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Some Lessons for Regulation from Recent Bank Crises

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Abstract

Recent bank crises in developed and developing countries have underlined the question of a good "regulatory regime," which is a wider concept than the set of prudential principles and business rules established by external regulatory agencies. The role of external regulation in fostering a safe and sound banking system is limited. The incentive's structure for private banks and the efficiency of monitoring and supervision have to play a great role. Liberalization of markets can have bad effects in the transitional period, but advantages can be enormous after the system starts to work correctly. The main lesson of recent bank crises is that there needs to be more effective surveillance of financial institutions both by supervisory authorities and by markets. Effective regulation (internal and external) and supervision of banks and financial institutions have the potential to give a major contribution to the stability and robustness of financial system.

Introduction

Our objective is to consider the experience of recent banking crises in both developed and developing countries and to draw lessons, especially with respect to the design of an optimum regulatory regime. This is done by setting out a series of general principles designed to lower the probability of banking distress. The concept of a regulatory regime is considerably wider than the prevailing set of prudential and conduct of business rules established by external regulatory agencies. It is widened to include the nature of the incentive structures operating within banks, the role of monitoring and supervision (by private and official agents), the disclosure regime and the role of market disciplines, and corporate governance arrangements within banks. It also includes the arrangements for official intervention in the event of bank distress. Just as the causes of banking crises are multidimensional, so the principles of an effective regulatory regime must also incorporate a wider range of issues than just externally imposed rules on bank behavior.

A central theme is that, while external regulation has a role in fostering a safe and sound banking system, this role is limited. Equally and increasingly

important are the incentive structures faced by private banking agents and the efficiency of the necessary monitoring and supervision of banks by official agencies and the market. External regulation is only one component of regimes to create safe and sound banking systems. It is further argued that over time and as the market environment in which banks operate becomes more complex, two structural shifts are needed within the regulatory regime: (1) external regulation needs to become less prescriptive, more flexible, and more differentiated among different institutions, and (2) more emphasis needs to be given to incentive structures and the contribution that regulation can make to creating appropriate incentive structures.

It is also necessary within the regulatory regime to include the arrangements for intervention in the event of bank distress and failures, not the least because they have incentive and moral-hazard effects that potentially influence future behavior by banks and their customers and the probability of future crises. These arrangements also have important implications for the total cost of intervention (for example, initial forbearance often has the effect of raising the eventual cost of subsequent intervention) and the distribution of those costs between taxpayers and other agents. Different intervention arrangements also have implications for the future efficiency of the financial system in that, for instance, forbearance may have the effect of sustaining inefficient banks and excess capacity in the banking sector.

For instance, it has frequently been argued (e.g., Drage and Mann, 1999) that, in the recent case of Southeast Asia, the injection of funds by the International Monetary Fund (IMF) and World Bank (which in effect replaced private finance) effectively bailed out investors and, by shielding them from the full losses of their actions, may have had the effect of encouraging imprudent lending in the future, which in turn may subsequently raise the probability of banking crises. It has also been claimed that the aftermath of the Mexico crisis sent a signal to investors that they are less likely to sustain losses by investing in short-term securities.

The focus of the article is wider than the banking crises recently experienced by countries in Latin American and Southeast Asia. There are also significant lessons to be learned from the experience in more long-standing developed countries such as the Scandinavian banking crises in the early 1990s.

The outline of the article is as follows. It begins with a brief overview of recent banking crises and the economic costs that emerge. Section 2 considers the common elements in banking crises. This is followed in Section 3 by a discussion of the multidimensional nature of recent crises and focuses on the macroeconomy, the legacy of preliberalization, the role of bad banking practices, perverse incentive structures and moral hazard, ineffective regulation, weak monitoring and supervision, weak market discipline on banks, and unsound corporate governance arrangements. This is followed (in Section 4) by a review of the impact of liberalization with a distinction made between the transitional effects associated with the shift from one regime to another and the steady-state characteristics of a deregulated financial system. The

characteristics of a robust financial system are outlined in Section 5. The final section draws together the implications of the previous analysis of the nature and origin of banking crises by setting out a set of principles for a regulatory regime designed to lower the probability of distress in the banking sector. These are organized in six components: regulation, incentive structures, monitoring and supervision, intervention, market discipline, and corporate governance.

1. Recent banking crises

A recent IMF study of banking crises around the world begins as follows: "A review of the experiences since 1980 of the 181 current Fund member countries reveals that 133 have experienced significant banking-sector problems at some stage during the past fifteen years (1980–1995)" (Lindgren, 1996). Crises in the banking sector (in both developing and industrial economies) are clearly not random, isolated events. Around the world, banks in many countries have had very high levels of nonperforming loans, there has been a major destruction of bank capital, banks have failed, and massive support operations have been necessary. This represents a greater failure rate among banks than at any time since the great depression of the 1930s. They have involved substantial costs. In around 25 percent of cases the cost has exceeded 10 percent of gross national product (for example, in Spain, Venezuela, Bulgaria, Mexico, Argentina, and Hungary).

The main causes of recent crises have been those that have always attended commercial banking problems: poor risk analysis by banks, weak internal credit-control systems, connected lending, insufficient capital, ineffective regulation, weak monitoring and supervision by regulatory agencies, and weak internal governance. These factors have frequently been aggravated by a volatile conduct of economic policy and structural weaknesses in the macroeconomy. In other words, the origins of crises are both internal to banks and external. To focus myopically on one side misses the essential point that systemic crises have both macro and micro origins.

