1998), p.19. Chapter 8 of this study provides a useful discussion of policy issues relating to the institutional structure of regulation.
7. See, generally, Dale (1992).
8. George (1996). Cited in Goodhart et al., (1998) Chapter 8.
9. See Taylor (1995).
10. Financial System Inquiry (1997), "The Wallis Inquiry."
11. See Taylor (1997).
12. See Goodhart and Schoenmaker (1993).
13. See Taylor (1998).
14. See, generally, Herring and Litan (1994).
15. See Dale (1996), pp. 135–51.
16. See Dale (1996), pp. 144–46.

APPENDIX 1

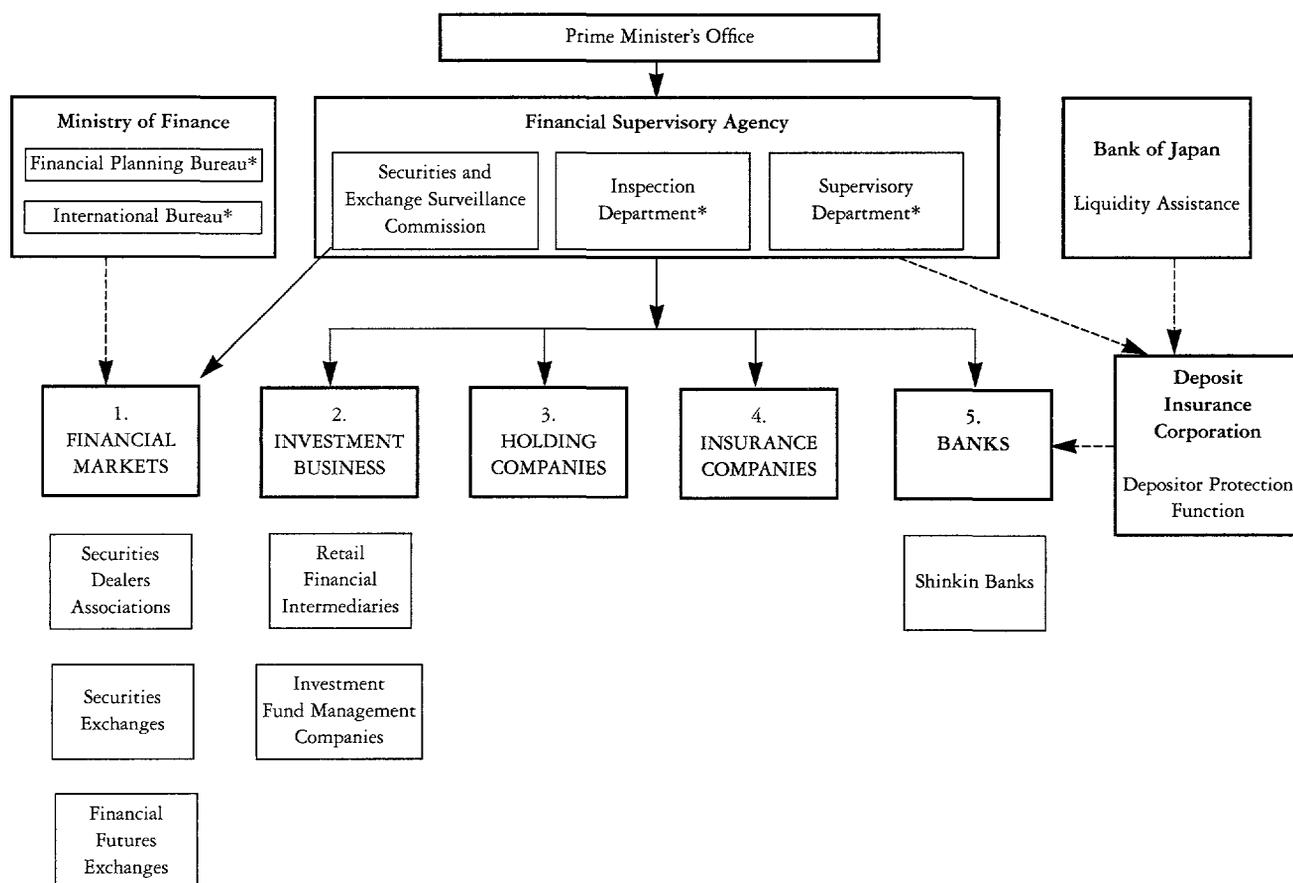
Australian Regulatory Structure



APRA: Australian Prudential Regulation Authority
 ASIC: Australian Securities and Investment Commission

APPENDIX 2

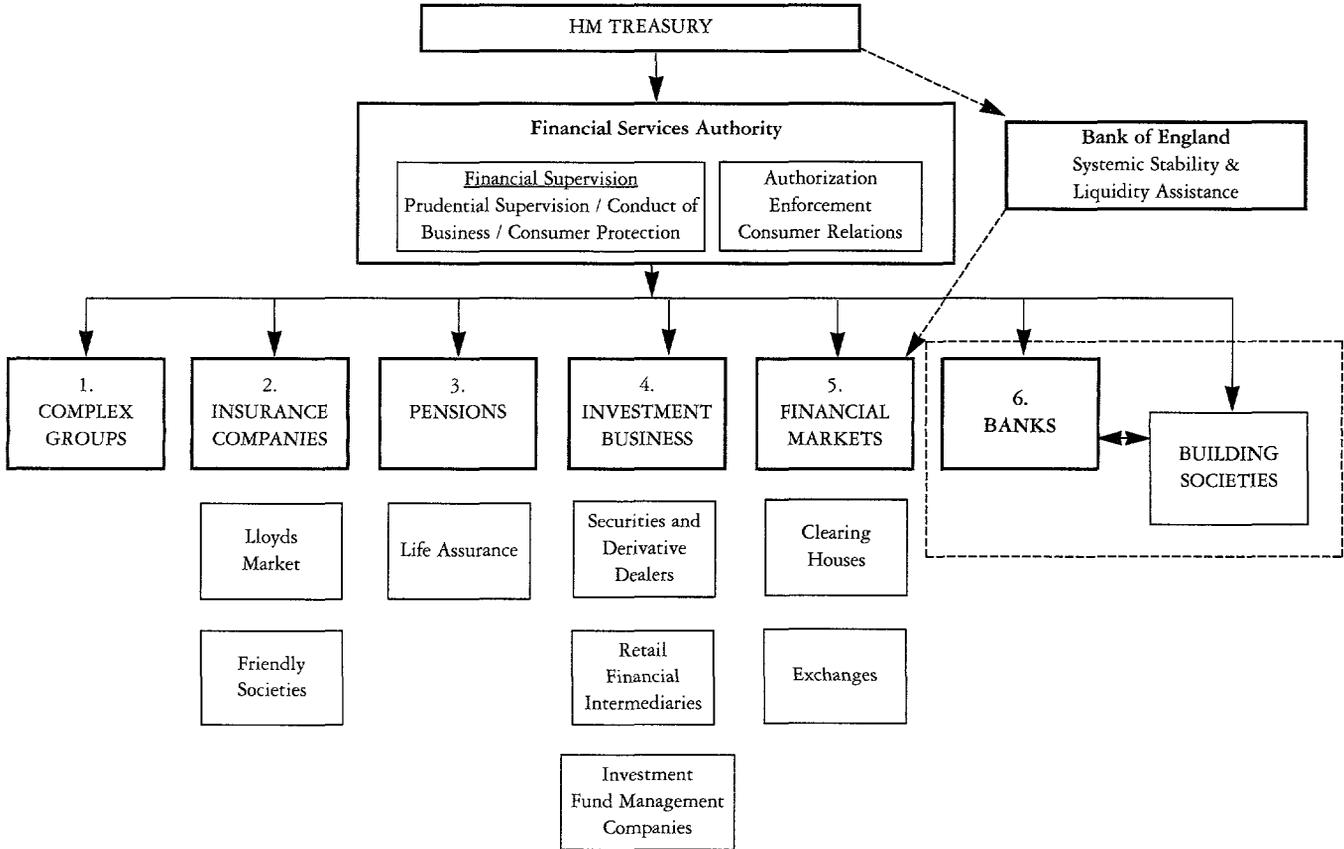
Japanese New Financial Regulatory Structure



FSA: Financial Supervisory Agency. Responsibilities: Prudential Supervision / Conduct of Business / Consumer Protection / Authorization / Enforcement
 MoF: Responsible for legislation for the whole financial system (banks, securities and insurance companies) and international representation (IMF and G7).
 *Denotes a tentative name.

APPENDIX 3

U.K. Regulatory Structure



FSA: Financial Services Authority

1. Complex Groups regulation will follow the "lead Supervisor Model."
2. Insurance Companies: The FSA will have extensive powers over Lloyds.
3. Pensions: Includes life assurance companies, pension funds, unit trusts.
4. Investment Business: Covers all current SFA firms, PIA firms, and IMRO firms.
5. Financial Markets: Exchanges include LIFFE, London Metals Exchange, International Petroleum Exchange, OMLX, London Stock Exchange, Tradepoint, OTC Markets.
6. Banks: Following the new BoEBill in 1998, the supervision of banks falls under the FSA and once the Financial Regulatory Reform Bill is enacted supervision will include B Societies, Mutual Societies, Credit Unions, Industrial, and Provident Societies.

APPENDIX 4

Memorandum of Understanding between the U.K. Treasury, the Bank of England, and the Financial Services Authority: Summary of issues addressed.**1. Bank of England's Responsibilities**

The Bank will be responsible for the overall stability of the financial system, involving:

- (i) Stability of the monetary system.
- (ii) Financial system infrastructure, in particular the payments system.
- (iii) Advice on implications for financial stability of domestic and international financial market developments.
- (iv) Role as lender of last resort.
- (v) Efficiency and international competitiveness of the financial sector.

2. FSA's Responsibilities

The FSA will be responsible for:

- (i) The authorisation and prudential supervision of banks, building societies, investment firms, insurance companies and friendly societies.
- (ii) The supervision of financial markets and clearing and settlement systems.
- (iii) The conduct of support operations, other than lender of last resort assistance, involving, for

instance, changing capital or other regulatory requirements and capital injections into troubled firms by third parties.

- (iv) Regulatory policy in the above areas.

3. The Treasury's Responsibilities

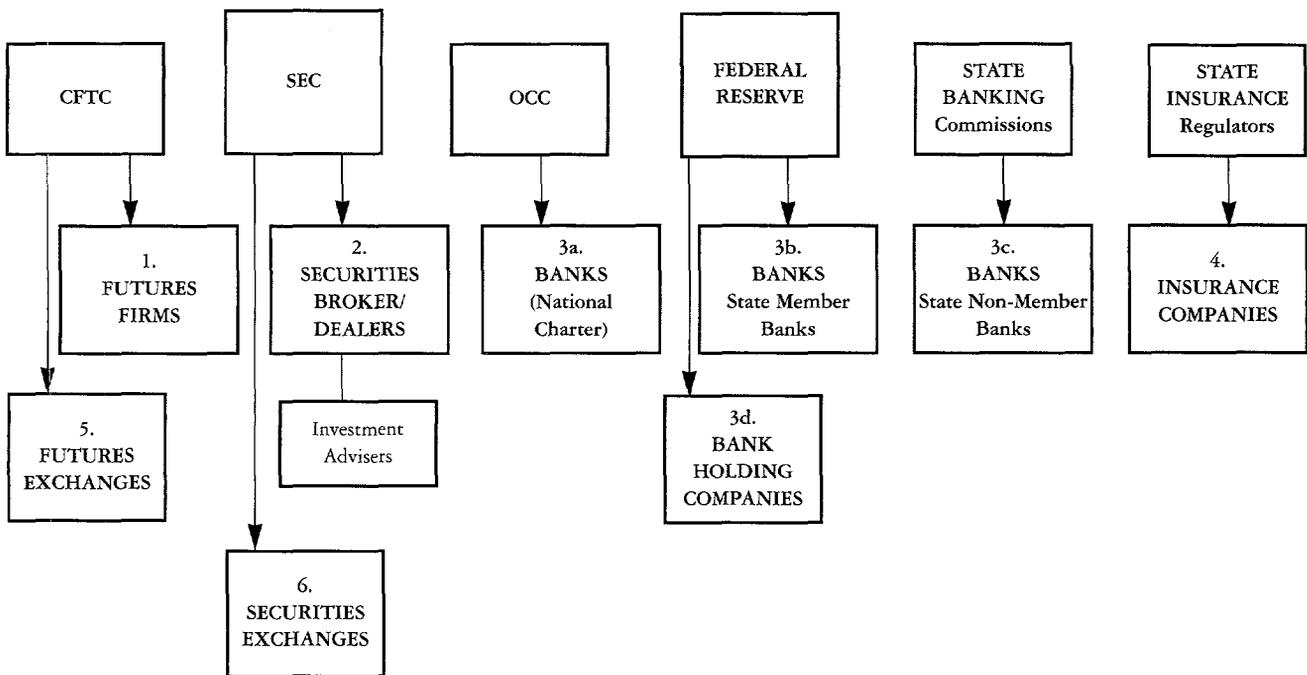
The Treasury is responsible for the institutional structure of regulation and the legislation that governs it. It has no operational responsibility for the activities of the Bank or the FSA but it is to be kept informed of problem situations so that the Chancellor may be given the opportunity of refusing support action.

