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**Developing Countries and the Globalization of Financial Markets**

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**Abstract**

This paper analyzes the impact of the globalization of financial markets on developing and transition economies. Differences between the responses of competitive and imperfectly competitive banking sectors cause them to affect economic activity differently. While nonbank financial markets and institutions can help to increase the competitiveness of banking sectors, there are “gaps” in the institutions and market structures of developing and transition economies. Eliminating these gaps may reinforce financial market discipline in these countries. Some current international initiatives are outlined for enhancing financial system soundness; these emphasize the complementary roles of market discipline and official oversight in an environment of globalized markets.

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## SUMMARY

The early 1990s witnessed a spectacular rise in capital flows to developing and transition economies. But while this globalization can allocate savings more efficiently worldwide, the recent financial crises in several Asian countries illustrate the associated risks of financial instability and contagion.

This paper discusses globalization, considers some issues of financial stability in emerging markets, and summarizes recent initiatives to enhance financial system soundness. The analysis focuses on imperfect competition in banking and on “gaps” in the structure of financial markets.

The paper suggests that, in contrast to a perfectly competitive banking system that transmits economic shocks without magnifying them, an imperfectly competitive banking system responds to adverse shocks in ways that worsen their impact, inducing negative macroeconomic feedback. With regard to “gaps,” the paper argues that the presence or absence of a given nonbank financial intermediary or market has major implications for bank soundness and, more generally, for the robustness of a country’s financial system. Just as banks exercise market discipline over borrowing firms by assessing credit risks using an information set different from that used by the firms themselves, so other markets and institutions can exercise discipline over banks, thereby strengthening financial system soundness.

To illustrate, the paper discusses equity markets, which provide both an alternative to bank financing and a means for exercising market discipline over bank managements. A simple empirical analysis indicates that the ratio of stock market capitalization to GDP in a representative cross-section of emerging market countries is correlated with several economic determinants that can be influenced by economic policies suggesting that, over time, public policy can help to attenuate gaps in the financial market structure. The paper ends with a discussion of the complementary roles of market discipline and official oversight as essential elements for fostering financial system soundness.

## I. INTRODUCTION

During 1991–96 there was a spectacular rise in net capital flows from industrial countries to developing and transition economies (DTEs).<sup>2</sup> These flows were associated with greatly increased interest by international asset holders in the “emerging market economies,” as the DTEs are often called, and with a profound trend toward the globalization of financial markets.

These developments create the prospect of a more efficient worldwide allocation of savings and investment than was possible in the past, when domestic investment in most countries was constrained by domestic saving.<sup>3</sup> However, as the financial crises that struck Thailand, Indonesia, and Korea during the latter half of 1997 have amply demonstrated, financial globalization also carries large risks, since instability in one country can now transmit contagion to others. If properly managed, the globalization of financial markets could gradually create a “virtuous circle” in which DTEs strengthen the market discipline that enhances financial system soundness. At present, however, there are important informational uncertainties in global markets as well as major gaps and inefficiencies in the financial systems of many DTEs.

Until market discipline becomes more effective in ensuring sound financial systems, closer official oversight will be key to increasing the benefits and limiting the risks of globalization. To achieve this goal, policymakers in developed and developing countries, as well as supervisory and regulatory bodies such as the Basle Committee on Banking Supervision and international financial institutions such as the International Monetary Fund and the World Bank are taking steps to enhance financial system soundness in the new environment. This paper analyzes the recent globalization of financial markets, considers some features that may raise concerns about financial stability in DTEs, and outlines recent initiatives to enhance the safety and stability of financial systems. In particular, it focuses on imperfect competition and gaps in the structure of financial markets as elements of financial instability in DTEs, and discusses the complementary roles of market discipline and official oversight as essential elements of a robust financial system.

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<sup>2</sup>In this paper the term “transition economies” denotes the countries of eastern Europe, the Baltics, Russia, and the other countries of the former Soviet Union that are currently in the process of deep structural reform from central planning to market-based resource allocation. “Developing countries” are countries other than the industrial and transition countries. This paper refers to developing and transition economies (DTEs) and “emerging market” economies interchangeably.

<sup>3</sup>See Feldstein and Horioka (1980) and the extensive empirical literature stimulated by their paper.

## II. FINANCIAL FLOWS TO DEVELOPING AND TRANSITION ECONOMIES, 1970–1996

Table 1 presents data for net capital flows from the industrial countries to the DTEs for selected years from 1970 to 1996. The size and composition of these capital flows have shifted markedly over the past 25 years, particularly since 1990 (see IMF 1996a).

In Table 1, net capital flows to DTEs include three components: (i) net foreign direct investment (FDI) inflows (i.e., establishment or purchase of plant and equipment or net inflows of controlling equity); (ii) net inflows of portfolio investment, including changes in net foreign liabilities of banks, the private sector and governments, and flows of portfolio (i.e., noncontrolling) equity; and (iii) other net inflows, including trade credits, loans, and other accounts. These flows finance both the current account deficits and the net reserve accumulation of DTEs.

As Table 1 shows, net capital inflows to DTEs were low in the 1970s, both in dollars and as percentages of their GDPs.<sup>4</sup> During the 1970s, such flows averaged only \$16 billion annually, or 0.8 percent of combined DTE GDP.<sup>5</sup> Moreover, FDI was a small proportion of the total: net FDI flows to DTEs averaged only \$3.6 billion a year, or 0.1 percent of DTE GDP. During the 1980s, net capital inflows were only slightly higher as a percentage of GDP than in the preceding decade, averaging 1.1 percent.

Data for 1990–96 contrast sharply with past trends; not only did total net capital inflows to DTEs increase markedly relative to their GDPs, but net flows of equity rose sharply relative to the total. Net capital inflows to these countries more than doubled from \$71 billion in 1990 to \$157 billion in 1991. Thereafter, they continued to rise to over \$200 billion in 1996. Within the total, net FDI flows rose rapidly from \$19 billion in 1990 (0.3 percent of DTE GDP) to \$102 billion (1.6 percent of GDP) in 1996, with capital inflows amounting to 3.2 percent of DTE GDP, and FDI inflows approximately half the total. For 1990–96 the annual savings transfer to DTEs averaged 3.1 percent of the combined domestic product of the group, more than twice the average rate in the preceding decade. Although Mexico's financial crisis in 1995 briefly spread contagion to other emerging markets, net inflows to DTEs still rose by nearly 60 percent in that year. Capital flows to transition economies were more variable, rising to nearly \$38 billion in 1995 before falling back to \$11 billion in 1996.

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<sup>4</sup>For an analysis of international bank lending during this period, see Knight (1977) and Crockett and Knight (1978).

<sup>5</sup>An empirical analysis of the determinants of developing country current account deficits during this period is given in Khan and Knight (1983).