Almost always and everywhere banking crises are a complex interactive mix of economic, financial, and structural weaknesses. For an excellent survey of the two-way link between banking systems and macro policy, see Lindgren, Garcia, and Saal (1996). The trigger for many crises has been macroeconomic in origin and often associated with a sudden withdrawal of liquid external capital from the country. As noted by Brownbridge and Kirkpatrick (1999), financial crises have often involved triple crises of currencies, financial sectors, and corporate sectors. Similarly, it has been argued that East Asian countries were vulnerable to a financial crisis because of "reinforcing dynamics between capital flows, macro-policies, and weak financial and corporate sector institutions" (Alba et al., 1998, pp. 275–290). The link between balance of payments and banking crises is certainly not a recent phenomenon and has been extensively studies (e.g., Kaminsky and Reinhart, 1998; Gadlayn and Valdes, 1997; Sachs, Torrell, and Velesco, 1996).

Almost invariably, systemic crises (as opposed to the failure of individual banks within a stable system) in the financial system are preceded by major macroeconomic adjustment. This often leads to the economy moving into recession. Most financial crises have been preceded by sharp fluctuations in the macroeconomy and often in asset prices. However, it would be a mistake to ascribe banking crises and financial instability entirely to macroeconomic instability. While macro instability may be the immediate and proximate cause of a banking crisis, such a crisis usually emerges because the instability in the macroeconomy reveals existing weaknesses within the banking system. It is also usually the case that the seeds of the problem (such as overlending, weak risk analysis, and control) were sown in the earlier upswing of the cycle. The downswing phase reveals previous errors and overoptimism. The mistakes made in the upswing emerge in the downswing. Such weaknesses include, for instance, poor, weak, or inappropriate incentives in the system, weak internal-risk analysis, inefficient management and control systems within banks and financial firms, poor regulation and supervision of financial institutions, and so on. In Southeast Asia, for instance, a decade of substantial economic growth up to 1997 concealed the effects of questionable bank lending policies.

A common experience in countries that have experienced serious banking problems is that expectations have been volatile and asset prices (including property) have been subject to wild savings. A sharp (sometimes speculative) rise in asset prices has been followed by an equally dramatic collapse. An initial rise in asset prices induces overoptimism and sometimes euphoria, which in turn lead to increased demand for borrowed funds and an increased willingness by banks to lend.

Analysis of financial crises throughout the world indicates very powerfully that two common characteristics are weak internal-risk analysis, management, and control *systems* and weak (or even perverse) *incentives* within the financial system generally and financial institutions in particular. These need to be addressed if a robust and stable financial system is to be created. In particular, the conclusion is that an unstable or unpredictable macroeconomic environment is neither a necessary nor a sufficient condition for banking crises to emerge: it is an illusion to ascribe such crises to faults in the macroeconomy alone. The fault also lies internally within banks.

2. Some common elements in banking distress

While each banking crisis has unique and country-specific features, they also have a lot in common. Several conditions tend to precede most systemic banking crises:

- Rapid growth in bank lending within a relatively short period;
- Urealistic expectations and euphoria about economic prospects in the economy;

- A sharp and unsustainable rise in asset prices (part of euphoria speculation), leading to unrealistic demands for credit and willingness of banks and other lenders to supply loans;
- Concentrated bank portfolios often with a high property content (that is, while project risks may be properly assessed, portfolio risk is often not);
- Excessive interconnected lending within banking groups;
- Government involvement in loans and loan decisions, which may have the effect of weakening incentive structures, eroding discipline on lenders (an implicit guarantor), and involving undue political influence or insider relationships;
- Inappropriate risk premia being charged in lending interest rates,
- Insufficient attention being given to the value of collateral, most especially if rapid balance-sheet growth occurs in a period of asset-price inflation; and
- Weak conduct of monetary policy in a context of high and volatile rates of inflation.

In the final analysis, weak internal-risk analysis, management, and control systems are at the root of all banking crises. Instability elsewhere should not conceal or be used to excuse weaknesses in this area of bank management. Further, when these weaknesses are present, they frequently manifest themselves in excessive lending on property projects. Many banking crises around the world have been associated in part with overlending on property projects. This is partly because, in periods of rapid asset-price inflation, property appears to be an attractive lending proposition. However, it is in essence speculative lending, and the bubble bursts when the overcapacity in the property sector becomes evident. In other words, when internal-risk analysis, management, and control systems are weak and when euphoria supplants analysis, the problem will frequently be focused on property lending, which, in essence, is speculative in nature.

Banking crises also often follow major changes in the regulatory regime that create unfamiliar market conditions. Periods of rapid balance-sheet growth—especially if it occurs after a regime shift and in a period of intense competition where market-share considerations dominate bank behavior—almost inevitably involve banks incurring more risk. There are several reasons for this: banks begin to compete for market share by lowering their risk thresholds; risks are underpriced to gain market share; control systems tend to weaken in periods of rapid balance-sheet growth; growth itself generates unwarranted optimism and a balance-sheet growth momentum develops; and portfolios become unbalanced if new lending opportunities are concentrated in a narrow range of business sectors. When, as is often the case, fast-growth strategies are pursued by all banks simultaneously, borrowers become overindebted and more risky, which in turn increases the vulnerability of the banks from whom they are borrowing.