4. Co-operation between the Bank and the FSA

The Bank's Deputy Governor will be a member of the FSA's board and the FSA Chairman will sit on the Court of the Bank. The FSA and the Bank will establish information sharing arrangements. There will be a standing committee of representatives of the Treasury, Bank and SEA which will discuss financial stability issues on a monthly basis (and at other times as needed).

APPENDIX 5A

U.S. Regulatory Structure



CFTC: Commodity Futures Trading Commission.

SEC: Securities and Exchange Commission.

OCC: Office of the Comptroller of the Currency.

1. Futures Firms are regulated by the CFTC and subject to the self-regulatory bodies National Futures Association, and Futures Exchanges.

2. Securities Broker/Dealers are regulated by the SEC and state securities regulators, and also by the following self-regulatory bodies: National Association of Securities Dealers (NASD) and Stock Exchanges.

3. a, b, c, d.: Banks: See appendix 5b.

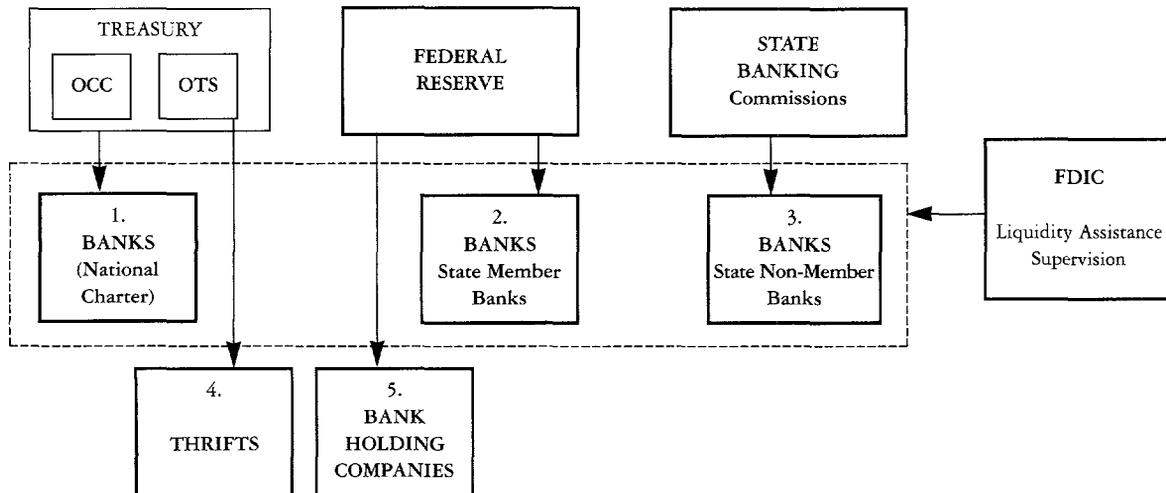
4. Insurance Companies are regulated by the state insurance regulators.

5. Futures Exchanges and future exchanges' Clearing Houses are regulated by the CFTC.

6. Securities Exchanges are regulated by the SEC.

APPENDIX 5B

U.S. Depository Regulatory Structure



OCC: Office of the Comptroller of the Currency

OTS: Officer of Thrift Supervision

FDIC: Federal Deposit Insurance Corporation

1. Banks with a national charter are regulated and supervised by the OCC.

2. State-chartered banks that are members of the Federal Reserve System (State Member Banks) are regulated and supervised by the Federal Reserve and their state agency.

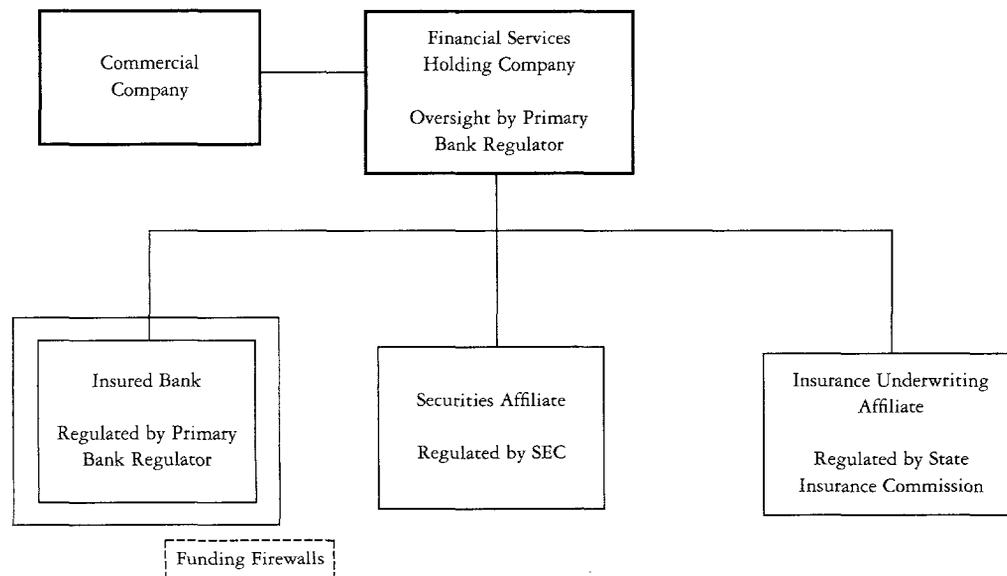
3. State-chartered banks that are not members of the Federal Reserve System (State Non-Member Banks) are regulated and supervised by their state agency, and supervised by the FDIC if federally insured.

4. Thrifts are regulated and supervised by the OTS. State chartered thrifts are also regulated by the states.

5. Bank Holding Companies are regulated and supervised by the Federal Reserve, even though in most cases it does not regulate or supervise the subsidiary bank.

APPENDIX 5C

Glass-Steagall Reform Possible Regulatory Structure



Source: U.S. Treasury (1991), p. 56.

Comment

JOSÉ FLORENCIO GUZMÁN

PROFESSOR DALE'S PAPER PROVIDES A LUCID AND VERY FULL PRESENTATION OF THE ELEMENTS that each country has to take into account in order to define the optimum structure for supervising the broad spectrum of activities represented nowadays by capital market operations. It is a distinctly successful initial attempt to determine the basic features of the various groups of institutions and the objectives, activities, and safeguards needed within markets. As a common denominator of all these features, we should emphasize protection of the interests of consumers, depositors, and investors, on the one hand, and, on the other, the need for a clear demarcation of the exposure to possible systemic risks and possible contagions in each activity.

We share the view that the first priority in the banking system is the protection of depositors, and also the stability necessary for protecting the payments system and the explicit and implicit security provided by the state and the Central Banks, the former as guarantor of that stability and the latter as lenders of last resort. That priority distinguishes the banking system very significantly from the other institutions and activities in the capital market.

The other institutions are to some degree protected by their very nature (since holding assets and liabilities forms the basis of their structures), and by their methods of operation.

Securities or investment institutions, unlike banks, are generally protected by assets of a liquid nature that are frequently the object of transactions in the market. Their reliability and profitability can be verified because transparent information is available, and their investors are sensitive to the volatility of prices. The operations of insurance companies are subject to actuarially proven statistics and reserve requirements that serve to reconcile the liquidity and maturity of their investments with their obligations to meet claims. Companies specializing in funds management act purely as intermediaries, without any merging or mingling of capital, and investments are protected in the same way as was previously indicated in the case of investment companies. Similarly, securities agencies, including agen-

cies specializing in exchange, clearing, and payments, operate under technical rules that safeguard the instruments they manage and reduce risk exposure.

Each of these capital-market institutions operates in accordance with rules, legal structures, procedures, information technology facilities and controls, types of instrument, definitions of specialization, risk coverages, and requirements governing capital adequacy, the separation of capital from different sources, and the specificity of the services they provided that together make up a highly sophisticated variety of elements that cannot readily be grouped into common denominators.

To this sophisticated mix of activities and specializations must be added the very relevant issue (in the context

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of this commentary) of whether or not a particular country presents a systemic risk that could severely compromise its overall financial and economic position.

In my opinion, these two items (differentiation among activities and exposure to systemic risks) are key elements in determining the best ways to organize regulation and supervision in the relevant areas of the capital market.

In light of the very short time allowed for commenting on the keynote paper, one can put forward only the following basic ideas regarding the organization of supervision:

It is difficult not to agree that the new environment in which capital markets operate has undergone substantive change as a result of globalization, competition, technology, and the ways in which the consumers' many simultaneous needs are met. It is also hard not to agree that the above environment renders it essential to seek economies of scale and scope on the part of both the providers and the requesters of those services, and this leads to the integration of ownership and management that Professor Dale's paper emphasizes. We also agree that the various entities making up the capital market—and more especially the financial conglomerates that now cover broad-ranging interconnected activities—have blurred the clear dividing lines that used to exist in the past. This explains why the Tripartite Group of the G-10 has been assigned the task of establishing a more comprehensive view of these activities and devising ways of harmonizing the regulation and supervision of these conglomerates. However, it is a very different thing to expect that this situation should necessarily bring about the sort of integration in which regulation, and therefore supervision, are organized through a single agency, as in the systems recently introduced in the United Kingdom, Japan, Korea, and Taiwan.

The wide range of systems of supervision that already exist or are now being implemented around the world are the result of qualitative considerations and a concern for efficiency; these will be analyzed later. For the moment, it should just be noted that a recent survey based on the Directory of Financial Regulatory Agencies and cited in a paper on "Assessing the Case for an Integrated Financial Commission" (presented by Professor Michael Taylor of the ISMA Centre, University of Reading, at a seminar in Madrid on May 29, 1998) concludes that the prevailing form of regulatory structure consists of separate specialized agencies for the regulation and supervision of each of the different activities in the capital market.

None of this is surprising, especially in the case of the emerging economies, for the following reasons.

- In considering this issue, we should avoid grouping together, in one and the same analysis and set of proposed solutions, those countries that have developed capital markets and ones whose markets are only incipient. Deep capital markets offering information that is transparent in both frequency and quality, a diversity of institutions and instruments, a broad volume of transactions, solidly established valuation systems, and complete globalization are more open to the adoption of a single regulatory and supervisory agency than are other markets not possessing such features.
- If we accept the principle that the control and reduction of systemic risk must be made a priority for the financial and banking sector, then that sector must be isolated from possible contagions, stricter rules involving prudential controls must be established, and the market must identify a specialized agency to be devoted exclusively to the supervision of the sector, thereby contributing to its strength.
- That strength will be increased if the market also plans for the supervisory agency to be more independent and does not require that it be made part of—or subject to—other policy-making, decision-making, or coordinating bodies that will slow down or obstruct the process and hinder the agency's capacity for adopting timely decisions. In this respect, the bureaucracies operated by the mega-institutions constitute a serious constraint. The results of any attempts to further such independence through the creation of internal divisions or departments based on specialized objectives or activities tend to be purely theoretical.
- An equally important point (one that I have not found in the literature, but have myself encountered in practice) is the contagion effect that can be produced when problems affecting a sector other than banking and characterized by a high degree of public conflict become the concern of the single agency, as a consequence of its supervisory mandate. If a scandal occurs in an investment company or in a company with publicly offered stock that is registered, authorized, or monitored by the agency responsible for banking supervision, that one circumstance alone weakens trust in the market and in the agency's capacity to

control it, and this has repercussions for financial and banking systems that are most sensitive to systemic risk.

- Competition among regulatory and supervisory institutions has proved to be useful for improving their efficiency in terms of recruitment of suitable human resources, training plans for them, their degree of public recognition, the credibility of their policies, their independence and decision-making capacity, and the degree of stability and success they achieve in their respective systems.

One phenomenon that has significantly increased as a result of the development of capital markets and the consequent integration and formation of financial conglomerates is the emergence of conflicts of interest among different activities in the financial sphere. This phenomenon complicates the task of the regulators, given that it is detrimental to the public interest, the safeguarding of which is the very *raison d'être* of regulation.