Table 1. Capital Flows to Developing Countries and Countries in Transition

(In billions of U.S. dollars)

	1970	1980	1990	1991	1992	1993	1994	1995	1996
<b>Developing countries</b>									
Total net capital inflows 1/	8.1	34.7	60.2	156.9	141.7	164.5	138.7	182.2	196.9
Net foreign direct investment	2.3	6.0	19.3	26.7	34.3	50.2	69.5	72.5	90.7
Net portfolio investment	0.2	0.4	18.5	36.1	53.0	89.3	83.6	16.9	44.6
Other 2/	5.5	28.3	22.4	94.0	55.8	25.6	-14.7	92.7	61.1
Of which:									
Net credit and loans from IMF	-0.4	2.5	-1.9	1.1	-0.4	-0.1	-0.8	12.6	-1.0
<b>Africa</b>									
Total net capital inflows 1/	1.4	9.4	7.3	11.4	14.2	10.9	18.2	17.6	15.4
Net foreign direct investment	0.6	-0.1	1.4	2.4	1.9	1.2	3.4	2.3	5.1
Net portfolio investment	0.1	-0.6	-1.6	-1.6	-0.7	0.9	0.4	1.9	0.7
Other 2/	0.7	10.0	7.5	10.6	13.1	8.8	14.3	13.4	9.6
Of which:									
Net credit and loans from IMF	0.0	0.8	-0.6	0.2	-0.2	0.2	0.9	0.8	0.6
<b>Asia</b>									
Total net capital inflows 1/	1.8	13.8	33.8	43.0	32.5	62.8	69.4	94.8	101.9
Net foreign direct investment	0.3	1.7	10.0	12.1	17.7	34.0	43.6	49.5	54.8
Net portfolio investment	0.0	0.1	0.3	0.5	1.8	11.7	10.0	10.2	9.2
Other 2/	1.5	12.0	23.5	30.3	14.4	17.7	15.4	35.0	37.4
Of which:									
Net credit and loans from IMF	-0.2	1.5	-2.4	1.9	1.3	0.6	-0.8	-1.5	-1.0
<b>Middle East</b>									
Total net capital inflows 1/	1.0	-28.3	0.4	74.3	41.5	27.9	7.9	11.3	13.6
Net foreign direct investment	0.4	-1.3	1.3	1.4	1.9	1.5	0.9	0.8	0.8
Net portfolio investment	0.0	0.0	2.2	22.6	21.2	15.6	12.2	12.2	7.6
Other 2/	0.6	-27.0	-3.1	50.3	18.3	10.8	-5.3	-1.7	5.1
Of which:									
Net credit and loans from IMF	0.0	0.4	-0.1	0.0	0.1	0.0	0.4	0.4	0.1
<b>Latin America</b>									
Total net capital inflows 1/	3.9	39.8	18.6	28.2	53.5	62.8	43.2	58.4	66.0
Net foreign direct investment	1.1	5.6	6.6	10.9	12.9	13.4	21.5	19.9	29.9
Net portfolio investment	0.1	0.9	17.5	14.5	30.6	61.1	60.8	-7.5	27.1
Other 2/	2.8	33.3	-5.5	2.8	10.0	-11.7	-39.1	46.0	9.1
Of which:									
Net credit and loans from IMF	-0.2	-0.1	1.2	-1.0	-1.6	-0.9	-1.3	12.9	-0.7
<b>Countries in transition</b>									
Total net capital inflows 1/	...	-7.5	10.8	-0.1	7.1	14.1	5.1	37.9	10.6
Net foreign direct investment	-0.5	-0.5	0.0	2.4	4.2	6.0	5.4	13.1	11.3
Net portfolio investment	0.0	0.0	0.0	0.8	-0.8	3.4	2.7	3.4	1.6
Other 2/	...	-7.0	10.8	-3.2	3.7	4.7	-3.0	21.5	-2.2
Of which:									
Net credit and loans from IMF	0.0	0.0	0.3	2.4	1.6	3.7	2.4	4.7	2.2
<b>Total</b>									
Total net capital inflows 1/	8.1	27.1	71.0	156.8	148.8	178.6	143.8	220.1	207.6
Net foreign direct investment	1.8	5.4	19.3	29.1	38.5	56.1	74.9	85.5	101.9
Net portfolio investment	0.2	0.4	18.5	36.9	52.1	92.8	86.3	20.3	46.2
Other 2/	5.5	21.3	33.2	90.8	59.6	30.3	-17.7	114.2	59.0
Of which:									
Net credit and loans from IMF	0.4	2.5	-1.6	3.5	1.1	3.6	1.6	17.3	1.2

Source: IMF, World Economic Outlook Database.

1/ Not including reserve assets.

2/ Short- and long-term trade credits; loans (including use of Fund credit); currency and deposits; and other accounts receivable and payable.

The largest share of net capital inflows to DTEs in the early 1990s went to Asia and Latin America. Nevertheless, during 1995 countries in transition received an inflow nearly half as large as that to Latin America, much of it FDI. Net FDI flows to all DTEs jumped from 20 percent of total flows in 1990 to nearly 50 percent in 1996. While the ratio of net FDI to total inflows in the African countries gradually declined over 1990–96 and remained stable for the Middle East, it rose sharply for Asia, Latin America, and the transition economies. During the financial crises in Asia in 1997, net flows to this region were sharply reduced and remained low during the first half of 1998.

The increase in capital inflows to DTEs in 1990–96 and the sharp rise in the share of FDI in the total are the net outcome of many factors. From the mid-1980s, for example, a number of developing countries initiated macroeconomic adjustment programs, often with the financial support of IMF arrangements or World Bank loans. By the 1990s, reform programs were yielding lower inflation and better growth performance in a broad spectrum of developing countries. In the late 1980s, a number of central and eastern European countries initiated deep structural transformations that encouraged FDI inflows as their economies were privatized and their markets expanded. Since 1992 the Baltic countries, Russia and the other countries of the former Soviet Union have also been engaged in a fundamental transformation that has achieved monetary stabilization and is now showing the first signs of improved growth performance.<sup>6</sup> In many developing countries in Asia, Latin America, and the Middle East the structural reforms undertaken during the past decade were accompanied by substantial initiatives in the privatization of public enterprises and financial institutions, a trend that tended to increase market capitalization and widen the menu of financial instruments available to domestic and foreign asset holders.

Since the early 1990s there has also been a marked trend toward currency convertibility in DTEs. In the 1960s and 1970s, many developing countries that joined the IMF availed themselves of the transition arrangements of Article XIV of its Articles of Agreement, which permitted them to continue imposing certain restrictions on current account transactions. Although Fund members were expected to move to current account convertibility, the pace of liberalization was slow. In accepting Article VIII status, a country commits itself to refrain from imposing restrictions on payments for external current account transactions. Over the 45 years to 1990, a total of 68 IMF member countries, including 35 developing countries, accepted the obligations of Article VIII of the IMF's Articles. By contrast, during 1991–96, 52 DTEs accepted Article VIII. By end-1996, fully three-quarters of the IMF's 182 member countries had formally established current account convertibility. Article VIII applies specifically only to the avoidance of restrictions on current account transactions. In practice, however, international current and capital account transactions are difficult to distinguish. In many DTEs the removal of barriers to current transactions has been accompanied by liberalization of capital transactions as well. These liberalizing measures have

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<sup>6</sup>For a discussion of recent financial system reforms in the Baltics, Russia, and other countries of the former Soviet Union, see Knight (1997).

tended to bolster international asset holders' confidence that they will be able to move funds freely into or out of DTE financial markets as conditions and expectations change. In many cases, however, liberalization has not yet been supported by strengthened supervision of the domestic financial institutions that have been intermediating these flows.

The spectacular increase in financial flows to DTEs over 1990–96 also reflected developments in the industrial countries that were the sources of these funds. One factor was the continuing process of financial innovation in advanced economies, which encouraged a greater spreading of risk exposures to emerging markets, as reflected in the proliferation of emerging market mutual funds. Simultaneously, many portfolio managers viewed emerging markets as a means to diversify portfolios. These incentives were reinforced in 1994–96 as low interest rates in industrial countries led asset holders to seek higher yields, and to take on higher risks, by increasing financial holdings in DTEs. The events of 1997 have highlighted the risks of investing in emerging markets. But despite the recent high volatility, the process of global portfolio diversification is likely to resume over the longer term.<sup>7</sup>

### **III. GLOBALIZATION AND FINANCIAL SYSTEM SOUNDNESS IN DEVELOPING AND TRANSITION ECONOMIES**

The globalization of financial markets during the 1990s has had profound implications for world savings and investment flows, macroeconomic developments, and the challenges confronting policymakers. International investors, financial market regulators, and policymakers alike have an interest in understanding the characteristics of a robust financial system, and in promoting measures to improve financial stability. Thus it is important to analyze some basic aspects of financial system soundness in DTEs to better understand what measures can be used to enhance the stability and robustness of their financial systems and to appreciate how financial risks can impact on their macroeconomic performance.