3. A multidimensional problem

The recent banking crises in Southeast Asia have, as always, been complex and their causes multidimensional. While evident macro-policy failures and volatile and structurally weak economies have been contributory factors, it is also the case that fundamentally unsound banking practices, perverse incentive structures and moral hazards, and weak regulation and supervision have also been major contributory factors. A myopic concentration on any single cause will fail to capture the complex interactions involved in almost all banking and financial crises.

This also suggests that the response to avoid future crises equally needs to be multidimensional, involving the conduct of macro policy, the conduct of regulation and supervision, the creation of appropriate incentive structures, the development of market discipline, and the internal governance and management of financial institutions. As a prelude to a consideration of the principles to reduce the probability of future banking fragility, the remainder of this section briefly considers in turn the main components of recent banking crises. While the experiences of these countries vary in detail, there is a remarkable degree of commonalty among them, including, to some extent, the experience of financial fragility in some developed economies. A discussion of the factors behind the Scandinavian banking crises of the early 1990s is given in Andersson and Viotti (1999) and Benink and Llewellyn (1994).

Reflecting the multidimensional aspect of financial distress, the main causal factors in recent banking crises are now considered under eight headings: (1) volatility in the macroeconomy, (2) the inheritance of structural weaknesses in the economy, (3) bad banking practices, (4) hazardous incentive structures and moral hazard within the financial system, (5) ineffective financial regulation, (6) weak monitoring and supervision by official agencies, (7) the absence of effective market discipline against hazardous bank behavior due partly to the lack of transparency and the disclosure of relevant information, and (8) structurally unsound corporate governance mechanisms within banks and their borrowing customers.

We find that the recent distress of banks in Southeast Asia is a product of a volatile economy (with strong speculative elements) combined with bad banking practices, weak regulation, ineffective supervision both by the official agencies and the market, and hazardous incentive structures. All of this induced excessive lending and risk taking by banks.

3.1. The macroeconomy

Although growth in the countries of Southeast Asia had been strong for many years before the onset of the crises, structural weaknesses in some of the economies of the region was also evident. In many cases, exceptionally high investment rates concealed inefficiencies in the allocation of investment funds

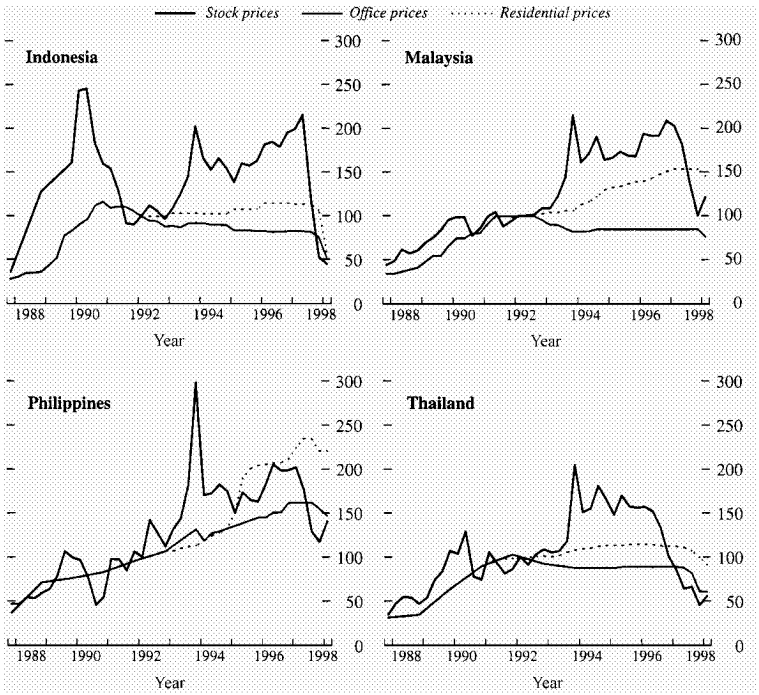

Figure 1. Real estate and stock prices in selected Asian countries.
Source: Adams et al. (1998).
Note: March 1992 = 100. Real estate and stock prices in local currencies, except for Indonesia, where prices are in U.S. dollars.

in the economy. Investment plans were often undertaken without reference to realistic assessment or measurement of expected rates of return. The financial and solvency position of many large investing companies was also seriously overstated by inaccurate accounting procedures.

Many financial crises have often been preceded by sharp and speculative rises in real and financial asset prices (see, for instance, the experience of Indonesia, Malaysia, Philippines, and Thailand in Figure 1 and Tables 1 and 2). Such sharp and unsustainable rises in asset prices have a bearing on subsequent financial distress through several channels. As already noted, the main route is through the effect on the demand and supply of bank credit.

A key factor in the macroeconomic background to recent banking crises has been the dependence on short-term capital inflows intermediated via the banking system. Table 3 shows the pattern of private capital flows to Asian countries over the 1990s and the dependence of the crisis countries (Indonesia, Korea, Malaysia, Philippines, and Thailand) on volatile banking flows (the dominant component of the "other" category in Table 3). The vulnerability to such volatile flows is shown in the $73 billion turnaround in 1997 when a net inflow

Table 1. Stock market price index.