In a context like this, it will be readily understood that the sector that is being regulated will not itself deal with such conflicts of interest, since they arise as a natural consequence of the integration of activities, and impose no special costs on the parties involved. These conflicts of interest are passed along to the various areas subject to financial regulation, and this, combined with the differences among the emphases and specific objectives of the various regulators, means that the public interest is maximized as a result of the interplay among the conflicting interests. This would suggest that there is a need for bodies that can coordinate the tasks of the regulatory agencies, so as to avoid impairing the social objectives associated with each individual financial activity.

We are also aware that the main drawback of having a multiplicity of regulatory and supervisory agencies is that there will be no single body responsible for overseeing the solvency of all the holding companies or groups concerned. This problem can be solved by having a lead supervisor or an effective coordination body, such as that suggested above, for dealing with conflicts of interest. This is partic-

ularly important in the case of financial conglomerates with international ramifications, as is emphasized in Paragraphs 23–25 of the “Core Principles for an Effective Banking Supervision” recently issued by the Basle Committee. In some countries, such coordinating bodies are constituted by capital market committees made up of the various specialized supervisors.

To conclude, I want to express my full support for the following paragraphs taken from the paper by Professor Michael Taylor and already referred to:

The decision whether or not to create an Integrated Financial Commission therefore depends on a matrix of factors, in which potential gains must be balanced by other considerations, which can only be fully assessed on a case-by-case basis.

Thus we can conclude that there is no one right model for structuring financial regulation in a particular country. Integrated Financial Commissions may be growing in popularity, but it would be a mistake to see them as a universal solution to the administrative problems of financial regulation. There would appear to be only two universal truths in this area. The first is that the design of the institutional structure of regulation must reflect the structure of the underlying industry. Hence, regulatory structures ought to be as varied as those of the industry that is regulated. Second, regulation continues to have different objectives, notwithstanding the integration of the financial services sector that has occurred in Britain and the United States. Hence, there is no necessary connection between the integration of financial services and the assumption that an IFC is the appropriate policy response.¹

Endnote

1. Michael Taylor, “Assessing the Case for an Integrated Financial Commission.” ISMA Centre, University of Reading. Mimeo. May 29, 1998.

Comment

J A C Q U E S T R I G O L O U B I E R E

THE DOCUMENT PRESENTED BY MESSRS. DALE AND WOLFE OFFERS SOME VERY PERSUASIVE arguments about the need for a coordinated and comprehensive approach to the supervision of banking and non-banking financial markets, both domestically and abroad. The essential characteristic of these markets is that the people running them, whether they are bankers, insurers, pension fund managers, stock brokers, or managers of exchanges and clearing houses, are all in a position of public trust. For this reason, there is a public interest in supervising their entry into the market, assessing their behavior, and, if necessary, demanding their removal from the market.

Thinking in terms of the public interest, then, who are the people that financial market regulators should be seeking to protect? In the first place, they are the depositors who have placed their money with banks, finance companies, savings and loan cooperatives, and other deposit-taking financial intermediaries, and who more than anything else seek security and a reasonable return on the savings they have built up over time. In the second place, there are people who have contributed to private pension plans and who have spent their entire working lives systematically accumulating a body of forced savings, so that when they are old they can count on a company to look after their family's security and to substitute for any productive assets they may

have lost for one reason or another. Finally, there are people who invest in securities and investment funds, people who are willing to run a greater risk with their savings in the expectation of obtaining a higher yield on them and who have confidence in the transparency of information and the good faith and professionalism of their advisers and their investment managers.

One of the primary objectives of regulation is to ensure the transparency of the market—in other words, to see that the information provided about the financial situation of banks and non-banks is reliable. While there has been much progress in this regard, the fact remains that in most emerging markets the information that companies put out is not always very transparent, and this makes it difficult

for financial institutions to make sound decisions. On the other hand, in many developing countries the use of corporate accounting and financial statements as a means of ensuring transparency about a company's situation is still in its early stages. This situation not only contributes to low corporate capitalization, it also increases the systemic risk represented by the huge amounts of unsecured credit that the banking system tends to provide to its major clients and business groups.

With respect to coordinating and harmonizing international rules on regulation as a way of supporting the competitiveness and integrity of world markets, there is still a degree of unfair competition in the form of financial and tax havens that are far from complying with common

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international standards. Moreover, we must not overlook the fact that, regardless how comprehensive our regulatory approach, there are some risks that supervisors in many Latin American countries are simply not empowered to inspect. The most glaring example is the “offshore” banks that many financial groups maintain, which may provide not only a fiscal or monetary shield but also can hide solvency and risk-diversification problems.

With respect to market integrity, it is important to note that, thanks to financial globalization, companies are increasingly resorting to direct financing through the international banking system, without necessarily having any link to a domestic bank. Financing activities of this kind are not subject to supervision by regulatory bodies, and they may not even show up on the company books, so that national financial intermediaries cannot take them into account in assessing a firm’s debt-carrying capacity, and this can lead to over-indebtedness and increased risk.

Consumer protection as a regulatory objective, and compensating depositors in the case of bank failure, should be reserved for small depositors only, because the larger ones should be in a position to assess a financial entity’s health and solvency on their own.

When there is a major run on deposits, the contagion can spread to create a systemic risk. In such a case, the return of savings to depositors can go beyond the amount set by the deposit insurance fund, since it is in the public and state interest to preserve the confidence of savers, the stability of the financial system, and that of the payments system in particular.

The capitalization of financial institutions should be related to a comprehensive assessment of the risks, using new statistical techniques of risk assessment such as portfolio theories, and not merely relying on a portfolio evaluation in line with the current Basle standards. At present, the level of bank capitalization required is too low and should be increased to ensure that the shareholders have a greater stake in the sound management of their banks. There is an inherent moral hazard, too, when banks are undercapitalized. Moreover, their owners may enjoy access to non-arm’s-length credit.

In light of the organizational structure and the business strategies that are coming to prevail on national and international financial markets, there is no doubt in my mind that the arguments set out in this paper in favor of a coordinated and coherent approach to supervising such markets

are pointing in the right direction. Financial conglomerates are a reality in nearly every country. They may be formal where legislation so permits, or “de facto” where it does not; indeed, regulatory barriers can be easily overcome by setting up a company that is legally independent but that answers to the same group of shareholders and has the same corporate strategy and, even more importantly, is seen by the public as having common backing.

We understand that any modern regulatory approach must focus on financial conglomerates or the so-called financial supermarkets that offer a broad range of products and financial services. In particular, supervision must ensure that their risk-management procedures and models are appropriate. This task poses a difficult challenge for regulatory bodies in our region, in light of the following considerations:

- Capital markets in most Latin American countries are still underdeveloped.
- Savings are mobilized for the most part through the banking system.
- The form taken by financial conglomerates varies from country to country, and there are sharp differences between countries with developed financial markets and those where the banks still constitute the core of the financial system and the major, if not the only, source of funds for the real sector.

The ability to coordinate the various supervisory activities (banks, securities, insurance, and pensions) into one consolidated activity may be limited by the inherent institutional weakness in our countries. Some countries, such as New Zealand, have increasingly been leaving supervisory responsibility to the market itself and have stopped conducting in situ inspections. Up to what point should we press our supervision of the riskier financial activities—for example, by conducting in situ bank inspections?

The regulatory bodies of Latin America have taken full account of the changes that have occurred in the financial environment, through the internationalization of markets and the technological progress that has been made in telecommunications and computers. They are also aware of how ownership can become concentrated in a single conglomerate of entities that used to provide separate financial services (banks, securities, insurance, mutual funds). For this reason, discussions in the Association of Regulators in recent years has focused on the issue of consolidated supervision.

There is also a pronounced trend toward self-regulation, preventive supervision that takes account of the risks associated with a lack of internal policies, and procedures for risk evaluation or management. On the other hand, there will always be an interest in analyzing and assessing internal controls, the role of the internal auditor, and his responsibilities vis-à-vis management, the board of directors, the shareholders, and the regulatory agency.

Allow me in this context to describe the recent changes that have been made in Bolivia's financial legislation. Although it does not go so far as to create a single regulatory body, the purpose has been, as the paper advises, to establish regulatory symmetry in financial markets and to ensure comprehensive supervision of the different risks assumed by financial conglomerates. In this respect, the Bolivian model has several significant features:

The existing four superintendents over the financial sector are being reduced to two—the Superintendent of Banks and Financial Entities, and the Superintendent of Pensions, Securities, and Insurance. These superintendents are appointed for a period of six years and enjoy functional stability.

A Committee on Prudential Financial Standards has been created, comprising the senior authorities of the Central Bank of Bolivia, the two superintendents, and a vice-minister of the Ministry of Finance, as the body is charged with approving prudential standards for the financial system and is the coordinating body for the supervisory activities of the superintendents.

A *Superintendencia de Recursos Jerárquicos*, a kind of senior appeals tribunal, has been created, under a superintendent who is to be appointed by the president of the republic, on the nomination of the Senate, for a period of eight years, and who, like the other superintendents, will have quasi-judicial powers. This official is empowered to hear and decide appeals against the decisions of the other two superintendents (except in the case of forced bankruptcy) and to resolve any jurisdictional conflicts and disputes that may arise between the superintendents and the central bank.

We believe that this model is an appropriate one in light of the current status of our national financial markets, where bank lending is still the predominant form of financ-

ing, and where the insurance, securities, and pension fund markets are as yet in their early stages.

This brings me to a point that I think is important in this discussion: the new market environment, characterized in some cases by financial conglomerates with common corporate strategies, and in other cases by universal banks or financial supermarkets. It finds its justification (to quote the paper by Dale and Wolfe) in “the centralization of risk management within diversified financial firms, using advanced statistical techniques that ‘unbundle’ different types of risk at the individual entity level and reaggregate them (again by type of risk) for the purpose of centralized management at the group level.” This means that an important element of the conglomerate's solidity lies in the diversification and overall assessment of the different risks that it takes on. In effect, the greater its diversification, the greater its security.

From the consumer's viewpoint, however, the advent of these financial groupings may be creating the opposite effect. The concept of the “financial supermarket” implies that the user will be able to obtain all his financial services, and hence to concentrate all of his risks, in one single entity or financial group. Does this mean that if a financial group goes broke, a person might lose at one stroke all of his financial assets—his deposits, his pension fund, his life and accident insurance, and his mutual funds, and other investments? The answer would seem to be, and should be, no. Most of the existing legislative frameworks seem to have safety valves that require, for example, that pension funds, mutual funds, and employment-related investments be treated as separate accounts by the financial group, and that they be given special protection.

In any case, this issue deserves continued attention by financial market regulators and supervisors. While we need to adopt comprehensive or “optimal” strategies for overseeing financial groups or entities engaged in multiple financial activities (today's preferred solution), we must not forget that by doing so we may be inadvertently giving the green light to the users of financial services to concentrate their risks, and that this could turn out to be a problem for tomorrow.

Comment

L U I S A L B E R T O G I O R G I O

I APPRECIATE THE INVITATION FROM THE CONFERENCE ORGANIZERS TO COMMENT ON Richard Dale's interesting paper, which contains very thought-provoking ideas on the modifications that international regulatory and supervisory machinery must undergo to adapt to ongoing changes in the banking industry as activities are consolidated. When I say "activities," I mean the financial intermediation services provided up to now by specialized entities.

Conceptually, it is difficult to object to a centralized mechanism for regulating and supervising financial intermediation activities under which supervised companies reach their decisions within a centralized risk-management structure. Accordingly, I will review Mr. Dale's proposals in the light of experience gained in Latin America and the Caribbean and the restrictions this experience suggests should apply to the relevant institutional machinery.

To begin with, I want to make a general comment concerning the objectives and purposes of regulation. The author states that one justification for state intervention in this area is the inability of depositors and investors to assess the risk faced by depository institutions or to monitor the frequent changes that such risk engenders.

When addressing this issue, it is important to bear in mind that we are dealing here with an increasingly more sophisticated group of both institutional and large investors entirely competent to carry out direct or indirect monitoring. This is of no small importance when we recall the negative impact on macroeconomic stability of burden-sharing measures implemented in a number of countries in the region in order to distribute the costs incurred by economic agents whose investment decisions have proved mistaken.