Such knowledge is all the more important because the experience of the past two decades demonstrates that international financial markets are subject to unpredictable swings, costly financial crises, and contagion. Examples are abrupt declines in asset prices (e.g., global equity markets in 1987, real estate values in the late 1980s and early 1990s, and bond markets in 1994); the Latin American debt crisis of the 1980s; major bouts of volatility in foreign exchange markets (e.g., the realignments of major currencies in 1985, the speculative attack on the European exchange rate mechanism in 1992, the sharp movements in the dollar-yen

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<sup>7</sup>A recent study by the World Bank (1997) argues that institutional investors could continue to increase expected returns and reduce overall risks until the share of their portfolios allocated to emerging markets reached a level three times as high as it is today.



exchange rate in 1995; and the exchange rate depreciations and associated financial system problems in several emerging market economies in Southeast Asia during the latter half of 1997).<sup>8</sup>

These recurrent problems raise key questions: how sound are financial systems in the emerging market economies to which the huge amounts of funds described in section II have been flowing? What elements determine the soundness of financial systems in DTEs, and how robust are they likely to be in the face of adverse shocks?

Intermediaries and markets in many DTEs lack a number of the stabilizing elements that are central to the way financial systems function in advanced industrial countries. In addition to having well-developed banking sectors, advanced economies have evolved a variety of financial markets: government securities markets, spot and forward foreign exchange markets, and markets for corporate securities, equities, mortgages, insurance, and derivative instruments such as futures and options. There are also a wide variety of financial intermediaries: securities dealers, mortgage and leasing companies, insurance companies, and many others. Banks in industrial countries must compete with other institutions and markets as both borrowers and lenders, and this competition tends both to improve the efficiency of intermediation by increasing the breadth and depth of markets, and to reduce the sensitivity of the financial system to adverse shocks.

Each financial market—as well as the legal and regulatory framework that supports markets—performs a different role that can contribute toward achieving a robust financial system. If a key market, law, or regulatory practice does not function effectively or is missing altogether, the robustness of the financial system is adversely affected. Many DTEs have experienced prolonged periods of financial repression, intervention in financial markets, and restrictions on external current and capital account transactions. The legal and regulatory frameworks governing their financial systems are often weak or inadequate. As a result, most emerging market economies have significant “gaps” in the structure of their financial systems.

Banks are the core financial intermediaries in virtually all countries; their liabilities typically comprise the bulk of broad money. In most DTEs they are the major supplier of credit to finance productive investment and other debt-financed activities. Banks also perform other key financial functions, such as operating the clearing and payments system and the foreign exchange market. As a result, the banking sector is the main fulcrum for transmitting monetary policy actions to market interest rates, the stock of liquidity and, ultimately, overall economic activity and the price level.

Because banks perform these diverse functions, a sound banking sector is the single most essential element of a well-functioning financial system. The legal definition of deposit banking and the activities that banks are allowed to engage in vary widely across countries.

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<sup>8</sup>See IMF 1996a.

Nevertheless, as has often been stressed (see Diamond and Dybvig 1983, and Fama 1985), banks in all countries share several basic characteristics. They transform maturities by borrowing in the relatively liquid and capital-certain instruments demanded by savers, such as demand and time deposits, and using the funds thus generated to provide credit to borrowing entities that, for one reason or another, are unable to issue securities that can be traded in active markets. More important, banks perform the crucial function of assessing the expected risks and returns on the real sector projects that underpin the demand for bank credit.

However, the presence or absence of a given nonbank financial intermediary or market, the extent to which it offers close substitutes for bank liabilities and assets, and the degree to which it functions efficiently, can affect the soundness of the banking sector. In this sense, gaps in markets can have a large impact on the robustness of a country's financial system—that is, on the financial system's ability to return to a stable equilibrium following a major shock.

Since alternative nonbank sources of credit for investing firms often do not exist in DTEs, banks in these countries may be the only domestic source of financing for private sector capital formation. In essence, they are the only institutions that assess the credit risks associated with investment projects. From this perspective, the crucial characteristic of banks is that they undertake the task of evaluating and then monitoring the risks and returns on *unsecuritized* lending. Both the soundness of the banking sector and the resiliency of the financial system depend on how effectively banks perform the due diligence procedures that underlie their credit risk analysis and their lending decisions, and on how well they recognize and manage changing risk profiles as the economic circumstances of their borrowers evolve.

### **A. The Banking System and Domestic Financial Stability**

Basically, the financial “soundness” of a bank is its ability to withstand adverse shocks without failing.<sup>9</sup> An example on the asset side occurs when the stock of nonperforming bank loans rises above a certain critical level; on the liability side, an example could be a deposit run that reflects a lack of confidence in a single bank, the banking system in general, or the macroperformance of the economy. The macroeconomic environment also exerts a major influence on bank soundness—even when banks are well managed, adverse developments in the macroeconomic environment may cause many to fail. Furthermore, similar macroeconomic developments can lead to different outcomes depending on the structure of the banking sector.<sup>10</sup>

This section develops a simple analysis of these issues. We consider an economy where domestic bank credit is the only source of financing for capital investment by

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<sup>9</sup>For a detailed discussion, see Lindgren et al. (1996).

<sup>10</sup>Bordo et al. 1995.

productive enterprises, and we examine the consequences of the structure of competition in the banking sector for the overall stability of the financial system. The key element of the analysis is that, in evaluating credit risks, banks assess the underlying profitability of the project they are considering financing using a *different information set* from that available to the prospective borrower. They therefore provide a valuable service to productive firms: that of giving a “second opinion” on the expected profitability of the project. The efficiency with which banks provide this financial service depends on a number of factors, including the structure of competition in the banking sector and the state of the macroeconomy.

To illustrate this point, consider the case where a private sector firm plans to undertake an investment project financed with a bank loan. Based on its own information set, the firm expects that the investment project will have a positive net present value after all opportunity costs—including the servicing costs of the bank loan—have been paid. When the investor approaches the bank to obtain funding, the bank will independently assess whether the project is likely to yield sufficient cash flow that the investor can service his contractual obligations under the bank loan and still make a normal profit. In doing so, it will use a *different* information set from that available to the prospective borrower. For example, while the prospective borrower will likely know more than the bank about the microeconomic cost structure of the project, the bank may possess more information about such important characteristics as the conditions in the market in which the firm will be selling its output, and macroeconomic conditions such as the conduct of monetary policy and the general outlook for domestic and foreign interest rates, the price level, economic activity, and exchange rates. By using this information to develop an independent assessment of a project’s credit risk, a bank provides “credit assessment services” to the productive firm that help it to choose profitable investment projects and avoid unprofitable ones. Thus, whether a bank is willing to provide a loan to finance a project provides the potential investor with a valuable independent assessment of the project’s likely profitability.

The effectiveness with which banks in a given country assess credit risk depends on a host of factors. A particularly important one in DTEs is the structure of competition in the banking sector. Many DTEs have imperfectly competitive banking systems, which can impact adversely on the efficiency of financial intermediation between bank depositors and borrowers, the soundness of the banking sector, and the stability of the financial system. To see how important these factors can be, we compare the behavior of a perfectly competitive banking sector with one characterized by monopolistic competition.

In a perfectly competitive banking sector, each individual bank has a small enough share of the deposit market that it can obtain whatever stock of deposits it demands at constant cost. Consistent with the discussion above, however, assume that each individual bank supplies potential borrowers with “credit assessment services” that are specific to its information set. This means that in the short run the individual bank faces a downward-sloping stock demand curve for credit by nonbank borrowers.