Country	1990	1991	1992	1993	1994	1995	1996	1997
Korea	696.00	610.00	678.00	866.00	1027.00	882.00	651.00	376.00
Indonesia	417.00	247.00	274.00	588.00	469.00	513.00	637.00	401.00
Malaysia	505.00	556.00	643.00	1275.00	971.00	995.00	1237.00	594.00
Philippines	651.00	1151.00	1256.00	3196.00	2785.00	2594.00	3170.00	1869.00
Singapore	2254.00	1490.00	1524.00	2425.00	2239.00	2266.00	2216.00	1529.00
Thailand	612.00	711.00	893.00	1682.00	1360.00	1280.00	831.00	372.00
Hong Kong	3024.00	4297.00	5512.00	11888.00	8191.00	10073.00	13451.00	10722.00
Taiwan	4350.00	4600.00	3377.00	6070.00	7111.00	5158.00	6933.00	8187.00

Table 2. Stock market price index (property sector).

Country	1990	1991	1992	1993	1994	1995	1996	1997
Indonesia		119.00	66.00	214.00	140.00	112.00	143.00	40.00
Malaysia	113.00	113.00	126.00	369.00	240.00	199.00	294.00	64.00
Philippines	32.00	34.00	39.00	81.00	80.00	87.00	119.00	59.00
Singapore	230.00	280.00	250.00	541.00	548.00	614.00	648.00	357.00
Thailand	74.00	82.00	168.00	367.00	232.00	192.00	99.00	7.00
Hong Kong	32.00	453.00	554.00	1392.00	862.00	1070.00	1682.00	941.00
Taiwan	61.00	71.00	57.00	137.00	109.00	59.00	55.00	55.00

of $41 billion in 1996 was followed by a $32 billion net outflow in the following year. A substantial proportion of the short-term capital inflow was intermediated by domestic banks incurring short-term liabilities against foreign banks. The vulnerability of the crisis countries to an external illiquidity problem became substantial, and this was a pattern evident in crises faced by other countries (see Cole and Kehoe, 1996, and Sachs, Torrell, and Velesco, 1996). The issue is discussed in more detail in Corsetti, Pesenti, and Rabini (1998).

Overall, strong economic growth was, at least at the margin, intermediated by domestic banks incurring foreign-currency liabilities to foreign banks on the basis of short-term interbank lines.

3.2. The inheritance

Many of the crisis countries have had a long tradition of substantial government involvement and ownership in the banking system. This has frequently meant that funds have been channeled to ailing industries under overt or covert political pressure. Bisignano (1998) argues that such selective credit allocation has been a factor retarding the development of effective risk-analysis and

Table 3. Private capital flows to asian countries.

	1990	1991	1992	1993	1994	1995	1996	1997
Total net private capital inflows	19.10	35.80	21.70	57.60	66.20	95.80	110.40	13.90
Net foreign direct investment	8.90	14.50	16.50	35.90	46.80	49.50	57.00	57.80
Net portfolio investment	−1.40	1.80	9.30	21.60	9.50	10.50	13.40	−8.60
Other	11.60	19.50	−4.10	0.10	9.90	35.80	39.90	−35.40
Net external borrowing from official creditors	5.60	11.00	10.30	8.70	5.90	4.50	8.80	28.60
Affected countries net private capital inflows[a]	24.90	29.00	30.30	32.60	35.10	62.90	72.90	−11.00
Net foreign direct investment	6.20	7.20	8.60	8.60	7.40	9.50	12.00	9.60
Net portfolio investment	1.30	3.30	6.30	17.90	10.60	14.40	20.30	11.80
Other	17.40	18.50	15.40	6.10	17.10	39.00	40.60	−32.30
Affected countries net external borrowing from official creditors	0.30	4.40	2.00	0.80	0.70	1.00	4.60	25.60

Sources: IMF; International Financial Statistics; World Economic Outlook database.
[a]Indonesia, Korea, Malaysia, the Philippines, and Thailand.

management systems in banks. In effect, banks were not acting as market-orientated financial intermediaries but as a channel for the public-policy support of industries that would not have received the scale of support through market mechanisms. In addition, the close connections between banks and industrial corporations and the general influence of government in the economy and the support of certain industries created the climate that neither borrowers nor the banks would be allowed to fail. This in turn aggravated a tendency toward imprudent lending. The issues are discussed further in Martinez (1998).

This is not a problem restricted to the less developed countries of Southeast Asia. Suzuki (1986) has argued that heavy involvement of government in the financial intermediation process carries three potential hazards: capital may be allocated inefficiently and on nonmarket criteria, it may undermine the effectiveness of monetary policy, and it may undermine fiscal discipline.

The inheritance problem also included weak corporate-sector structures with powerful links between companies in a way that could avoid normal market discipline on corporate behavior. This in turn was aggravated in many cases by weak corporate governance arrangements and the nonfeasibility for the market in corporate control to operate, both of which again muted normal market disciplines.

Before the financial liberalization process was instigated, many of the crisis countries operated on the basis of quite rigid public control or direction. Some of

the subsequent problems emanated from losses (which were often concealed) incurred during the previously repressed financial regime. It is also evidently the case that the true financial condition of many banks had been concealed in the preliberalization period because of weak loan classification standards and an expectation that banks would be supported in the event of difficulty. In many Latin American countries, accounting standards were very lax, to the extent that banks were reporting positive net income even during a banking crisis (see Rojas-Suarez and Weisbrod, 1995). Such questionable accounting practices are not exclusive to developing countries (Kim and Cross, 1995). In some cases, banks seem to be able to determine loan-loss provisions on the basis of managing the level of declared capital rather than to reflect the true quality of loans (Beatty, Chamberlain, and Magliola, 1993).