In such situations, regulatory objectives create a conflict between the stability and efficiency of the financial system, because provisions designed to mitigate systemic risk simultaneously tend to accentuate inefficiencies in the intermediation process, whether or not it is of a specialized character. The protection—explicit or implicit—which the

government provides to creditors diminishes creditors' ability to discriminate among institutions with differing solvency profiles, because in the final analysis they all present the same risk, namely that which falls on the government. Financial intermediaries, for their part, are tempted to engage in high-risk lending operations and to operate on as slim a capital margin as possible, since any losses will be absorbed by the guarantor government.

When it comes to Latin America and the Caribbean, before broaching the question of which regulatory and supervisory institutional structure for the banking industry is best suited to dealing with overlapping financial markets, it is necessary to clarify the role that the state should play in this arena. Conceptually, there is agreement that the supervisory role of the state should complement

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market-imposed discipline. The corollary of this complementarity, in public policy terms, is the precept that state regulation and supervision should focus on minimizing the number of bankruptcies of individual financial intermediaries likely to pose systemic risks, and on fostering the orderly exit from the system of insolvent and bankruptcy-prone entities so that they do not threaten the stability of the financial system as a whole.

In practice, however, it is difficult if not impossible to differentiate, simply on the face of things, between entities whose operations entail systemic risk and those where this is not the case, since such risk cannot be determined solely on the basis of a firm's size or whether it operates in the wholesale or retail segment of the market. This situation has resulted in indiscriminate bailouts of financial firms (such as occurred in Venezuela in 1994). Consequently, the criterion of interchangeability has often replaced that of complementarity between the state and the market. This in turn has created the obviously mistaken perception among banking system creditors that because the government enjoys a monopoly on information concerning the quality of financial intermediaries and has the power to impose penalties, it should also assume responsibility for the liabilities of the institutions supervised.

The thorniest problems of moral hazard arise from these expectations, which are in fact highly specific when it comes to financial markets. The very same economic agents insisting on government guarantees act otherwise with respect to other services supplied by the private sector, where payment comes first and the contractual consideration comes later, and where confidence in the provider is a factor in the consumer's decision-making process. One example is the relationship among airlines, government regulatory bodies, and passengers. Everyone is aware that airlines must be licensed in order to operate, that they must comply with certain regulations, and that some of their operations are under direct government control. Nevertheless, when problems arise between creditors and airlines, the former do not ascribe to the state the dual role of regulator and guarantor, which is something the creditors of a bank facing insolvency without the threat of systemic risk would do.

Given this lack of clarity regarding the basis of state regulation and supervision, it could prove counterproductive to create a mega-regulator. The existence of such an entity may encourage the above-mentioned economic

agents to extend their expectations to include highly volatile financial markets, where the line between risk and uncertainty is extremely fine, and the rewards and punishments meted out are functionally more meaningful.

Mr. Dale also refers in his paper to the institutional structure resulting when regulatory and supervisory functions are centralized in the entity responsible for ensuring the macroeconomic stability of the financial system—i.e., the Central Bank. He places particular emphasis on the coordination problems arising from segmentation. In this regard, I believe that the region's financial instability is less a function of information coordination problems encountered by the various regulatory entities than of the inability of these agencies, from a political standpoint, to enforce the rules of the game. Accordingly, the optimum institutional supervisory machinery must take into account the existing restrictions in each country that prevent technical supervisory criteria from prevailing over politically motivated decisions. The most effective system will be one under which the regulation and supervision of financial intermediaries are autonomous functions. In other words, when determining the ideal institutional structure, the importance of ensuring the independence of the supervisory function should receive greater weight than the question of where in the state bureaucracy the institution exercising this function should fit.

With regard to the operations of a mega-regulator, such a body would find it easier to achieve its objectives if the same rules—including tax rules—were applied to banks, securities firms, and insurance companies. However, this is a tall order, because they conduct discrete activities with different risk profiles. In the absence of homogeneous rules, the mega-regulator will be a segmented institution lacking many of the touted advantages of such a structure; in effect, it will be three institutions in one, not one institution supervising three activities. This point is also relevant when it comes to preparing consolidated balance sheets of the group.

Finally, it is essential not to underestimate the concentration of power a mega-regulator represents. Legal instruments are therefore needed to minimize the discretionary element in decision-making to the fullest extent possible—a matter that has posed serious practical problems in the region.

Thank you for your attention.

VII. Roundtable: Lessons
from the East Asian
Crisis for Latin America
and the Caribbean

THE FIVE ASIAN COUNTRIES THAT SUCCUMBED TO FOREIGN EXCHANGE AND FINANCIAL crisis during 1997—Thailand, Indonesia, Malaysia, the Philippines, and Korea—shared common elements of financial vulnerability, although in varying degrees. We define financial vulnerability as the probability of a successful speculative attack against the currency.

The first element of financial vulnerability (Table 1) is a risk of external sustainability. The majority of these countries were stricken with a significant appreciation of the real exchange rate; they had a drag in the growth rate of exports, most notably in the cases of Thailand and Korea; and some of them had high levels or increases in the current account deficit. Nevertheless, the level of appreciation of the real exchange rate was not greater (on July first of last year, when Thailand was compelled to float its currency) than those of some Latin American countries. Likewise, the current account deficits, with the exception of Thailand and Malaysia, did not exceed levels of Latin American nations. None of the countries in Latin America experienced a slackening in export growth rates, as occurred in Asia. Two reasons explain this difference, in spite of the severe appreciation of the real exchange rate in Latin America: The recession in Asia's principal export market, Japan, coupled with the Asian economies' relative greater openness and manufacture-led export base, have rendered these markets more vulnerable to exchange rate appreciation.

In contrast with the above, the Asian countries experienced higher levels of exposure than their Latin American counterparts in the other three elements of financial vulnerability exhibited in Table 1.

On the one hand, they endured severe liquidity risks. On the first of July of 1997, the short-term external debt reached at least one and a half times that of international reserves (see Table 2). This situation gravely shook investor

TABLE 1

Symptoms of Financial Vulnerability

- *Risk of External Sustainability:* *Real exchange rate appreciation, fall in export growth, high/increasing current account deficit*
- *Liquidity Risk:* *High short-term debt as a proportion to reserves*
- *Exchange Risk:* *Exchange risk without coverage*
- *Interest rate risk:* *High debt and poor quality loan portfolio after prolonged credit "booms" and asset prices*

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TABLE 2

Liquidity Risk: Short-Term Debt/Reserves

	DEBT TO MATURITY RESERVES				
	TOTAL	UP TO AND INCLUDING A YEAR	OVER A YEAR AND UP TO 2 YEARS	OVER TWO YEARS	OTHERS
Asian Countries in Crisis					
Indonesia	2.9	1.7	0.2	0.8	0.2
Korea	3.0	2.1	0.1	0.5	0.4
Thailand	2.2	1.5	0.1	0.5	0.1
Latin America					
Argentina	2.2	1.2*	0.1	0.8	0.2
Brazil	1.3	0.8	0.0	0.4	0.1
Mexico	2.6	1.2	0.1	0.1	0.3

Source: Bank for International Settlements (1998). FMI Reserves for the end of June 1997. Data come from banks solely reporting to BIS.
 * In the case of Argentina, this number is reduced approximately to US\$13 billion if one excludes local assets in foreign currency.

confidence as it became more likely that once banks decided against the renewal of credit, all others would follow in kind, seeing that reserves would prove insufficient to offset a run of this kind. This reaction was in fact observed in all cases.

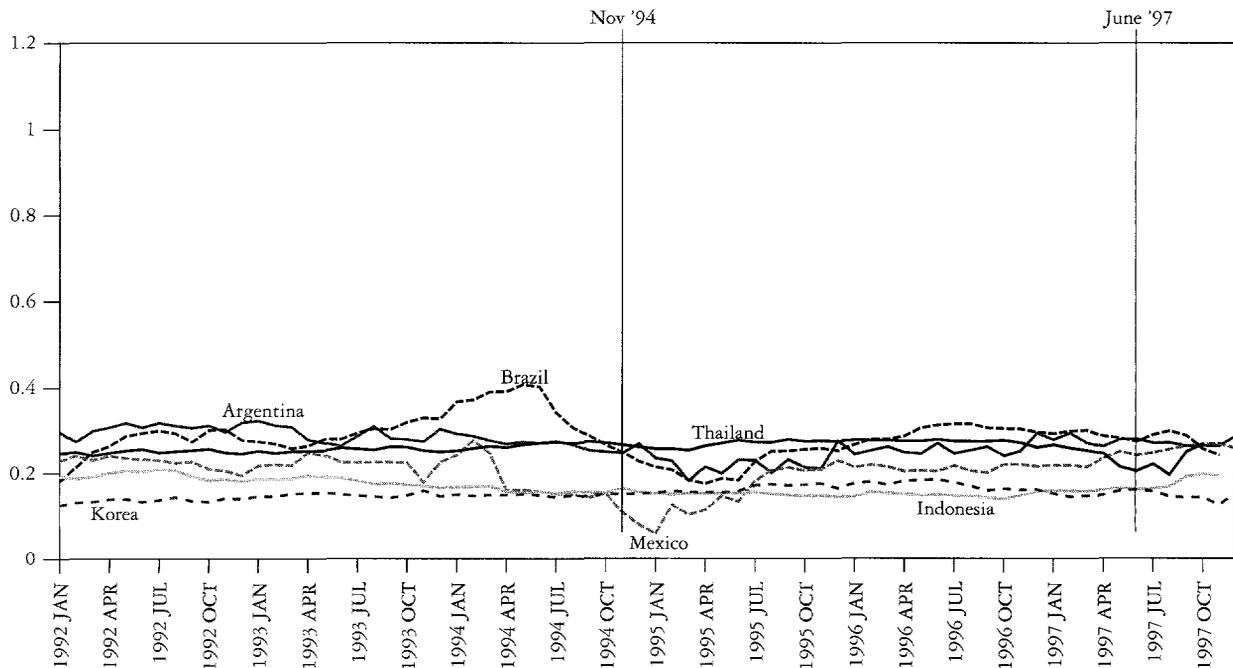
On the other hand, they exhibited massive exchange risks in the private sector, which had secured short-term, external debt to finance activities in the non-tradable service sector, which earns revenue in local currency. Also, in

some cases, the financial sector itself underwent sweeping adjustments, as in the case of Thailand where financial companies secured foreign currency to further extend loans in local currency to such activities as construction. Graphs 1 and 2 suggest the low coverage existing at the macro level against these private risks.

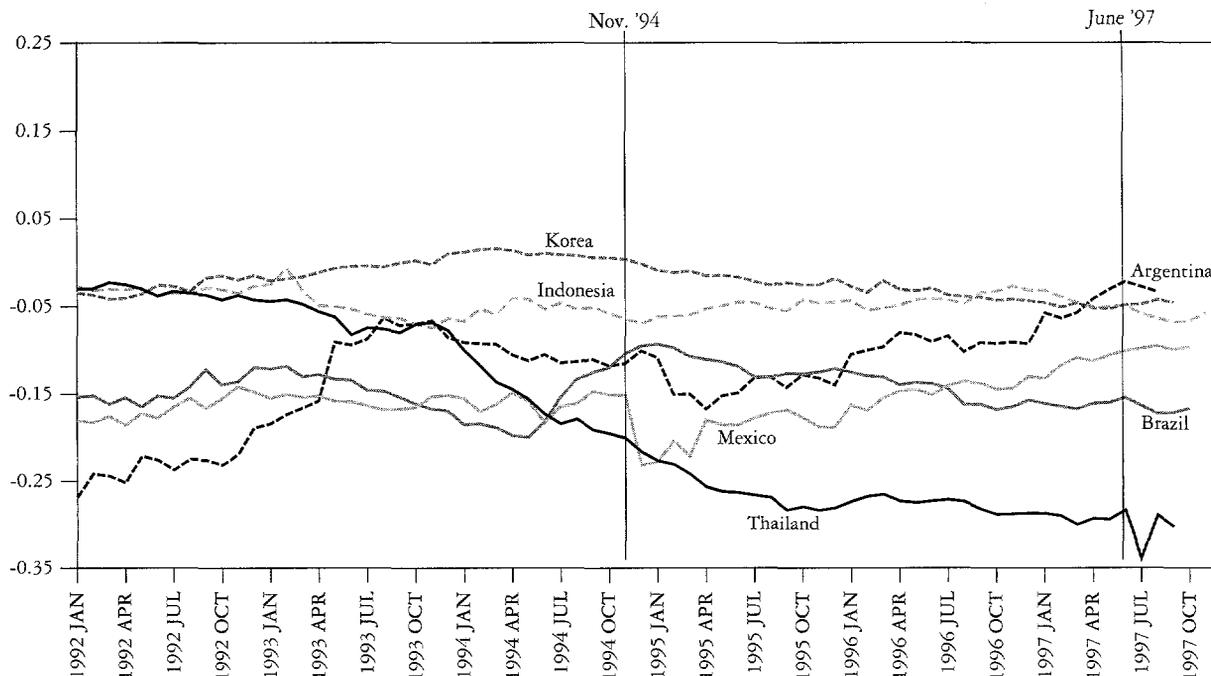
Finally, the private sector sustained acute financial risks, born out of high corporate debt and severe bank exposure. All these countries were emerging from prolonged credit

GRAPH 1

Total Reserves Minus Gold/M2



GRAPH 2

Net Assets Denominated in Foreign Currency/M2


“booms” (Graph 3), and companies were having unusually high debt-to-capital levels.¹

In summation, the major difference between these crises and previous ones is that the risks leading to the severe level of financial vulnerability were ultimately absorbed by the private sector. At first glance, the direct responsibility of poor public policy (macroeconomic or debt management) was confined to a set of countries and did not play a central role.