Looking at the banking industry in Figure 1, the stock supply of deposits by nonbanks,  $D^s$ , is an upward-sloping function of the interest rate on deposits,  $r_D$ . The banks' aggregate supply of loanable funds is  $LF = (1-c)D^s$ , where  $c$  is the required cash reserve ratio (cash reserve holdings are taken to be unremunerated). Assume that the intermediation cost per dollar lent (including normal profit) is  $s$ . If banks are making only normal profits,  $LF$  is their marginal cost curve and the vertical difference between  $LF$  and  $D^s$  (the relation between the lending rate and the deposit rate) is:

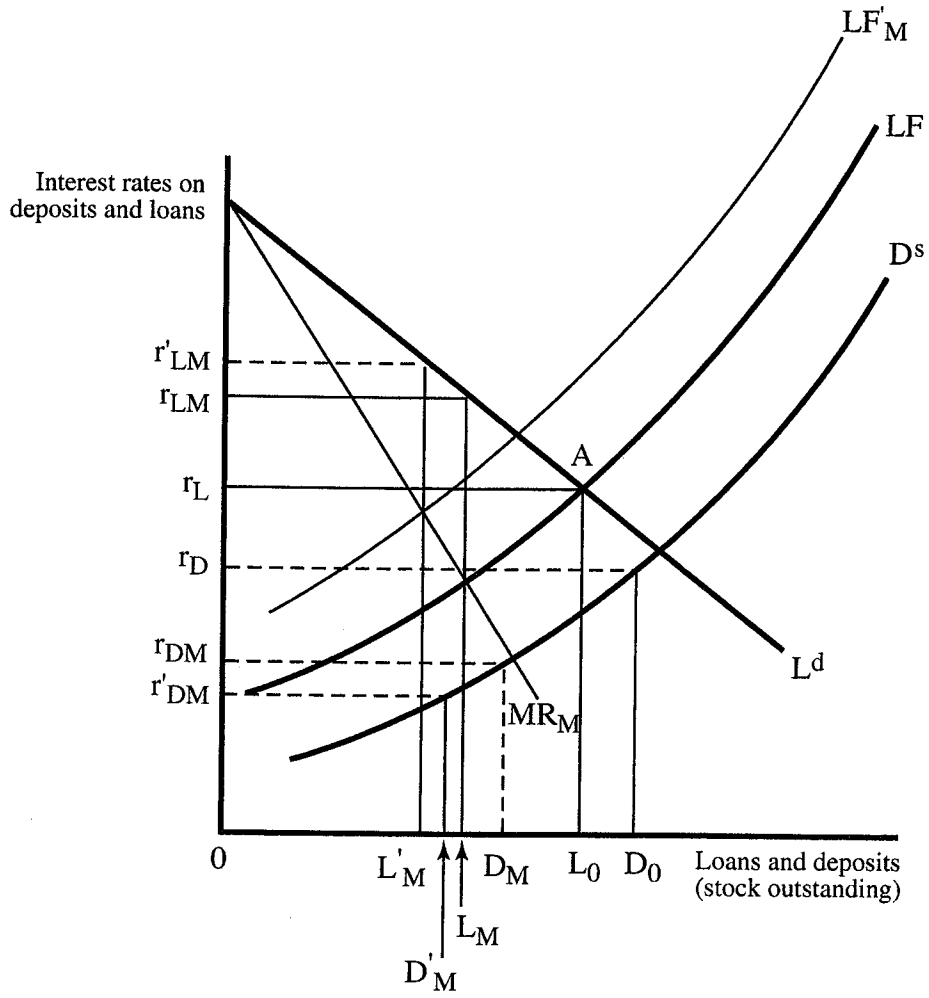
$$\frac{r_L}{r_D} = \frac{(1+s)}{(1-c)} \quad (1)$$

If the banking sector is perfectly competitive, the intersection of the sector's marginal cost curve with the average revenue curve, at  $A$  in Figure 1, determines the stocks of loans,  $OL_o$ , deposits,  $OD_o$ , and the interest rates on loans,  $r_L$ , and deposits  $r_D$ .

Contrast this with the situation where there is imperfect competition in the banking sector. For simplicity, assume there is a single monopoly bank, also depicted in Figure 1. The monopoly bank faces the economy-wide stock demand curve for loans  $L^d$  and the upward-sloping economy-wide supply function for deposits,  $D^s$ . Suppose the monopoly bank has the same cost structure as the competitive industry, so that its cost curve is also  $LF$ . In contrast to the competitive case, the monopoly bank will choose the stock of loans that maximizes its profits from financial intermediation by holding the stock of loans  $OL_M$ , at which the marginal cost of its borrowing equals the marginal revenue from its outstanding stock of loans. It will pay a lower deposit interest rate,  $r_{DM}$ , as compared with the competitive banking sector, and charge a higher interest rate,  $r_{LM}$ , on its loans. This analysis has two immediate implications. First, imperfect competition in the banking sector results in a lower level of bank credit relative to GDP than that supplied by a competitive banking sector. Second, intermediation is less efficient when there is imperfect competition, in the sense that a smaller stock of loans is supplied at a higher cost to borrowers, while depositors receive a lower rate of interest as compared with the competitive case.

If an individual bank in a competitive sector experiences a large enough increase in its nonperforming loans, it will make losses and be forced to exit the industry, whether through liquidation or via a merger with a more efficiently managed institution. However, the banking sector can remain robust provided the rise in nonperforming loans is indeed a random event affecting an individual bank. Thus in Figure 1 the economy's stock supply of bank loans remains unchanged at  $OL_o$ . In contrast, if the banking system is imperfectly competitive each individual bank possesses enough market power (in the markets for bank deposits and loans) to allow it to raise its intermediation spread to finance a portion of the increased cost of its lending as its nonperforming loans rise. To illustrate, in Figure 1 a rise in nonperforming loans shifts the loanable funds curve of the monopoly bank leftward to  $LF'_M$ , the deposit rate is reduced to  $r'_{DM}$ , and the lending rate rises to  $r'_{LM}$ . Total credit falls to  $OL'_M$  and both bank

Figure 1. Banking Sector



depositors and bank borrowers bear a portion of the cost of the bank's errors of credit risk management.

This analysis suggests that an imperfectly competitive banking system responds to bad loan problems by reducing lending and raising intermediation spreads. But the situation depicted in Figure 1 is unlikely to be the end of the story. As the stock of bank credit declines and the interest rate on bank lending rises, more borrowers may begin to default; as the deposit rate declines, some depositors' expectations may change, and they may begin shifting their assets to other markets, including abroad. Such actions will, of course, tend to feed back on the stock of nonperforming loans, inducing a renewed decline in lending and a further increase in intermediation spreads, thereby putting additional pressures on bank borrowers. Thus when an imperfectly competitive banking system experiences a rise in nonperforming loans, its response—raising its intermediation spread—is likely to act as a negative feedback effect that tends to depress economic activity, exacerbating the bad loan problem.

Furthermore, as the ratio of nonperforming loans rises in an oligopolistic banking system, the intermediation of financial savings from lenders to borrowers becomes less efficient and the level of monetization in the economy declines, in the sense that the ratios of both bank deposits and bank credit to GDP tend to fall. Since this ratio provides a measure of the intermediation and payment services that banks are performing, a rise in spreads and an associated decline in the ratio of bank assets to GDP can also exert an adverse impact on output and economic performance.

This relation between the structure of competition in the banking sector and the robustness of the financial system is important for two reasons. First, partly because of government intervention, the banking sectors of many DTEs are concentrated—a large proportion of total deposits is held in a relatively small number of institutions. Second, many DTEs have, intentionally or unintentionally, promoted imperfect competition in their banking sectors through nationalization and public ownership, restrictions on foreign ownership, and lax rules on relations between domestic banks and financial or corporate groups. When problems arise in such systems the authorities may be subject to strong pressures to provide explicit or implicit deposit guarantees to their banks. The costs of such actions can be large indeed. Among a group of 34 countries studied by Lindgren et al. (1996) that had experienced significant banking sector problems, the recorded fiscal cost ranged up to 30 percent of GDP.