3.3. Bad banking practices

Several elements of bad banking have also played a central role in the emergence of financial fragility and the subsequent failure of banks but were concealed during the optimism generated during the previous period of rapid economic growth. Mention may be made in particular of the following:

- Banks operated on the basis of low capital ratios, which were sometimes below minimum levels required by the regulatory authorities and which were not forced to be addressed by the regulators.
- Substantial foreign-currency exposures were incurred because foreign-currency borrowing was cheap, because the alleged commitment to a fixed exchange rate was not questioned, and because of the general expectation of bailouts in the event of difficulty.
- Very rapid growth was experienced in bank lending. As already noted, a common feature of bank crises (including in advanced economies) is that they are preceded by a period of very rapid growth in bank lending. This is shown for the crisis countries of Southeast Asia in Tables 4 and 5, which show the high rates of growth in bank lending to the private sector and the sharp rise in the proportion of bank lending to gross domestic product (GDP). Periods of rapid growth in bank lending frequently conceal emerging problems: it is more difficult to distinguish good from bad loans (Hausmann and Gavin, 1996), banks often lend to areas with which they are not familiar, herding behavior develops, credit standards are weakened in a phase of euphoria, and some of the lending is based on speculative rises in asset prices. This has also been noted in the Scandinavia banking crises of the early 1990s (Benink and Llewellyn, 1994).
- Weak risk-analysis and management systems were in place within banks.
- Excessively concentrated portfolios often had a substantial exposure to property and real estate either directly in the form of loans or indirectly through the collateral offered by borrowers (the exposure to property of seven countries of Southeast Asia is given in Table 6).

Table 4. Bank lending to private sector (percent growth).

Country	1991	1992	1993	1994	1995	1996	1997
Korea	20.78	12.55	12.94	20.08	15.45	20.01	21.95
Indonesia	17.82	12.29	25.48	22.97	22.57	21.45	46.42
Malaysia	20.58	10.79	10.8	16.04	30.65	25.77	26.96
Philippines	7.33	24.66	40.74	26.52	45.39	48.72	28.79
Singapore	12.41	9.77	15.15	15.25	20.26	15.82	12.68
Thailand	20.45	20.52	24.03	30.26	23.76	14.63	19.8
Hong Kong		10.17	20.15	19.94	10.99	15.75	20.1
China	19.76	20.84	43.52	24.58	24.23	24.68	20.96
Taiwan	21.25	28.7	19.46	16.18	10	6	8.92

Table 5. Bank lending to private sector (percent of GDP).

Country	1990	1991	1992	1993	1994	1995	1996	1997
Korea	52.54	52.81	53.34	54.21	56.84	57.04	61.81	69.79
Indonesia	49.67	50.32	49.45	48.9	51.88	53.48	55.42	69.23
Malaysia	71.36	75.29	74.72	74.06	74.61	84.8	93.39	106.91
Philippines	19.17	17.76	20.44	26.37	29.06	37.52	48.98	56.53
Singapore	82.2	83.34	85.06	84.14	84.21	90.75	95.96	100.29
Thailand	64.3	67.7	72.24	80.01	91	97.62	101.94	116.33
Hong Kong		141.84	134.2	140.02	149	155.24	162.36	174.24
China	85.51	87.87	86.17	95.49	87.12	85.83	91.65	101.07
Taiwan	100.41	108.99	126.43	137.23	146.89	149.49	146.05	146.23

Table 6. Banking system exposure to property.

	Property Exposure	Collateral Valuation
Korea	15–25%	80–100%
Indonesia	25–30	80–100
Malaysia	30–40	80–100
Philippines	15–20	70–80
Singapore	30–40	70–80
Thailand	30–40	80–100
Hong Kong	40–55	50–70

Source: J.P. Morgan, *Asian Financial Markets* (January 1998).

- Bank lending was done on the basis of an unsustainable rise in asset prices.
- Substantial connected lending was done by banks to companies within the same group and on the basis of poor (or nonexistent) risk assessment and nonmarket criteria.
- Loans failed to incorporate risk premia in their interest rates. The Bank for International Settlements has noted (BIS, 1998) that in many crisis countries the lending margin was low (and was declining during the period of rapid growth) relative to operating costs, which indicates that insufficient risk premia were being charged.
- Inaccurate accounting standards and weak loan classification and provisioning had the effect of overstating the value of bank loans and hence the true capital position of banks.

An interesting perspective on the effect of excessive bank lending is given by an IMF team (Adams et al.,1998). Bank-lending growth was substantially in excess of the growth of GDP in the distress countries of Southeast Asia (Figure 2). This produced high leverage ratios (ratio of credit to the private sector relative to GDP). The IMF study notes that in many of the countries of the region (and particularly those where bank distress was most marked: Korea, Malaysia, and Thailand) the loan-leverage ratios rose to levels that were higher than those in industrial countries with more developed financial infrastructures (Figure 2). Several studies (e.g., Demirguc-Kunt and Detragiache, 1998; Kaminsky and Reinhart, 1999; Benink and Llewellyn, 1994) show that rapid credit growth and high and sharply rising leverage are significant determinants of banking crises in both developing and developed countries. The authors of the IMF study