These facts are related to an argument put forth by Joe Stiglitz the first day of this conference, regarding the adequacy of the policy responses to these crises. In Latin America, the symptoms of crisis have been met with either preventive devaluations by countries with flexible exchange rates, or by defending the exchange rate via strict monetary policy that severely raises interest rates in the short and long term, as successfully implemented by Brazil in 1997. Neither of these two options was viable in the case of Asia, given its massive exchange rate risks and high corporate debt levels. Any one of these policies could have instantly bankrupted a great portion of the private sector, as well as shaken investor confidence, rather than regain it, as occurred in the long run with the devaluation and sub-

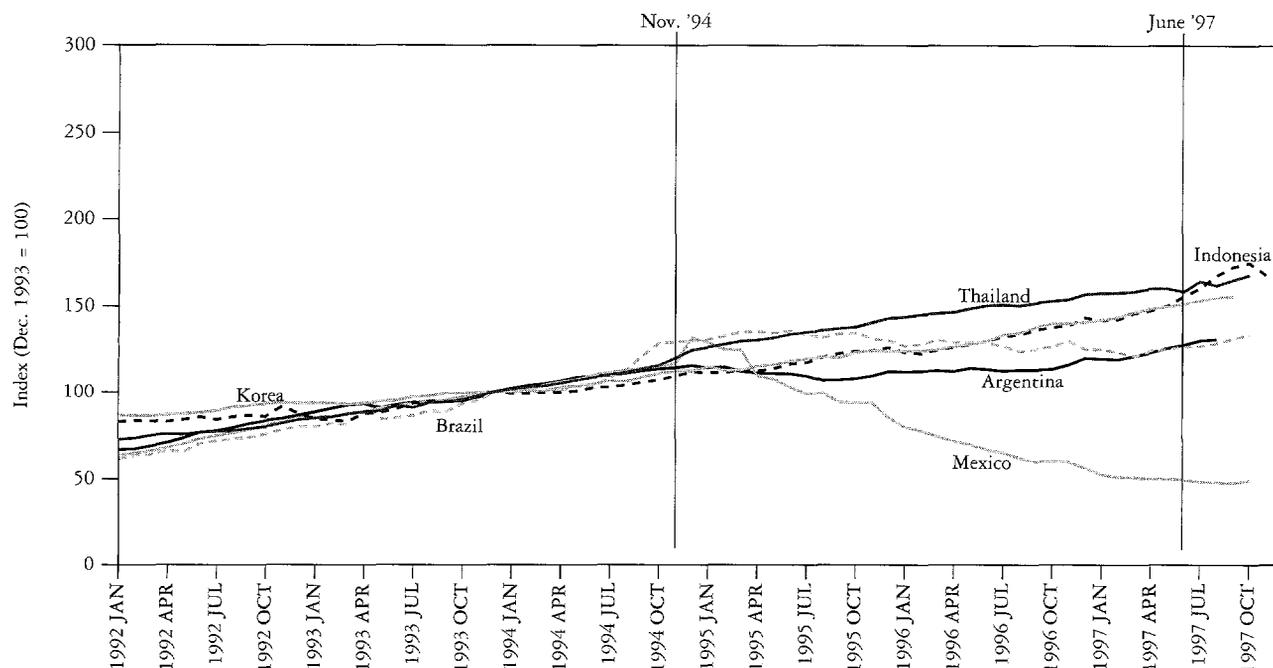
sequent recession. These differences explain why certain policies have proved useful in Latin America to prevent or treat crises, and not so successful in Asia.

Now then, the four factors of financial vulnerability exhibited in Table 1 will be named “symptoms of vulnerability.” Some analysts of the Asian crises maintain that therein lies the explanation, but we believe one must delve further. The deeper question for economic policy is what created this situation: Why did things escalate to a state of massive risks? Our answer is this: perverse incentives (that is, an institutional deficiency, as defined by Douglass North), a relatively quick financial liberalization, and a rather strange sequence. First, the perverse incentives:

- Drawn-out periods of fixed rates prompted the private sector to falsely assume that there were no foreign exchange risks combined with generalized “moral hazards” (the common belief was that the state would prevent bankruptcy of any bank or vital corporation) induced excessive risk-taking by the private sector.
- The lack of transparency in the management of corporate and economic group activities and financial transactions barred domestic or foreign financial

GRAPH 3

Credit "Booms"



intermediaries from readily assessing the risks taken by companies.

- Prudential regulation and, above all, lax supervision failed to call attention to the accumulation of high risks, or simply turned the other way.

But these perverse incentives (these institutional weaknesses) had already existed for a long time and yet failed to generate a crisis. Their contribution came when financial liberalization granted access, to corporations and banks alike, to enormous external, short-term credit flows, which permitted the massive accumulation of these risks. In sum, the crises were produced when a rapid financial liberalization, founded upon a structure of perverse incentives and inappropriate institutions, permitted the massive accumulation of risks in the private sector, thus subjecting these economies to a grave level of financial vulnerability vis-à-vis foreign investors' changes in attitude.

When I suggest that the sequence of financial liberalization was very strange, I am referring to the fact that in Asia there was a total liberalization of short-term capital flows, and not conversely, foreign direct investment in the financial sector. Some went even further to limit the accumulation of long-term debt. Latin America, in contrast,

has liberated all long-term flows, while some countries have installed controls or disincentives against short-term capital flows.

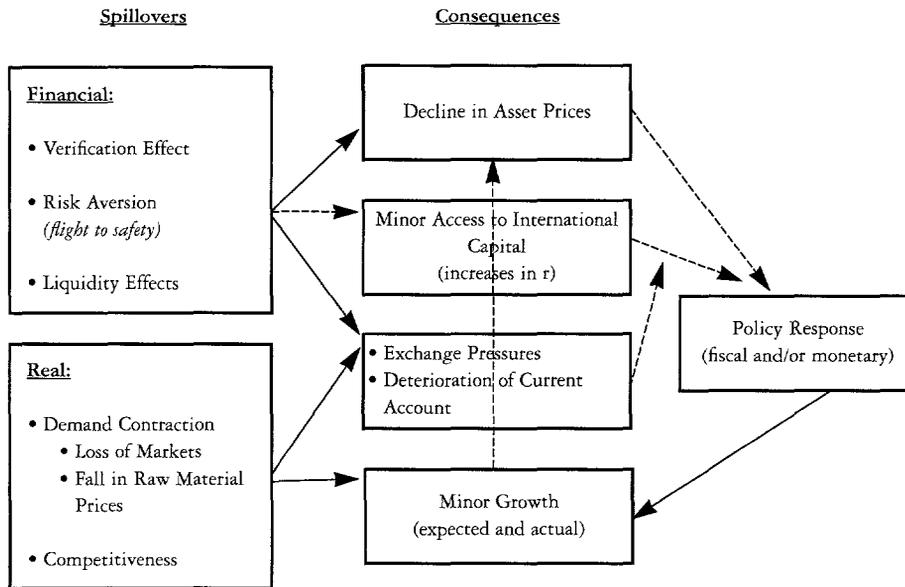
Allow me now to turn to the subject of spillover effects and contagion. Graph 4 presents the real and financial spillover effects and contagion. Three types of financial effects are displayed on the top side: (1) A demonstration effect—when crisis erupts in a country, investors check to see whether there are other countries with similar problems. (2) An increase in risk aversion leading to a “flight to safety”—a diversion of funds to more secure investment havens—in the presence of great uncertainty as to what may transpire. And (3) the need to liquidate investments in healthy countries in order to cover losses or withdrawals in other locations.

These three financial spillovers lead to the deflation of asset “booms” in third countries, which in turn puts pressure on their exchange rates and international reserves. Moreover, they increase the costs of foreign borrowing and impede the access to new credit.

The bottom of the graph shows the spillover effects through “real” (non-financial) channels. The Asian countries that entered into crisis had solid commercial integration: Intra-regional exports in Asia account for 50 percent

GRAPH 4

Spillover Effects



of total exports, when Japan is included; therefore, a slump in one country greatly affects the others. Moreover, they have highly competitive export structures, so that a severe devaluation in one nation immediately altered the fundamentals of the other countries, causing a strain in exchange rates in all these nations amidst a spiral of competitive devaluation.

In effect, beginning in July of 1997, one observes a simultaneous decline in the stock markets of all the countries, followed by a modest recovery and then another decline (in July of 1998). There is only one exception—Indonesia—where the crisis ultimately became more aggravated than anywhere else in the region. The same occurred (as has been said) with exchange rates.

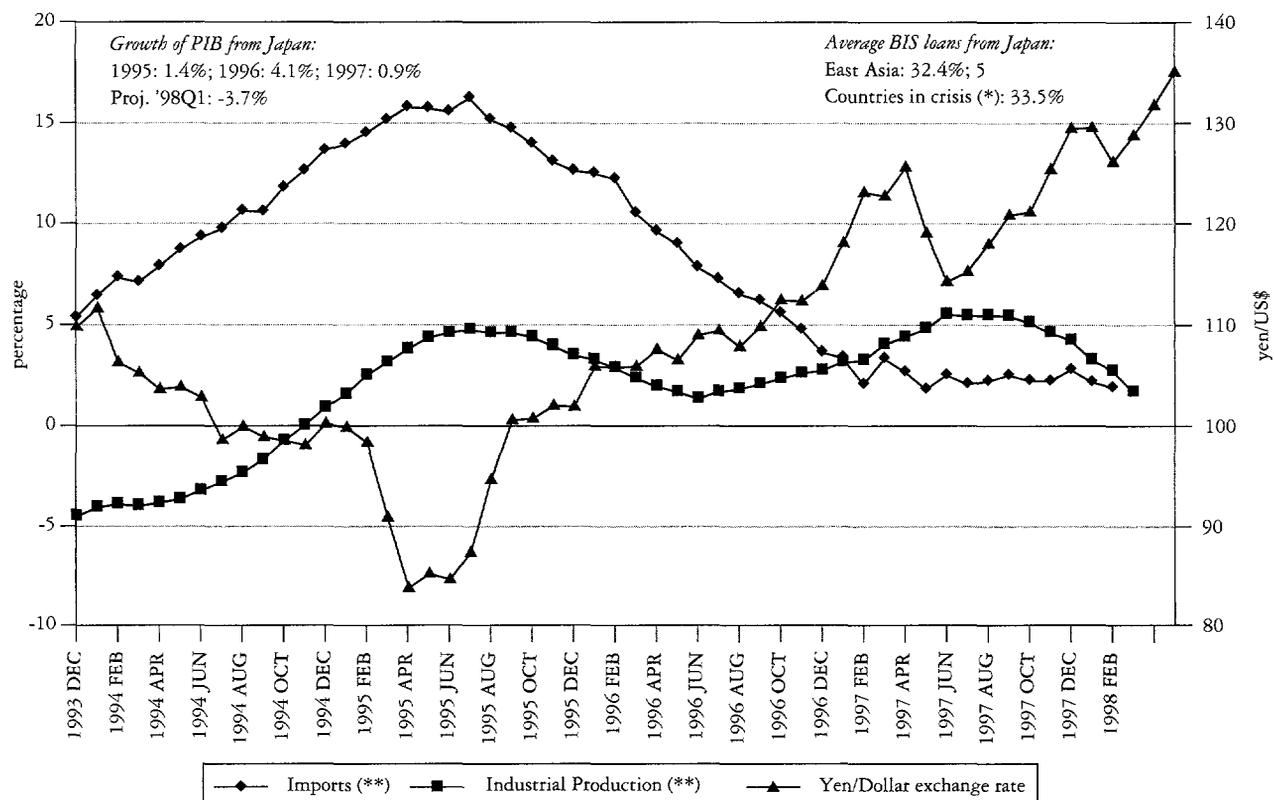
One critical aspect of the regional environment in which this crisis evolved, as well as its respective solutions, can be traced to Japan's difficulties (Graph 5). Japanese imports, after rapidly growing in the early '90s, began to severely wane as of mid-1995. The graph also shows the devaluation of the yen as of 1995, after a prolonged appreciation. In addition, 35 percent of loans to these five countries came from (troubled) Japanese banks that, even before the crisis, had begun to withdraw their financing after flooding East Asia with liquidity in the beginning of the '90s. In other words, the evolution of the Japanese economy first prepared the way for the credit "boom" and East

Asia's expansion in the onset of the '90s, and later spear-headed its export deceleration and credit contraction. Consequently, the regional character of the crisis, and the problems plaguing Japan in particular, are greatly to blame for its development and difficult resolution. This is why it has not been easy to overcome the crisis through increased exports, as Mexico and Argentina succeeded in doing in 1995 and 1996.