## **B. Macroeconomic Developments, Competition, and Banking Sector Soundness**

Adverse shifts in macroeconomic conditions can weaken the banking sector because lending problems are much more likely to affect the sector as a whole when they are due to adverse economy-wide shocks. A macroeconomic downturn puts two types of pressure on banks. First it means that there will be fewer new profitable capital investment projects for banks to fund. Second, as economic agents' income streams weaken in a macroeconomic downturn, existing bank borrowers experience greater difficulties in servicing their

outstanding loans. Thus an economic downturn exerts adverse effects on the soundness of the banking sector through a deterioration in the quality of the aggregate loan portfolio.

The structure of competition among banks also has implications for the extent to which adverse macroeconomic developments affect banking sector soundness and financial system stability. A weakening of aggregate loan demand will cause the stock of loans, the lending rate, and the deposit rate to fall in a competitive banking system. In Figure 2A the movement is from A to B, with the outstanding stock of loans falling to  $OL_{C1}$  and the lending rate declining to  $r_{LC1}$ . However, the relationship between the lending rate and the deposit rate (not shown in this diagram) for the competitive system as a whole will still be as given in equation (1). As Figure 2A shows, a monopoly bank will also call loans and reduce the interest rate on its credits when loan demand weakens. Whether its outstanding loans fall less or more than those of the competitive banking sector is indeterminate, since this depends on the shape of the marginal cost curve,  $LF$ , and on whether the decline in loan demand is accompanied by a change in the interest elasticity of the demand for bank credit. The difference, however, is that in the case of an imperfectly competitive banking system, the fall in loan demand is accompanied by a decrease in the banking sector's intermediation spread. In this sense, an imperfectly competitive banking system tends to cushion the financial effects of a fall in loan demand, since this reduces the scope for earning supernormal profits. It remains true, however, that the stock of bank credit is lower after the fall in loan demand in the imperfectly competitive case than in the case where the sector is perfectly competitive.

These effects may be severely exacerbated in cases where banks' liquidity problems oblige them to liquidate collateral on the loans they call, since such actions can cause the prices of the assets that are financed by bank lending, particularly real estate, to fall. Over the past decade declines in the prices of real assets, particularly real estate, have been associated with systemic banking problems in the Nordic countries, the United States, Venezuela, Japan, and in 1997 in Thailand, Indonesia, and Korea. As already noted, the interactions of adverse macroeconomic developments and banking system unsoundness can create a "vicious circle" that weakens the financial system.

Similarly, Figure 2B shows that an increase in nonperforming loans for the banking system as a whole will cause the stock of loans to decline by more in a competitive banking sector (a movement from A to B) than in an imperfectly competitive banking sector (a movement from C to D) because the marginal revenue curve of the industry is, by definition, more steeply sloped than the loan demand curve. However, this result occurs because the imperfectly competitive banking sector can recoup some of the potential profit reduction from the decline in its stock of performing loans by raising its intermediation spread, so that it is more likely to exert an independent negative feedback effect on overall economic activity. This puts additional financial pressure on firms by raising debt-servicing costs. While the intermediation spread of the competitive banking sector (not shown in Figure 2B) remains unchanged, the spread charged by the imperfectly competitive sector rises from  $r_{MO} - r_{DMO}$  to  $r_{MI} - r_{DMI}$ . This development places additional financial pressure on both bank borrowers and

Figure 2A. Decline in Loan Demand

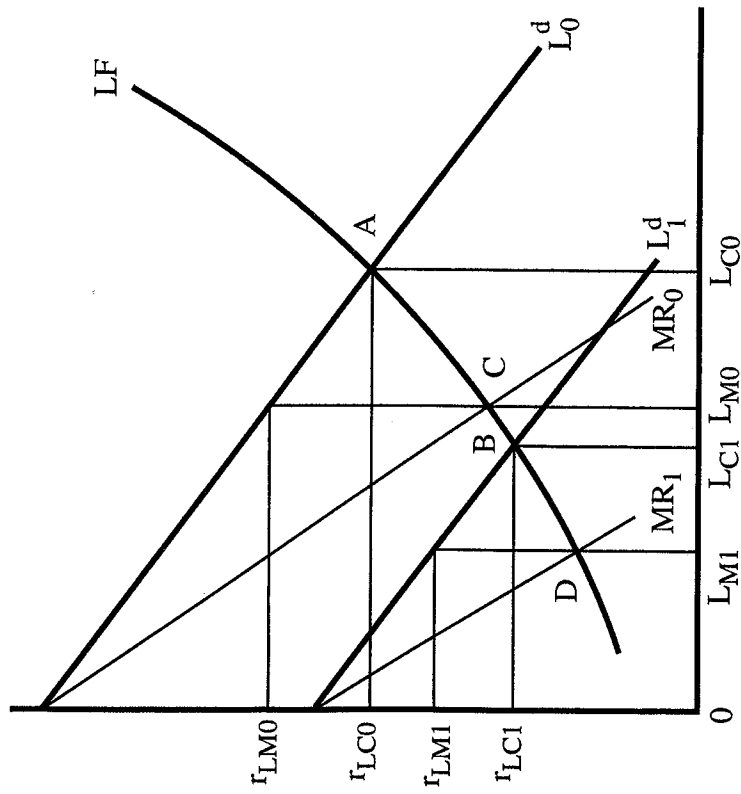
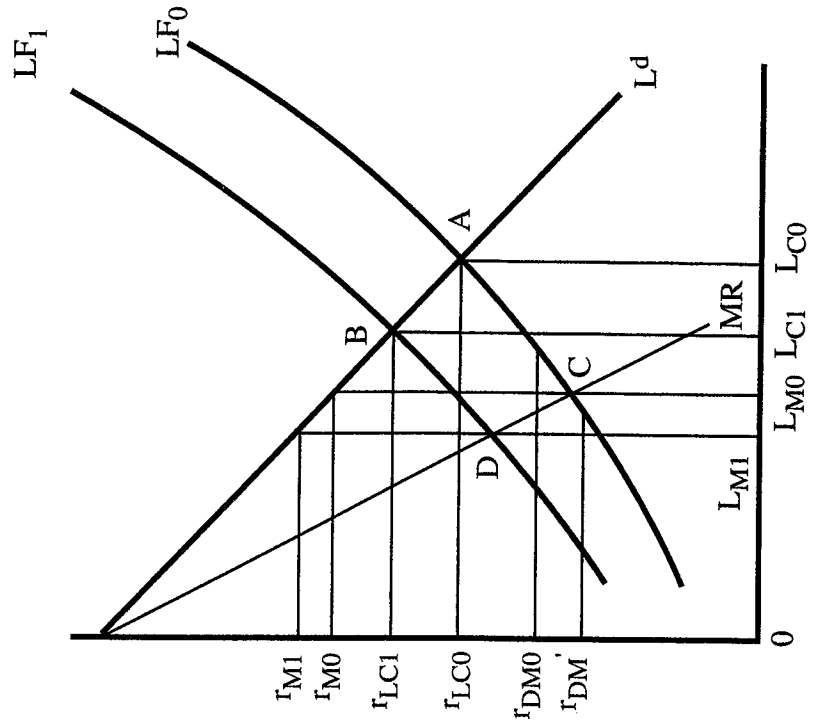


Figure 2B. Sector-wide Increase in Nonperforming Loans





bank depositors at the very time when a weakening economy is inducing a rise in nonperforming loans, thus aggravating financial distress.