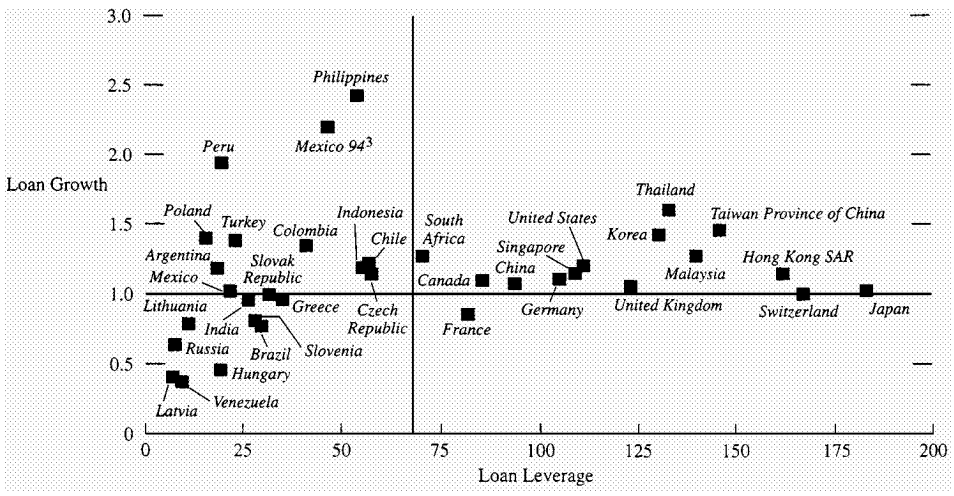

Figure 2. Financial-sector lending; Growth and leverage, 1990 to 1996.
Source: Adams et al. (1998).

suggest that with respect to Figure 2 countries in the early stages of economic development are normally in the northwest quadrant (high loan growth with low leverage) but that as they advance in their development they are expected to converge to the border between the southeast and northeast quadrants. The figure shows, however, that Korea, Thailand, and Malaysia each had both high growth rates of bank lending and high leverage ratios. A somewhat different picture emerges for the Philippines (very high growth rate of bank lending but comparatively low leverage ratio) and Indonesia with a modest growth rate of bank lending and a modest leverage ratio.

3.4. Hazardous incentive structures and moral hazard

A central theme of this article is that the incentive structures and moral hazards faced by decision makers (bank owners and managers, lenders to banks, borrowers, and central banks) are major issues to consider in the regulatory regime. Some analysts ascribe much of the recent banking crises to various moral hazards and perverse incentive structures such as fixed exchange-rate regimes, anticipated lender-of-last-resort actions, what are viewed as bailouts by the IMF, the ownership structure of banks and their corporate customers, and safety-net arrangements.

Mora-hazard effects, while important, may nevertheless also be exaggerated. For instance, Brealey (1999) argues against the adverse incentive effect of IMF lending on the grounds that investors did in fact lose value, and also points, to the reluctance of governments to resort to IMF facilities because of the resultant conditionality that is applied. It is also argued (Adams et al., 1998) that investors in Southeast Asia were motivated not by any alleged safety net but by the "star-performance" status of the economies. While potential moral-hazard effects may be exaggerated, this is not to deny the central importance of identifying the incentive structures implicit in regimes and the potential moral hazards that can arise.

There is a particular issue with respect to the incentive structure of state-owned or state-controlled banks, as their incentives may be ill defined if not hazardous. Such banks are not subject to the normal disciplining pressures of the market, their "owners" do not monitor their behavior, and there is no disciplining effect from the market in corporate control. Political interference in such banks and the unwitting encouragement of bad banking practices can itself become powerful ingredients in bank distress. Lindgren, Garcia, and Saal (1996) found, for instance, that banks that are, or were recently, state-owned or -controlled were a factor in most of the instances of unsoundness in their sample of banking crises.

Several adverse-incentive structures can be identified in many of the countries that have recently experienced distressed banking systems:

- The expectation that the government's commitment to the exchange value of the domestic currency was absolute induced imprudent and unhedged

foreign-currency borrowing both by banks (though these were sometimes hedged) and companies.
- Expectations of bailouts or support for industrial companies (which had at various times been in receipt of government support) meant that the bankruptcy threat was weak.
- This may also have affected foreign creditors.
- A strong belief in the role of the lender-of-last-resort led to expectations that banks would not be allowed to fail. The IMF notes that the perception of implicit guarantees was probably strengthened by the bailouts in the resolution of earlier banking crises in Thailand (1983 to 1987), Malaysia (1985 to 1988) and Indonesia (1994).
- The effect of close relationships between banks, the government, other official agencies and industrial corporations often meant that relationships (such as lending) that would normally be conducted at arm's length became intertwined in a complex structure of economic and financial linkages within sometimes opaque corporate structures. This also meant that corporate governance arrangements, both within banks and their borrowing customers, were often weak and ill defined.