In contrast, Latin American countries enjoyed a low commercial exposure to Asia. Only Chile, Peru, and Brazil had a significant share of exports to Asia. The major trade effect was indirect—due to a fall in commodity prices. Asian countries are major consumers of commodities and, given their dynamism, represent a significant share of its demand growth. The Asian crisis, combined with other factors, precipitated a severe fall in commodity prices, which in turn gravely affected many countries in the region.

One can observe in Graphs 6 and 7 how, between July 10 and October 21, 1997, the Latin American stock markets that begin to fall (albeit modestly) are precisely those of Chile, Peru, and Brazil—the three nations most directly exposed to trade with Asia. As of October 21, after the attack on Hong Kong's dollar, the financial contagion became universal and provoked significant declines in world stock markets for several weeks. Subsequently, as of

GRAPH 5

Nominal Exchange Rate and Index of Industrial Imports and Production from Japan

(*) Indonesia, Korea, Malaysia, Philippines, Thailand. (**) 12 month running average.

December, major declines corresponded to those countries largely dependent on exports of commodities. (Subsequently, the Russian crisis produced a new episode of financial contagion, more severe than its predecessor, which once again affected all countries of the region and the world.)

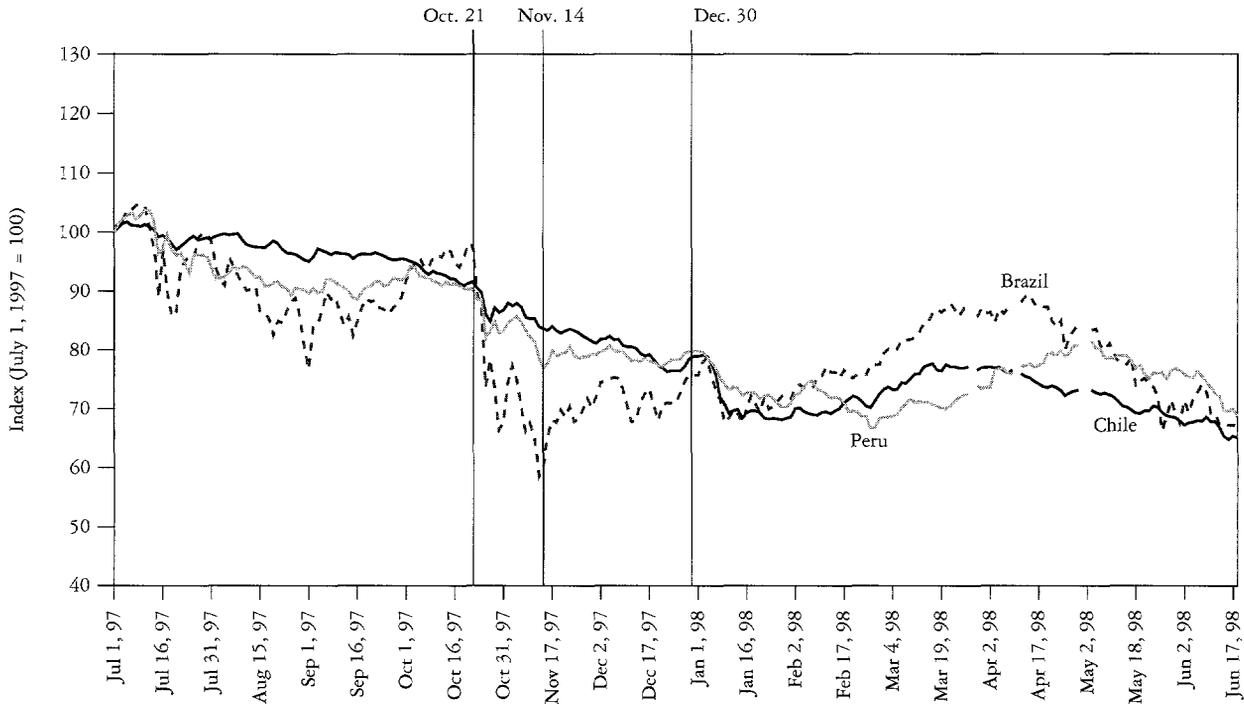
The LAC region grew 5.6 percent in 1997 and 2.0 percent in 1998. This difference should not be entirely, but rather largely, attributed to the direct and indirect effects of the Asian crises, including as an indirect effect the prudential reaction of economic authorities. In effect, officials, seeing that trade shocks tended to increase current account deficits at a moment when it was likely to be difficult or more costly to finance them, correctly opted for fiscal and monetary contractionary policies with the intent of reducing external vulnerability. (Despite these measures, which aggravated the effects on economic growth, they were not able to elude the grave contagion of the Russian episode.) Countries with flexible exchange regimes permitted an

adjustment in exchange rates, which cushioned the effects of the adjustment on economic growth.

The new lesson of the Asian crises for Latin America is that institutions are vital in preventing financial vulnerability. Institutions, understood as rules of the game in which the financial and private sector operate, are crucial in maintaining stability in a world of vast financial integration and volatile capital flows. In fact, Latin America avoided a major contagion this time around precisely because past financial crises led it to perfect or improve its financial institutions—and its prudential regulation and supervision in particular. Nevertheless, there is still much to be done in this area. Moreover, Latin America has yet to take full heed of the environment in which the corporate sector operates: rules of competition, disclosure, management and majority shareholder responsibility, minority shareholder protection, bankruptcy, etc. This topic has received little attention in Latin America and, as the Asian crises demonstrated, could foreseeably carry major repercussions.

GRAPH 6

Stock Market Price Indexes

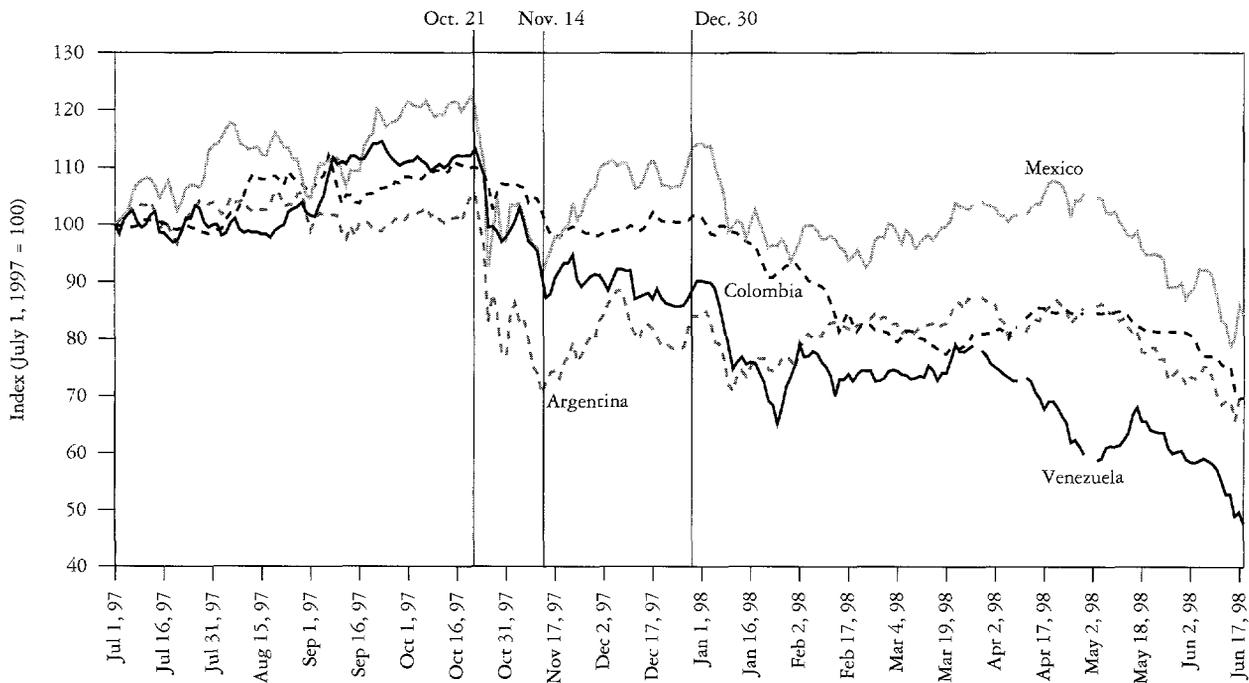


Finally, old lessons are reinforced: (1) prudent macro-economic management, in fiscal and monetary matters, avoiding prolonged credit “booms,” severe current account

deficits, and excessive exchange-rate appreciation; (2) prudent management of public and private debt, with regard to size and composition; (3) financial liberalization (gradu-

GRAPH 7

Stock Market Price Indexes



ally and carefully), above all of the capital account, accompanied by institutional strengthening.

With respect to the last point, countries do not seem to be misguided when they choose, as an arsenal of prudential policies, to install disincentives against short-term capital inflows; at least not until there is an improvement in international financial regulation, providing greater stability to short-term capital flows. In conclusion, the countries that fared better during 1997 were those with flexible exchange systems. A system of fixed exchange rates is discernibly risky when it induces the private sector to incur high levels of foreign currency exposure, as occurred in East Asia—unless one is willing to cover all the foreign exposure with international reserves and construct institutions suffi-

ciently strong to sustain it. Argentina has demonstrated that, with proper institutions, one can successfully maintain fixed exchange rates. The Monetary Union is, of course, another type of fixed rate, shouldered by the appropriate institutions.

Endnote

1. An earlier study exhibits several graphs containing various indicators that compare these four types of risk between the five countries encountering crisis and the Asian countries that evaded it, along with the seven largest countries of Latin America. See Guillermo Perry and Daniel Lederman, *Financial Vulnerability, Spillover Effects and Contagion: Lessons from the Asian Crises for Latin America*. World Bank Latin American and Caribbean Studies Viewpoints, 1998 (Washington, DC: The World Bank).

DANNY LEIPZIGER

I'D LIKE TO TALK TO YOU A LITTLE BIT ABOUT THE EAST ASIA CRISIS AND WHAT THE LESSONS might be for Latin America, starting with the point that there are a number of features that made the crisis unique—obviously, its size and the rapidity with which it moved; the fact that it happened in the best-managed region, supposedly, in the world; the fact that it was private sector in origin and that it had micro fundamentals at its root causes; and that governance was particularly important, at least in the three countries most affected, which were Thailand, Korea, and Indonesia.

This leads to some interesting questions. One, for example, is whether or not these kinds of crises will be more common in the future, and I think the answer is yes. I think we are used to dealing with more macro-induced crises, and these certainly had some different features, and I'll get to them.

The second is whether or not the East Asia miracle was really a mirage, and the World Bank and others were misleading the world in publishing books about it. I think that if we look at the three decades of growth, poverty reduction, total factor productivity, and other indicators, it is pretty clear that it wasn't a mirage, but the region has been dealt a serious shock.

The third question that comes to mind is whether all this is the fault of capital market liberalization. Here, I think there are some legitimate points that need to be addressed—not that capital market liberalization or

capital account opening is a mistake, but rather that certain institutional prerequisites probably need to exist for it to be most beneficial.

So let me try to address a few of the lessons that appear to come out of it. My assumptions are the following: First, that globalization is irreversible; second, that medium- and long-term capital is overwhelmingly a positive feature, but short-term capital might or might not be; and third, that the costs of banking crises are enormous (the systemic ones, at least) in terms of the budgetary burden, lost confidence, lower growth rates, and the downside overshooting that is taking place. Clearly, these are things to be avoided, and the question then is how to avoid them.