The above analysis suggests that in a macroeconomic downturn the impact of a competitive banking system is neutral. By contrast, an imperfectly competitive system creates independent feedback effects that exacerbate real sector fluctuations.<sup>11</sup> Furthermore, when a large portion of the banks in the system become unsound, they can exert a strong negative impact on the macroeconomy. Banks that have lost their capital behave differently from sound banks: as the owners and managers try to recoup past losses, moral hazard increases.<sup>12</sup> Intensified competition from insolvent banks can pose threats to the financial condition of banks that are still sound, inducing contagion in the banking system. Thus the altered behavior patterns of unsound banks can destabilize the whole banking system, particularly if the structure of competition is oligopolistic, and can also affect the way the banking sector responds to monetary policy instruments.

Banking sector crises can also exert major macroeconomic effects because they are often intimately linked with balance-of-payments crises. When conditions of banking system weakness persist, they can lead to a sudden run of deposits, exacerbating liquidity problems. If the run is on an individual bank, deposits may flow to other banks in the system. But since adverse macroeconomic developments affect all banks, they can often induce contagion in the domestic banking system. The main means by which domestic residents reduce their exposure to domestic banks is by moving their deposits to institutions abroad. The result, as much casual empirical evidence suggests, is that *systemic* banking crises are often closely intertwined with balance-of-payments crises, particularly in small open economies (Krugman 1979, Calvo 1995, and Kaminsky and Reinhart 1996).

This discussion of the interrelations between the structure of competition in the banking sector, macroeconomic fluctuations, and the soundness, or stability, of the financial system is important for three reasons. First, problems of systemic bank unsoundness have become widespread in recent years, not only in developing countries but in industrial countries as well. Lindgren et al. (1996) found that during the 25-year period from 1980 to 1994, over 130 IMF member countries—two-thirds of the total—had either suffered outright banking crises or experienced significant episodes of banking sector weakness. Second, such crises arise with little warning because of the “sequential servicing” aspect of bank deposits: namely

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<sup>11</sup>Empirical work on these issues is limited. However, a recent paper by González-Hermosillo, Pazarbasioglu, and Billings (1997) provides interesting evidence that microeconomic factors are of primary importance in determining the likelihood of unsoundness in DTE financial institutions, while macroeconomic shocks are relatively important in determining the timing of failures.

<sup>12</sup> “Moral hazard” is defined as the tendency for economic agents to be less careful when they do not expect to bear the full consequences of their behavior.

that depositors and creditors who are first to withdraw deposits are more likely to be fully repaid than those who wait. This characteristic of banks tends to induce runs when problems arise. Third, as noted by Fama (1985), banks are particularly likely to experience problems suddenly because their assets are risky owing to the uncertain ability of bank borrowers to repay their loans while, on the liability side, banks need to maintain the confidence of their creditors and depositors. The fact that depositors have an economic incentive to make a “run” on a bank the moment they lose confidence in its ability to meet its obligations, combined with the fact that banks are highly leveraged, is what makes banks particularly vulnerable to instability. Such runs can snowball and create contagion to other banks, and to the financial system as a whole.

### **C. The Role of Other Institutions and Markets in Reinforcing Financial System Stability**

Banks are prone to runs, crises, and contagion when macroeconomic conditions are volatile. Furthermore, as the previous section suggests, imperfect competition may cause the banking sector’s response to exacerbate economic booms and downturns. This circumstance suggests the need to increase competition in the financial systems of DTEs to strengthen financial stability. There are two ways to do this: (i) by liberalizing the conditions of entry to the banking industry, and (ii) by building up other domestic institutions and financial markets that can compete with banks in intermediating financial savings. If other types of financial institutions and markets develop in DTEs, they may help to enhance the stability and robustness of their financial systems.

In a well-developed financial system, competition from well-functioning financial markets limits the scope for an imperfectly competitive banking sector to vary intermediation spreads over the course of the business cycle. Thus it also tends to limit the extent to which the behavior of the banking sector can destabilize the macroeconomy in the face of adverse shocks.

Just as banks exercise market discipline over borrowing firms by assessing credit risks with a different information set from the firms themselves, so other markets and institutions—if properly regulated and supported by an adequate legal and regulatory framework—can operate to reinforce the soundness of the banking sector. A few examples may serve to illustrate the point. Active government securities markets give domestic nonbank residents alternatives to bank deposits for placing their savings. Similarly, the fact that banks have to compete with government securities markets on the borrowing side limits the degree to which they can raise intermediation spreads by lowering deposit rates. Active markets for government securities also permit the central bank to operate monetary policy more flexibly. Moreover, by providing a vehicle for collateralizing central bank credit, a government securities market furnishes the means by which the central bank can provide temporary liquidity support without exposing itself to moral hazard problems. Repurchase agreements based on government securities can also be used to develop a collateralized interbank market, yielding additional gains in bank soundness and liquidity. Capital account convertibility, by

allowing domestic residents to hold foreign assets, further widens the menu of close substitutes for bank deposits in the portfolios of nonbank asset holders. The development of a liquid interbank foreign exchange market is essential to give traders and speculators full flexibility to take spot and forward positions in foreign exchange. This tends to increase the interest elasticity of the demand for domestic bank deposits, which also limits the banks' scope to charge large spreads. Finally, well-functioning equity markets can also widen the menu of financing sources for capital investment and strengthen certain aspects of market discipline.

The problem is that in many DTEs these markets do not exist, or do not function efficiently. Where crucial financial markets are missing, an element of the interlocking web of market discipline will also be missing. Many impediments to the development of financial markets exist in DTEs. A few examples will suffice to indicate the potential problems. These include measures to require the central bank or banks at large to lend to the government, often at subsidized interest rates (which also limits the market for government securities); extensive public ownership of financial institutions and nonbank financial enterprises (which limits the market capitalization available for purchase and sale on the stock market); ceilings on interest rates (which reduce the efficiency of financial system intermediation and the signals for profitable investment); restrictions on international current and capital transactions (which limit the depth of foreign exchange markets and create parallel markets in foreign exchange); other restrictions on the operations of financial markets (including requirements for banks to extend directed credits to the government's priority sectors); and lack of disclosure of important economic and financial information on an accurate and timely basis.

The development of well-functioning, well-regulated nonbank financial intermediaries and markets can serve to mitigate many of the distortions and problems created by these impediments. However, this is an evolutionary process, and it often requires the active support of the authorities. It seems evident that in the meantime official oversight of the banking sector will need to fill the gap until other markets develop. And since regulatory and supervisory authorities will be undertaking functions that financial markets could handle if they were present, it is important for the legal and supervisory framework to operate in a way that encourages the development of the institutions that strengthen market discipline, rather than stifling it.

#### **D. Equity Markets in DTEs**

To illustrate these issues, it is useful to consider the role of equity markets in DTEs. This is an interesting area for further study because an active and well-functioning stock market can contribute to the overall stability of a country's financial system in two important ways. First, it provides an alternative to bank credit as a source of funding for capital investment by domestic enterprises. Second, by providing a market for corporate ownership, it can serve as an instrument for exercising market discipline over bank managements—if bank equities are publicly traded then weak managements can, in principle, be disciplined by the market for corporate ownership and control.

DTE equity markets have grown in importance in recent years as an element of the globalization of financial markets. But while many DTEs now have stock exchanges, there are only a few dozen that are relatively large and active. Table 2 presents data on average stock market capitalization for a sample of 24 DTEs during the two years 1994–95.

Table 2. Selected Emerging Market Countries:  
Ratio of Stock Market Capitalization to GDP  
(Average of year-end values in 1994–95, in percentage)

Argentina	13	Pakistan	17
Brazil	23	Peru	20
Chile	104	Philippines	81
Colombia	21	Poland	4
Greece	16	Portugal	18
Hungary	7	Sri Lanka	15
India	43	Taiwan, China	77
Indonesia	31	Thailand	77
Jordan	64	Turkey	16
Korea	37	Venezuela	8
Mexico	32	Zimbabwe	33
Nigeria	10		
	Mean		29
	Standard deviation		25

Source: International Finance Corporation, Emerging Markets Database, and author's estimates.