3.5. Ineffective regulation

The many elements of weak regulation in the origin of banking crises in recent years aggravated the effect of the other dimensions to the distress:

- Capital-adequacy regulations were often either not in place or were not effectively enforced.
- Regulatory requirements for capital, while conforming to the letter of international agreements, were nevertheless set too low in relation to the nature of the risks in the economy and the risks being incurred by banks: capital-adequacy regulation often did not accurately reflect the banks' risk characteristics (BIS, 1998).
- The rules with respect to classification of loan quality and provisions were often too lenient and ill specified, with the result that provisions were insufficient to cover expected losses, and earnings and capital were overstated (Brownbridge and Kirkpatrick, 1999; Folkerts-Landau et al., 1995).
- Rules with respect to exposure to single borrowers were often too lax (or not enforced).
- Regulation and supervision with respect to concentrated exposures (such as property) were too lenient.
- Poor accounting standards enabled banks to evade prudential and other restrictions on insider lending (Rahman, 1998).
- Many governments and regulatory authorities were slow and hesitant to act in the face of impending solvency problems of banks. Such regulatory forbearance was often due to the fact that regulatory authorities had substantial

discretion as to when and whether to intervene and were often subject to political pressure of one kind or another.

3.6. Weak monitoring and supervision

As with all companies, banks need to be monitored. In addition to the standard principal-agent issues, banks are universally monitored and supervised by official agencies (such as central banks). In practice, "some form of supervisory failure was a factor in almost all the sample countries" (Lindgren, Garcia, and Saal, 1996, p. 312). In many countries, supervisory agencies did not enforce compliance with regulations (Reisen, 1998). In Korea and Indonesia, in particular, banks did not comply with regulatory capital-adequacy requirements and other regulations (UNCTAD, 1998). In particular, connected lending restrictions were not adequately supervised, partly because of political pressure and the lack of transparency in the accounts of banks and their corporate customers.

A further aspect of this supervisory failure was that supervisory intensity did not adjust in line with the liberalization of the financial system and the new business operations and risk characteristics of banks that emerged in a more deregulated market environment. This is discussed in more detail in the next section. This was also the case with Scandinavian countries when, in the second half the 1980s, banks responded aggressively to deregulation. The nature and intensity of official supervision needs to reflect the nature of the regulatory regime. In practice, while the latter changed, this was not accompanied by sufficiently intensified supervision.

3.7. Weak market discipline for banks

Monitoring is not conducted only by official agencies whose specialist task it is. In well-developed financial regimes, the market also monitors the behavior of financial firms. The disciplines imposed by the market can be as powerful as any sanctions imposed by official regulatory agencies. However, in practice, the disciplining role of the markets (including the interbank market, which in many jurisdictions is able to impose powerful discipline through the risk premium charged on interbank loans) was weak in the crisis countries of Southeast Asia. This was due predominantly to the lack of disclosure and transparency of banks and the fact that, for reasons already noted, little reliance could be placed on the quality of the accountancy data provided in bank accounts. In many cases standard accountancy and auditing procedures were not applied rigorously. In some cases there was willful misrepresentation of the financial position of banks and nonfinancial companies. Overall, market disciplines can work effectively only on the basis of full and accurate disclosure and transparency.

Effective competition in the banking system (and especially if this includes competition from foreign banks) can also impose its own discipline and instill good business practice. In general, a competitive banking system is essential

for long-term efficiency and soundness. Monopoly rents may engender inefficiency, most especially if the monopolies are state-owned or -controlled.

A further dimension relates to the potentially powerfully disciplining power of the market in corporate control, which, through the threat of removing control from incumbent managements, is a discipline on managers to be efficient and not endanger the solvency of their banks. As put in a recent IMF study: "An open and competitive banking market exerts its own form of discipline against weak banks while encouraging well-managed banks" (Lindgren, Garcia, and Saal, 1996, p. 312).

3.8. Unsound corporate governance arrangements

In the final analysis, all aspects of the management of a bank are corporate governance issues. This means that if banks behave hazardously this is, to some extent, a symptom of weak internal corporate governance. This may include, for instance, a hazardous corporate structure for the bank, lack of internal control systems, weak surveillance by (especially nonexecutive) directors, and ineffective internal audit arrangements. Corporate governance arrangements were evidently weak and underdeveloped in banks in many of the distress countries.

Some ownership structures of banks in the private sector can produce bad corporate governance. In some cases, particular corporate structures (for example, banks being part of larger conglomerates) encourage connected lending and weak risk analysis of borrowers. This has been found to be the case in a significant number of bank failures in the countries of Southeast Asia and Latin America. Some corporate structures also make it comparatively easy for banks to effectively conceal their losses and unsound financial positions.

3.9. Assessment

The central theme of this section has been that recent banking crises have been multidimensional and a complex mix of several interacting pressures and weaknesses. A myopic focus on particular causal components is likely to produce a distorted picture and also to produce inadequate policy and reform proposals. The experience of many countries has demonstrated the lethal cocktail of fundamental and structural weaknesses in the economy, hazardous incentive structures, weak and ineffective regulation, inadequate official supervision, and an inability or unwillingness of the market to impose discipline on banks. It follows that reform needs to proceed along several channels simultaneously, which in itself makes the reform process more demanding and challenging.

4. Liberalization: Stock adjustment versus steady state

Many financial crises have been associated with changes in the regulatory regime and a process of liberalization in particular. For decades, the economies

of Southeast Asia were highly regulated with interest-rate ceilings, limitations on lending growth by financial institutions, restrictions on foreign entry into the banking system, and so on. At various times during the 1990s, these restrictions were relaxed, and the pace of financial liberalization accelerated.