I would like to talk about ways to reduce vulnerability, and I think Guillermo started on this tack. Let me address five issues that involve vulnerability.

The first has to do with governance, and as I said, the three countries most affected all had political weaknesses that markets and investors saw and exploited. Thailand had unstable governments for many years; Korea had corruption scandals and a new presidential election; Indonesia had obvious difficulties, as you know. Corruption was a problem in all the countries, not only in terms of reducing the efficiency of resource allocation but also in reducing the preparedness of the countries for crisis management.

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The second vulnerability was really massive supervision failures. You heard in the previous session quite a bit about supervision. The merchant banks in Thailand and their equivalent in Korea engaged in short-term offshore borrowing in dollars to lend long-term in domestic currency for speculative, real estate, or other purposes, obviously an asset-liability strategy that no one should employ.

In addition, much of the lending that went on in East Asia was lending to groups, and there was no consolidation of balance sheets. There was a large prevalence of inter-firm guarantees, inter-firm lending, and basically a failure to acknowledge the covariance of risk between a lot of the different lending that went on. Some lawsuits have emerged due to disputes about who the actual borrower of record really was!

This was also complicated in some countries by the separation of supervision in different agencies, and there was a discussion in the previous session as to whether a mega agency is better or worse, but in any event, you need to have exchanges of information and coordination. This was not the case, for example, in Korea or in Thailand.

The most severe case to look at really was the case of Korea, because this is a country that had a GNP of \$450 billion, was in the top 10 in terms of global trade, had a per capita income of \$10,000, and had just joined the OECD. I guess the two predictive features for banking crises based on Korea and Mexico are that, one, you should not join the OECD, and second, you should be very careful in the month of December. November and December are bad months. It could be that that's the end of the financial accounting year, and banks want to cut their losses and not report terrible things, but I just throw that out for those of you who want to do further econometric work and are finding that your regressions don't work. I suggest two dummy variables—OECD and fourth quarter.

Well, in Korea, the conglomerates as they are known, *chaebols*, the top 30 of them control the economy, and the major preoccupation of all *chaebols* owners in Korea is to make it into the top 10. So the major preoccupation is to be the most profitable; it is to grow. And presumably, the idea among conglomerates is the same as among banks, that you want to be so big that you can't fail.

It is perhaps surprising to point out that of the top 30 conglomerates in Korea in 1996, half of them lost money. Only one earned more than 2 percent rate of return, and the average for the top 30 was .2 percent rate of return on turnover.

So then you ask why were people so happy to lend to these conglomerates when these are obviously not profit-making firms. Not only that, the average leverage ratio, the debt-equity ratio, in 1996 before the crisis was 363 percent debt to equity for the 30 largest firms. Now it is above 500 percent, and the interest rates are sky-high. The average large conglomerate owned 20 subsidiaries and was involved in 18 three-digit Standard Industrial Trade Classification (SITC) industries.

Obviously, we have some problems of banking due diligence; we also have some problems in the competition agencies. But the main point is that the kind of cozy relationship that existed in Korea, that exists in Russia with the financial industrial groups—and that exists in some countries in this region—this close relationship between banks and firms is not a healthy one and does not lead to the proper allocation of resources, particularly if supervision is politicized as it was in a number of these countries.

The third area of vulnerability was that there were very weak bankruptcy procedures. The incentives to acknowledge insolvency were not strong, and I don't have the time to go through the evidence of how bankruptcies were handled in Korea or Malaysia or other countries in the region. Needless to say they did not follow the Adam Smith type of parable, and the old saying that "capitalism without bankruptcy is like Christianity without sin" certainly was not taken to heart in the region.

The net result was that not only were firms not going bankrupt when they should have, but banks themselves were not failing when they should have. And I think there is probably an inverse correlation between individual bank failures and systemic bank failures, but I leave that again for further econometric work. Suffice it to say that one must have a bank failure resolution mechanism that works.

In a number of countries, governments intervened either to protect firms or to protect banks. In Thailand, it had long been a practice every five or 10 years—not the biblical 50 years, as Ricardo Hausmann said—but there were banking crises every 10 years, and at the end of the day the government would in one way or the other bail out the banks. In fact, they bailed them out so frequently that it had a name in Thailand—"the lifeboat policy." In Korea, there were similar arrangements with the government's playing the role of the work-out agent. So as long as the government plays this role, the private sector never learns

how to handle bankruptcy. It is a lot easier in a way to call the Ministry of Finance, and they would arrange it.

So there was a failure in the bankruptcy process, and I think that that was problematic.

The fourth vulnerability really has to do with this issue of moral hazard. Moral hazard refers to economic agents taking on more economic risk than they should because they feel they can offload some of that risk, so it is the equivalent of socializing risk. Domestic lenders felt comfortable avoiding due diligence because ties to business and government made bailouts likely.

This phenomenon is also seen in external borrowing where foreign lenders felt at the end of the day that the government would stand behind the obligations that were undertaken by the private sector. So the domestic lenders failed to do their due diligence in countries like Korea, and the foreign lenders didn't do their due diligence either, because they felt at the end of the day that all the debt was going to be sovereign debt anyway. And in the midst of this crisis, which began in Thailand and ran north through Asia, the Korean Government, for example, announced in August 1997, a few months after the Thai crisis, that it stood behind all the obligations of its firms and banks. The trouble with this announcement was that they didn't know what the real debt obligations of all the firms were, and they certainly did not have the reserves to cover them.

This announcement made in the midst of a crisis, before a presidential election, validated all the moral hazard behavior that had gone on. So, whereas Domingo Carvallo may have had a choice in 1995 of either saving the banks or the Currency Board, the Koreans had no such choice because they had purposely blurred the distinction between what was private risk and what was public risk, and in so doing, they took a liability of unknown size.

In the end, it turned out that private debts were in the neighborhood of \$200 billion, of which at least \$100 billion was short-term, \$20 billion coming due in December, and reserves were basically close to zero. I have written elsewhere about the Korea financial crisis of December 1997, but needless to say, moral hazard was at the heart of it.

The last vulnerability that existed in Asia, which I commend to you in case there are any parallels in this region, was the existence of very weak institutions and the politicization of those institutions, and in many countries the failure to create independent regulation in supervision agencies.

In brief, the implications are that if you have an open capital account, and you are not going to reverse globalization, you need to inoculate yourself, you need to reduce your vulnerability. You probably also need to look at the relationship between the government and firms. There are models out there that we have known about. There is the Japan-Korea-Malaysia model, which might apply to France and perhaps to China, where the corporations and the government are very close and there is a risk-sharing. Well, this has proven not to work very well, and we have this crisis to demonstrate it.

There is the corporate banking model—Germany, Euro Germany, maybe Singapore, potentially in the future, Chile—which is a corporate financial model that requires a lot of social consensus, where again, there is a certain sharing of risk, but it is done corporately, with some financial governance and equity-sharing.

Then, you have the U.S./UK/New Zealand model—markets imperfect but regulated—and it seems to me that Latin America is more in that tradition, although the institutional requirements of that model, as Joe Stiglitz and others have pointed out, are very high. That may well be the area where further work is needed, and the recent document that you have available by Guillermo Perry and Shahid Burki talks about the institutional weaknesses and how to cope with them.

So to conclude and finish exactly on time, you cannot create the institutions that you need in the midst of a crisis, but the institutions that you create before may reduce the probability of that crisis. Institutions tend to be national, but the impacts these days tend to be regional or even international, so that peer pressure is very important. I found very interesting the camaraderie and discussion among the regulators before, among the bank supervisors, because contacts among the supervisors, the auditors general, anti-corruption fighters, and Ministers of Finance can serve to lower risk because it is in everyone's interest to do so—it is really an economic decision here—that if your neighbor is going to have a crisis, and you know that contagion is very virulent, you should do everything in your power to make sure that your neighbor behaves, and that is certainly something that I think the region can do more with.

To sum up, I think the evidence is very clear that there are great benefits to liberalization and globalization, and they are irreversible in any event, so the major preoccupa-

tion for the region is to reduce the vulnerability—just do not go into malaria zones without taking the malaria pill, and the East Asia crisis shows you that some of these mosquitoes can be very large.

B A R R Y E I C H E N G R E E N

WITHOUT QUESTION, LAX SUPERVISION AND MORAL HAZARD WERE FACTORS IN the surge of capital flows into Asia in the years leading up to the region's crisis. Since most commentators emphasize the extent of these problems in the capital-importing economies, it is important to recall that they existed in the lending countries as well. The diversification of Continental European banks into middle-income Asia was the vehicle for the "carry trade" that sustained this flow of funds through 1996 and into 1997. Those European banks saw their business depressed by the slow growth of domestic economies weighed down by fiscal consolidation and had their margins squeezed by the intensification of cross-border competition. European banks enjoying implicit guarantees, including state savings banks in Germany and institutions like Credit Lyonnais in France, moved most aggressively into high-risk, high-yielding Asian loans. Bank for International Settlements (BIS) data suggest that these European banks were late to the party: Even while American banks were winding down their exposure in Asia, European banks were continuing to build up theirs. And Japanese banks, for their part, invested in high-yielding Asian securities as a way of gambling for redemption.

Meanwhile, of course, Asian banks, enjoying their own implicit guarantees, had an incentive to fund themselves abroad and invest in high-yielding securities. Hence there are the well-known stories of Korean banks' obtaining funds from Japanese banks and investing in Indonesian corporate paper, Russian GKO's, and Brazilian Brady bonds. And Asian governments, having long regarded their financial systems as central to their national economic development strategies, were loath to let their banks fail. Aware of the tendency for governments in this position to guarantee the liabilities of distressed domestic financial institutions, international investors were not deterred by the riskiness of the banks' assets. So there was moral hazard and lax supervision on both sides. It takes two to tango.

In principle, the solution to this problem is again the same: stricter prudential supervision and regulation of banking systems in both lending and borrowing countries.¹ The ingredients of this recipe could not be more familiar. Supervisors should monitor the adequacy of internal controls, external audits, loan and investment policies, and risk-management techniques. They should verify that banks have adequate management information systems in place to identify loan and investment concentrations in their portfolios. They should discourage abuses associated with connected lending and require banks to lend on an arm's-length basis. Supervisors should require realistic valuation of bank assets while imposing appropriate capital adequacy, liquidity, credit diversification, foreign exchange exposure, and non-bank activity requirements and limits.

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Supervisory oversight should be strengthened by giving bank supervisors political independence, financial autonomy, legal immunity, and the right to conduct on-site inspections. Banks for their part should be required to provide accurate information to their supervisors, who should have the power to impose remedial and punitive measures, including revocation of the license to operate in the event of noncompliance. Other desirable elements include limiting public sector distortions (by eliminating public sector guarantees, restricting deposit insurance to small deposits, and establishing a credible exit policy) and raising the quality of public disclosure as a way of strengthening market discipline.

All this is easier said than done. Political pressure for regulatory forbearance is intense. The expertise required to evaluate bank balance sheets is in short supply, nowhere more so than in emerging markets.² Efforts to eliminate this bottleneck through the provision of technical assistance by the World Bank and the IMF run up against personnel and expertise constraints of their own. (It does not help for the IMF to “borrow” regulators from the relevant national supervisory agencies.) The problem grows more intense as banks branch into new lines of business and exotic, thinly traded derivative financial instruments proliferate.

The alternative is to rely on simple rules—for example, limiting banks’ foreign-currency exposures as a way of containing risk. Unfortunately, simple rules can have complex consequences and unintended ones. As Thailand’s experience illustrates, restricting the open foreign exchange positions of banks, for instance, may simply cause the latter to pass that exposure on to their domestic customers, who are even less able to handle it.

Similarly, capital requirements higher than the Basle standards are a deterrent to excessive risk taking only if bank capital is ultimately written down, which is all too infrequently the case in developing countries. Political pressure may lead the authorities to repeatedly recapitalize an otherwise insolvent bank on concessionary terms or to establish a special public facility that takes non-performing loans off the banks’ books in return for government bonds in excess of those loans’ marked-to-market value, in which case higher capital requirements may have little effect.