As the data in Table 2 indicate, there is a strikingly wide dispersion of stock market capitalization relative to GDP across these DTEs, from under 5 percent in Poland to over 100 percent in Chile. Evidently there are a host of political, economic, and social factors that account for these differences, and it is interesting to examine a few of them to see if one can find any simple explanations for the differences in the role and importance of equity markets across this group of developing and transition economies. As a first approach to this question, we consider four possible determinants of MCAPY, defined as the average ratio of market capitalization to GDP (1994–95) for our cross-sectional sample of 24 DTEs.

The determinants are:

M2Y	=	the ratio of broad money to GDP (in U.S. dollars, average of 1994–95)
PCY	=	the level of per capita income (in U.S. dollars, average of 1994–95)
AVPCYGR	=	the average annual rate of growth of real per capita GDP over the preceding decade, 1984–1993
TRS	=	dummy variable (= 1 for transition economies and zero for all others)

The variable M2Y may be taken as a measure of the overall financial depth of each economy: as a country's financial system develops and its market structure becomes more sophisticated, the ratio of broad money to GDP tends to rise. Hence we might expect that, other things equal, a country with a high ratio of M2 to GDP would also be likely to have a high ratio of stock market capitalization to GDP, relative to the other countries in the sample. PCY represents each country's per capita income (measured in U.S. dollars as a uniform numeraire) in the given base year 1994–95. Empirical analyses of economic growth (see, for example, Knight, Loayza, and Villanueva 1994) tend to suggest that, other things equal, estimated equations for long-run economic growth exhibit "conditional convergence": that is, countries with low initial levels of real per capita GDP tend to grow more rapidly over the subsequent period. Since stock market valuation reflects the expectation of future earnings on capital in each country, we assume that the *lower* a country's initial per capita income the *higher* will be its future growth rate. Thus we expect that a lower level of PCY should be associated with a higher ratio of stock market capitalization to GDP. The variable AVPCYGR also attempts to catch the impact of economic growth performance on stock market valuation. Presumably, a country that has enjoyed better-than-average per capita real growth performance over the past decade is more likely to continue to outperform other countries in the future. Thus its stock market valuation should be higher. Finally, TRS reflects the fact that in transition economies the capital stock has been entirely state-owned until recently. Hence, one would expect the stock market valuations of these countries to be lower relative to GDP than they are in countries where the capital stock has traditionally been in private hands.

When the first three factors listed above are plotted in scatter diagrams against the average market capitalization ratio for 1994–95, MCAPY, the dispersions are very large and do not exhibit any clear pattern. Hence, it is useful to estimate a simple cross-sectional multiple regression on our sample of 24 countries. The estimated parameters and t-values (in parenthesis) are:

$$\text{MCAPY} = 0.10 + 0.52 \text{M2Y} - 0.18 \text{PCY} + 1.92 \text{AVPCYGR} - 0.27 \text{TRS} \quad (2)$$

$$(1.85) \quad (3.33) \quad (1.38) \quad (1.15) \quad (1.84)$$

$$R^2 = 0.51 \quad \bar{R}^2 = 0.40$$

These estimates are intriguing for several reasons. First, as expected, the measure of financial system deepening, M2Y, is highly significant as a determinant of a country's ratio of stock market capitalization to GDP. The estimated coefficients of both our "conditional convergence" variable, PCY, and our simple proxy for expected future growth, AVPCYGR, have their expected signs (negative and positive, respectively), though they are significant only at about the 20 percent level. The coefficient of the dummy variable for transition economies is, not surprisingly, highly significant, with the expected sign.

The explanatory power of the cross-section equation, at 40 percent, is relatively low. It certainly indicates that there is no short list of factors that account for the existence of active stock markets in some DTEs but not in others. Other less tangible factors than those we have proposed—such as the degree of private ownership of productive assets, the existence of a supportive legal and regulatory framework, and a tradition of open availability of economic information—may also be important. These issues certainly deserve further empirical analysis.

Nevertheless, the empirical results do suggest that the ratio of a country's stock market capitalization to its GDP is correlated with a plausible set of economic determinants which can, in turn, be influenced by economic policies. If equity markets are to serve as an important element for exercising market discipline over banks to strengthen financial system soundness, then considerable work will need to be done to develop and strengthen equity markets across a broad spectrum of DTEs. The most promising avenues for fostering equity markets are by opening up current and capital accounts, developing a sound regulatory framework, and providing stock exchanges with fair, internationally consistent, and well-enforced rules by which to operate.

Clearly, even as DTE equity markets develop they are likely to remain subject to high risks: illiquidity risk, transfer risk, risks associated with differential information, and political risk. Consequently, the ability to diversify risks will continue to be of crucial importance to attracting investors. As the flow of funds to DTE equity markets has expanded, portfolio managers have diversified through increased recourse to mutual funds. Over 1992–95, for example, the number of emerging market equity funds tripled to over 1,200, and their combined net asset value jumped threefold to over \$110 billion. As a fraction of combined DTE GDP, the net asset value of emerging market funds rose from 2.3 percent to 6.4 percent during these years.

The above discussion suggests that active official efforts may be needed to foster the development of well-functioning equity markets to strengthen financial system discipline in DTEs. Analogous arguments can be made for establishing other types of nonbank financial institutions as a means of enhancing financial system soundness.

But although the creation of an interconnected web of equity and other financial markets is a necessary condition for improving financial stability in DTEs, it has not thus far proved to be a sufficient condition. Indeed, experience indicates that cases where market discipline alone has been sufficient to resolve incipient financial crises are rather rare. This

suggests that other elements are needed. One possibility is information disclosure; another is stronger supervision designed to create incentives for more effective internal governance of financial institutions. No form of market discipline will operate efficiently unless the legal and regulatory framework creates strong incentives for the public disclosure of accurate information to market participants. Informed markets are essential for efficiently functioning markets, and markets will be well informed only if all potential participants are in a position to obtain information at reasonable cost. In this sense, improvement in the public disclosure of market information is an important initiative that can be taken by market regulators for strengthening the soundness of financial sectors in emerging market economies. As regards banks, for example, it is a fundamental principle that effective market discipline requires that financial information be disclosed promptly and that it present a true picture of the value of the bank, based on generally accepted accounting standards and proper loan evaluation procedures.

Similar arguments hold for nonbank financial intermediaries and conglomerates. While there are many impediments to the development of nonbank financial institutions and markets in DTEs, the lack of disclosure of either aggregate or firm-specific data on important economic and financial variables is, without doubt, one of the most essential weaknesses. Thus it is critical that best practices for sound financial systems in DTEs include standards for data provision, disclosure, and dissemination. Over the past several years, the IMF has taken steps to encourage the dissemination of member countries' macroeconomic data through two related initiatives. The first is the Special Data Dissemination Standard (SDDS)—a voluntary system by which countries that are active—or wish to become active—in international financial markets agree to provide certain key economic data on a regular and timely basis (see IMF 1996b). Over 40 countries, including more than 20 DTEs, have indicated their intention to subscribe to the SDDS.<sup>13</sup> The second initiative is the General Data Dissemination System, which each Fund member country is to adhere to as soon as feasible given its initial circumstances.

#### **IV. KEY ASPECTS OF SOUND FINANCIAL SYSTEMS IN EMERGING MARKET ECONOMIES**

The discussion in the preceding sections shows that a number of factors—both microeconomic and macroeconomic—can cause financial problems in DTEs, and that regulatory oversight and market discipline are, in principle, complementary means for achieving a stable and robust financial system. What follows is a brief outline of some elements of financial system soundness and a summary of recent initiatives for promoting it.