These dilemmas have motivated the search for additional options for enhancing the stability of the banking sector. One of the more radical options is narrow banking, under which banks, or at least insured banks, are permit-

ted to invest their liquid liabilities only in liquid assets.³ Eligible assets could be limited to deposits with other banks and to interest-bearing assets like short-term government securities, the market in which is deep and broad. Since narrow banks are still exposed to interest-rate risk and small depositors will still have difficulty in evaluating banks’ portfolios, there may remain a case for deposit insurance. Nonetheless, narrow banks would have relatively little scope for taking on additional risk in response to any consequent decline in market discipline.⁴

The problem with this approach is that the demand for other banking services would not disappear. Firms seeking external finance would supply increasing amounts of commercial paper and junk bonds, the demand for which would be provided by mutual funds, pension funds, hedge funds, and insurance companies. But only relatively creditworthy borrowers are able to issue the kind of publicly traded securities attractive to these investment vehicles. The demand for commercial, industrial, real estate, and consumer loans on the part of less creditworthy borrowers would thus shift to uninsured finance companies and finance-company-like organizations that were not offered deposit insurance. The latter would then have an incentive to offer deposit-like liabilities (unless detailed and rigorously enforced regulations prevented it). In the end, many of the risks to the banking system would simply shift to other organizations, which might themselves have a tendency to affiliate with narrow banks (through, *inter alia*, holding companies).

The question would then become whether the authorities’ commitment not to apply too-big-to-fail arguments to these entities would be politically sustainable *ex post*. Insofar as financial distress in these entities gave rise to bank-like externality problems, this might not be the case. The hope of some narrow-banking proponents is that the authorities could head off threats to systemic stability by undertaking lender-of-last-resort operations (following sound central bank practice, lending only at penalty rates against acceptable collateral), but not necessarily compensating investors for their losses, enhancing the incentive for the latter to exert market discipline against unsound lending practices. But in a sense, the proponents of narrow banking who argue along these lines are simply assuming an answer to the question; were it so simple for governments to limit support operations in this way, they could equally well limit their extension to existing financial institutions, obviating the need to create narrow banks.

A second option, which I associate with Ricardo Hausmann and Alan Meltzer (strange bedfellows these!), is to internationalize the banking system. A banking system with an internationally diversified asset base is less likely to be destabilized by a domestic economic crisis and to in turn worsen those crisis conditions. Domestic branches of foreign banks effectively possess their own private lenders of last resort in the foreign head office. The institution as a whole can count on last-resort lending by the central bank of the country in which the home office resides. And where competent management is in short supply, allowing entry by foreign banks can be a way of importing the relevant expertise. Parent banks with hard-earned reputations for financial probity have an incentive to apply state-of-the-art internal controls and accounting standards to their foreign branches.

These familiar arguments for internationalizing national banking systems have already received extensive airing at this conference. This makes it important to emphasize that the elimination of statutory barriers to the establishment of foreign branches and subsidiaries will not produce an integrated global banking system overnight. Domestic banks have an advantage when seeking to defend their market share as a result of having invested in proprietary sources of information. And however invigorating the chill winds of international competition, abruptly exposing domestic banking to foreign competition can be a sharp shock to previously sheltered financial institutions. In the absence of an orderly exit policy, the sudden intensification of competition may encourage gambling for redemption and other perverse short-run responses. This argument for phasing in the internationalization of the banking market suggests that this solution will take time to implement.

A final option is to place taxes or quantitative limits on banks' short-term foreign-currency borrowing. Banks, it has been argued, are a special source of vulnerability to the stability of the financial system. Knowing that the importance the authorities attach to the maintenance of confidence will ultimately induce them to make good on the banks' liabilities, international investors attracted by high domestic interest rates will be inclined to provide short-term foreign-currency funding in the expectation of being able to get their money out. At the same time, allowing the banks to fund themselves in foreign currency heightens the risk of crisis, since the domestic authorities cannot

print the foreign exchange needed by a lender of last resort seeking to make good on these liabilities and can only pay off the banks' creditors by putting the economy through a wrenching internal and external adjustment.

Given these rationales for limiting the banks' short-term foreign-currency borrowing, each bank could be restricted to borrowing no more than a certain percentage of its liabilities. Alternatively, the total short-term foreign-currency borrowing of the banks could be limited to a certain percentage of total banking-sector liabilities, and banks could trade licenses to borrow among themselves.

Simply limiting the ability of banks to borrow abroad would, however, encourage non-banks to do the borrowing for them. Corporates could borrow offshore in foreign currency and deposit the proceeds with domestic banks, which—their access to external funding restricted—would offer relatively attractive deposit rates; the banks could then lend the proceeds to their domestic customers. If corporates hedged their exposure by making foreign-currency denominated deposits, the banks would end up with the same short-term foreign-currency exposure as when no limits existed on their ability to fund themselves abroad. Assuming no change in the pressure on the authorities to provide the banks with guarantees, foreigners would have the same incentive to supply short-term foreign-currency funding, since there would still be little question about their ability to get their money back. The vulnerabilities to which the financial system was subject would be essentially unchanged.⁵

The logical consequence of starting down this road is therefore a tax or tax equivalent on all foreign capital inflows, not merely on foreign inflows into the banking system. If it were intended to target short-term capital inflows, it could be structured as a holding period tax, for example like the Chilean measure that requires all non-equity foreign investment to be accompanied by a one year, non-interest-bearing deposit (whose tax equivalent therefore declines with the duration of the investment). There is an irony for those of us attracted to these measures to see the Chilean authorities reducing these deposit requirements from 30 to 10 percent only days before this conference.

References

- Burnham, James B. (1990). "A Financial System for the Year 2000: The Case for Narrow Banking." Center for the Study of American Business, Formal Publication No. 97 (February).

Folkerts-Landau, David, and Carl-Johan Lindgren (1998). *Toward a Framework for Financial Stability*. Washington, D.C.: International Monetary Fund.

Goldstein, Morris (1997). *The Case for an International Banking Standard*. Washington, D.C.: Institute of International Economics.

Litan, Robert (1987). *What Should Banks Do?* Washington, D.C.: The Brookings Institution.

Endnotes

1. The particulars that follow are drawn from the Core Principles for Effective Banking Supervision (Basle Core Principles). See also Goldstein (1997) and Folkerts-Landau and Lindgren (1998).

2. However, U.S. experience with the S&L crisis should make an American like myself duly modest in this respect.

3. See Litan (1987) and Burnham (1990).

4. They would be competitive with other financial institutions in the same sense as money-market mutual funds. And were there any doubt about this, giving them exclusive access to the payments system operated by the central bank would give them a special advantage in terms of convenience in carrying out transactions for their customers.

5. If, on the other hand, corporates made domestic-currency deposits, they would assume the foreign-exchange exposure and be subject to similar insolvency risk from exchange rate changes as the banks in the no-restriction scenario. It seems likely that if the authorities had previously felt impelled to extend guarantees to the banks, having induced non-banks to take on financial-intermediation responsibilities, they would now extend similar support to the latter.

VIII. Closing Remarks

Closing Remarks

ARCHIE BALDOCCHI

WE ARE ABOUT TO CLOSE THIS FOURTH WORLD BANK CONFERENCE ON DEVELOPMENT in Latin America and the Caribbean. The papers presented and the exchanges of views have taught us much. For our part, we hope that you have had a pleasant stay in El Salvador, which thanks the World Bank for having honored it with the responsibility for organizing this important event.

Six years ago, our country embarked upon a momentous change in its history with the signature of the peace accords, which have been carried out thanks to the will and effort of all Salvadorans. However, there have also been changes in the economic sphere, with the ending of the era of state intervention, which grew out of the nationalization of foreign trade, the financial system, and land ownership. This had had the consequences that were to be expected: The country sank into economic stagnation, with high inflation rates, capital flight, and an active black market.

By means of a planned process of structural adjustment, the free market was restored, and the economy was opened up. In these new conditions, creativity and entrepreneurship, combined with the hard work and diligence of our workers, enabled the Salvadoran economy to post average growth in excess of 5 percent between 1990 and 1997, with single-digit inflation in the last two years. In short, we have achieved growth with stability.

The opening up of trade facilitated an increase in exports from US\$576 million in 1989 to US\$2,420 million in 1997. The privatization of the financial system has brought about pronounced deepening, stimulated by a rapid expansion of services, diversification of products, and brisk competition, with the number of institutions growing from 11 in 1990 to 21 in 1998. Over the same period, deposits rose from 34 percent of GDP in 1990 to 45 percent, while credit increased from 25 percent to 40 percent.

Investments to heighten competitiveness and concentrate efforts in order to participate actively in the globalization of world trade are also priorities in this process of change. This climate of openness with stability has made it

possible for foreign investment to take root in El Salvador. Exports of maquila goods (i.e., those processed in bond in El Salvador), which stood at US\$60 million in 1990, will reach about US\$1 billion this year. Various investments in pension administration organizations, banks, pharmaceutical enterprises, telephone systems, services, and electricity distribution have become a reality.

However, the progress achieved has not been without its ups and downs. We were adversely affected by the Mexican crisis in 1996, as a consequence of the links existing among the various Latin American economies. Because of that, and despite the fact that Asia is geographically remote from us, we have been interested in finding out about the causes and

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repercussions of the Asian crisis, and also about the measures and policies that are being applied to resolve it.

Although the International Monetary Fund's assessments, as published in the World Economic Outlook of May of this year, give one to understand that the crisis has already been brought under control, we are concerned that it may not yet have bottomed out and that key countries such as Japan are mired in a deeper recession than was expected. Similarly, the Southern Cone countries are suffering a severer effect than anticipated, because the corrective policies put into effect as of the end of 1997 have not in the event proven sufficient, so their governments are having to make greater adjustments. We hope that these setbacks will not have a more serious impact on our trading partners, because that would place us in a difficult situation, as a country and as a region.

Our position does not allow us to remain unconcerned about these happenings. However, we are confident that we will be able to minimize the risk of contagion from the Asian crisis, because we believe El Salvador has made a good job of immunizing itself:

- The economy is stable.
- The exchange rate is freely determined by the market and is kept stable by the steady inflow of foreign exchange.
- The monetary base is more than 100 percent dollar-supported.
- External debt does not exceed 19 percent of GDP.
- Property values, which had risen markedly up to 1996, have already adjusted to market realities, and the financial institutions are aware that any overfinancing in this area could be inadvisable.
- The legal and regulatory framework of the financial system is being strengthened to ensure the greatest possible degree of solvency, even beyond international standards.
- We are working diligently to expand and improve our financial information systems.

- Respect for property rights, including intellectual property, has been established as one of the basic rules of the game.
- Social investment is being assigned steadily increasing importance, and greater funding is being allocated to education and health.
- We are consolidating a broadly based and participatory democratic system, in order to ensure an adequate level of governability and lessen political uncertainty.
- The media enjoy full freedom, as a result of which they can play an important role in stimulating public opinion and acting as social watchdogs.

All of these features make this country an attractive place for investment, as is reflected in the "investment-grade" rating assigned to us by a number of sources.

In this context, I would like you to return home carrying the message that El Salvador has its doors open to all investors, that it offers an advantageous geographic location, and that it genuinely recognizes the value of foreign investment. The picture is rounded out by a financial system that is undergoing a rapid process of modernization and already participates actively in the globalized financial market, plus a labor force and a pool of professional skills in which we can take great pride.

The chances of preventing the crisis from spreading throughout the world and causing the sort of painful situation experienced in the early 1980s will depend on the political will of the industrial countries and on the financial abilities of the affected countries as they seek to make the necessary economic corrections.

In the midst of so many uncertainties, El Salvador is making efforts to offer you a favorable economic environment, together with a friendly people who want to work in order to progress and be part of this new market in which there are no boundaries, and which is characterized by freedom and competition.

Thank you very much.



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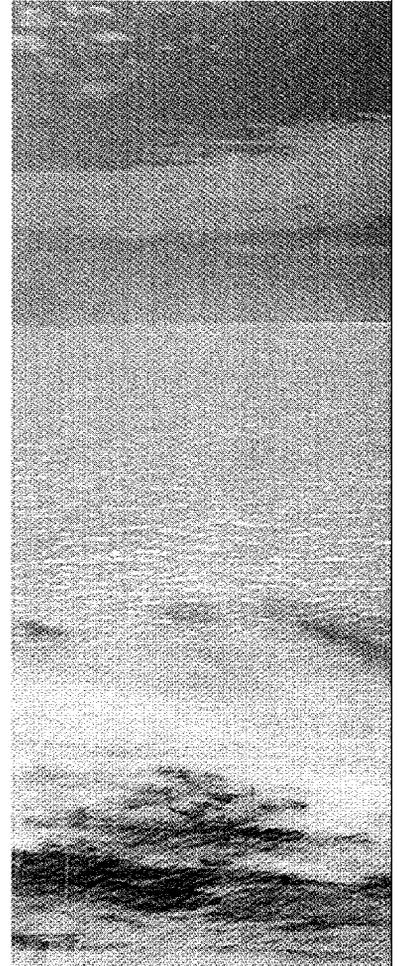
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