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<sup>13</sup>As of May 1997, 22 developing and transition economies had notified the IMF of their intention to subscribe to the SDDS. The remaining 20 countries that subscribe to the SDDS are advanced industrial countries. The IMF has a total of 182 member countries.

The basic elements of a sound financial system are a supportive legal and regulatory environment, strong internal governance, external discipline provided by market forces, and external governance provided by regulation and supervision at both the domestic and the international levels. Clearly, a sound financial system requires a legal framework that facilitates the enforcement of financial contracts, loan recovery, and the realization of collateral. Within this framework lies the responsibility for internal governance by each individual bank's owners, management, and directors. Owners with their capital at risk are the main means by which the soundness of financial institutions can be assured, since owners have a strong incentive to appoint competent directors and managers and to closely oversee their business. This is why an active equity market—that is, a market for corporate control—is very important in establishing market discipline over owners and managers.

Similarly, improvements in public disclosure tend to enhance the ability of private credit markets to impose discipline. Well-informed creditors with large positions, whose funds are at risk in the market and who are not protected by government guarantees, have a strong incentive to make distinctions between the institutions to which they lend in interbank securitized debt, commercial paper, and money markets, based on each borrower's risk characteristics. When financial data on banks and other intermediaries are timely, accurate, and regularly disclosed, creditors can monitor signals and respond to signs of weak risk management. In addition, provided the data allow them to distinguish weak institutions from strong ones, creditors need not start a run but can gradually shift funds from weaker to stronger institutions, or place stricter exposure limits on the former, thereby forcing them to pay higher rates for funds.

In much the same way, equity markets can discipline weak managements by depressing the value of the equity of their firms, thereby rendering them more likely targets for acquisitions and mergers. If market discipline can be made to work this way, weak managements are forced either to improve performance or exit the market before their institutions become insolvent. These exit pressures will work more efficiently in a competitive market—where each individual institution is expendable—than in a highly concentrated market where the authorities are more likely to conclude that certain banks or other institutions are “too big to fail.” A strong and equitable framework for the exit of weak financial institutions—whether through mergers or liquidation—is an important element for maintaining a robust, stable system as a whole. Finally, capital account convertibility broadens the list of assets available to domestic wealth owners, strengthens the market discipline that can be exercised by foreign residents over domestic institutions, and limits the likelihood of severe distortions in the pricing of domestic financial assets.

As long as there are gaps in the financial market structures of DTEs, however, there will be limits on the degree to which market discipline is effective in assuring a stable financial system. Accordingly, while such market structures are evolving, official supervision and regulation will need to continue to bear a large share of the burden of maintaining robust financial systems and resolving crises when they occur. In this sense, official oversight of



financial institutions and markets is an essential complement to internal governance and market discipline.

Since the 1970s, internationally accepted norms and standards of sound financial practice and supervision have been essential components in maintaining healthy financial markets. Since 1974 the Basle Committee on Banking Supervision, under the direction of the central banks of the Group of Ten industrial countries, has been instrumental in developing and refining basic norms of financial activity for international banks and in establishing basic standards for banking supervision.

Although market risk is an important issue for the large internationally active banks, for most banks, particularly those in DTEs, the paramount concern is still the management of credit risk. Among the norms that have been established by the Basle Committee, the most widely adopted thus far have been its standards for the minimum capital that banks should hold against their risk-weighted assets. In recent years, however, there has been a growing awareness that as globalization proceeds and asset holders' exposures to DTEs continue to rise, financial system problems in emerging markets are becoming an ever more pressing issue. There is also a widespread recognition that globalization increases the scope for weak and destabilizing financial practices to migrate to the least regulated jurisdictions. Thus, although supervision and regulation must take into account the particular circumstances of individual countries, it is clearly in the public interest for financial activities that involve reasonably homogeneous norms, minimum standards, and best practices to be adopted by the widest possible group of countries. There is also a clear awareness among economists and policymakers alike that the financial systems of many developing and transition economies are particularly vulnerable to economic and financial crises, and that such crises can have a serious impact not only on these economies—in terms of increased macroeconomic instability and weakened economic growth performance—but also on the worldwide allocation of savings and investment.

For these reasons, there is a growing consensus among financial system regulators on the necessity of developing a consistent international framework of financial and supervisory standards and best practices that would promote robust financial systems in all countries, including the emerging markets.<sup>14</sup> In view of the gaps in DTE financial markets discussed in this paper, the development of such a framework will require increased attention to the consistency and adequacy of regulatory and supervisory practices throughout the world. Moreover, attention must be devoted to developing regulatory systems that create economic incentives for market participants themselves to take actions that strengthen internal governance and market discipline. While reliance on regulation and official oversight as the main means of promoting financial system soundness in DTEs will initially be heavy, the importance of these other elements for enhancing financial system stability should gradually

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<sup>14</sup>See Heimann (1997).

increase over time. Like financial markets themselves, supervision and regulation must become global and homogeneous.

In response to the communiqué of the June 1996 Lyon Summit of the G-7 countries, an initiative was taken late in 1996 in which representatives of both G-10 and emerging market countries jointly sought to “develop a strategy for fostering financial stability in countries experiencing rapid economic growth or undergoing substantial changes in their financial systems.” Their report, *Financial Stability in Emerging Market Economies* (G-10, 1997) urges countries to take early action in three key areas. The first is establishment of an appropriate institutional setting and financial infrastructure as a basis for a sound credit culture and the effective functioning of financial markets. The second is promotion of the functioning of markets so that owners and other stakeholders in financial institutions have strong incentives to exercise adequate discipline. The third area is the creation of regulatory and supervisory arrangements that complement and support the operation of market discipline. Simultaneously, with this initiative, the Basle Committee has developed a general set of core principles for sound banking that are applicable to a wide group of countries, and the IMF has also been working on a broad framework for financial stability.

Consistent with this strategy, the IMF, the World Bank, the regional development banks, and the OECD are moving to foster the spread of best practices. In this context, the IMF is in a position to monitor the progress that countries are making in the adoption of sound principles in the context of its regular Article IV consultations with each of its member countries; to finance programs of balance-of-payments adjustment when the need arises; and to provide technical assistance in improving various aspects of the functioning of financial systems in DTEs. The World Bank and the regional development banks are expected to play a growing role in providing technical and financial assistance to countries undertaking major banking or financial sector restructuring initiatives. At certain times, the World Bank and the IMF may need to provide external financing rapidly and in large amounts when problems arise, because of the risk of contagion as global financial markets become ever more tightly integrated.<sup>15</sup> The recent experience of Mexico in 1994–95 and the turmoil in a number of Asian emerging market economies in the second half 1997 are good examples. To meet these challenges, the IMF has instituted emergency procedures, and several of its recent financial arrangements with countries in Southeast Asia are cases in point. Collaboration between the World Bank and the IMF, particularly on banking sector restructuring issues, has proved beneficial in the past and will need to continue in the years ahead.

If carried out as intended, this comprehensive strategy could constitute a market friendly approach to improving the soundness of financial systems in emerging market economies. In particular, it carries the promise of creating an incentive-compatible system in which a strengthening of financial systems through improved information, better market

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<sup>15</sup>For an empirical analysis of the economics determinants of the demand for and supply of IMF financial arrangements, see Knight and Santaella (1997).

discipline, more systematic and homogeneous supervision, and better overall direction are all mutually reinforcing elements. Over the longer term, this strategy should also create incentives to eliminate the gaps in financial institutions and markets in DTEs as well as addressing the weaknesses in their supervisory frameworks. Consequently, this approach carries the prospect of encouraging the evolution of a more robust international financial system. If it succeeds in doing so, it will improve the efficiency of the global allocation of savings and investment while enhancing economic growth performance over the longer term for industrial and emerging market economies alike.

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