Williamson and Mahar (1998) show that almost all of their sample of 34 economies (both industrialized and developing) that undertook financial liberalization over the 1980s and 1990s experienced varying degrees of financial crisis. Similarly, Kaminsky and Reinhart (1998) found that in the majority in their sample of countries that had experienced banking crises, the financial sector had been liberalized during the period of five years. They conclude that financial liberalization helps predict banking crises across a range of countries. Goldstein and Folkerts-Landau (1993) observe a general pattern of deregulation inducing more competition to be followed by increasing financial fragility.

While in both developed and less developed countries banking distress has often followed periods of deregulation and liberalization, a distinction needs to be made between the *transitional* effect of moving from one regulatory regime to another and the characteristics of a *steady-state* liberalized financial system. The instabilities that may occur in the transition period do not necessarily carry over into the new steady state.

4.1. The transitional phase

The universal evidence is that financial liberalization enhances efficiency in the financial system and that financial repression distorts the incentives for saving and investment. However, financial liberalization often brings problems most especially in the transition period.

One effect of increased competition that results from liberalization is often to erode the economic rents of financial firms associated with the previously noncompetitive environment. This reduced profitability may induce financial institutions into taking more risk.

In the stock-adjustment phase (that is, during the period when the new regime is being introduced) uncertainty may be created as financial firms are unfamiliar with the requirements of the new regime. Previously protected institutions need to adapt behavior, though this may occur only with a considerable lag. New behavior patterns need to be learned. Some mistakes during the process of financial liberalization occur because banks do not adjust quickly enough to the new regime. Behavior that is appropriate under one regime may be totally inappropriate in another (see Benink and Llewellyn, 1994, for a more formal discussion).

In the first instance, liberalization may also increase inflationary pressure as balance-sheet restraints are lifted and financial firms increase their lending very rapidly in a relatively short period. This is often associated with a sharp rise in asset prices within a relatively short period. The implication is that financial liberalization needs to be accompanied by an appropriate stabilization

policy to reduce the potential impact on inflation, which can distort lending decisions.

In countries that have liberalized their financial systems after decades of controls, banks responded in a remarkably similar way by substantially increasing the volume of lending in a short period. As a result of increased competitive pressures, banks tend to lower *equilibrium* and *disequilibrium* credit rationing and risk thresholds (Llewellyn and Holmes, 1991), bank lending margins are squeezed, and bank profitability at first rises due to this expansion but later deteriorates sharply due to massive loan losses.

The rapid growth in lending during the stock-adjustment phase may also increase risk because banks' internal control systems are weak. This is compounded when banks adopt market-share strategies in a strongly expanding loans market.

In general, periods of substantial growth of bank lending are likely to involve banks moving into more risky business and adopting a higher risk profile (OECD, 1992). The removal of controls often unleashes a pent-up demand for credit, and suppliers of credit are freed to compete, which in some cases leads to a relaxation of standards (see also Schinasi and Hargreaves, 1993). There are many reasons why risks might rise in a period of a sharp growth in lending following a period of deregulation: economic rents created by regulation are suddenly removed, more risky business appears to be profitable, and credit rationing is eroded. The same competitive pressures may also make it difficult, in the short-run, for banks to incorporate higher risk premia in loan rates, with the results that bank loans are underpriced.

The initial stock-adjustment reaction often involves a phase of overreaction by lenders as balance-sheet structures are taken beyond long-run sustainable positions. There are several reasons for this: reactions times in financial markets are short, adjustments can be made quickly, and the financial system is characterized by oligopolistic competition. As a result, competitive pressures seem to force firms to move together—sometimes described as a herd instinct. Some analysts have ascribed it to a property of the incentive structure within banks in that, in a world of uncertainty, the desire to avoid personal blame for mismanagement is liable to make risk-averse bank managers subject to peer-group pressure to follow the same policy.

The rise in interest rates that often follows the process of liberalization leads to an erosion of credit rationing and interest-rate ceilings imposed by financial firms. This in itself may both increase risk and reduce the profitability of banks.

Liberalization may also reveal inherent weaknesses in the banking system both with respect to structure and the traditional way of conducting business.

If supervision is not intensified at the same time as the financial system is liberalized, the financial system may become crisis prone. In liberalizing their financial systems, the countries of Southeast Asia ignored the risks posed by rapid liberalization, which is not accompanied by significant strengthening of

regulation and supervision of bank behavior (Furman and Stiglitz, 1998). In this, they followed the earlier experience of the Scandinavian countries (Benink and Llewellyn, 1994). Bisignano (1998) suggests that it represented a combination of "excess momentum" by the private sector and "excess inertia" by the regulatory authorities. Put another way, there is a tradeoff between regulation and supervision in that if regulation is eased to allow banks to conduct more business, there is an increased requirement for effective supervision of the way that business is conducted. There are many examples, in both developing and developed countries, where liberalization was not accompanied by more intensive supervision.

However, many of these problems are ones of transition. A distinction needs to be made between what happens during a *stock-adjustment* phase of liberalization and the characteristics of a *steady-state*, deregulated financial system. The evidence powerfully indicates that a liberalized financial system is more efficient and contributes more substantially to economic development. However, when moving from one regime to another (especially from a highly controlled financial system to a more market-oriented system) instability may be created as new behavior patterns need to be learned. The fact that instability may occur during the transitional, stock-adjustment period does not mean that a deregulated financial system is inherently unstable or even less stable than a regulated regime. Many of the financial crises experienced in recent years have been associated with the uncertainties and mistakes during the *transitional* phase during which liberalization measures were adopted. The crisis is often a function of the uncertainty associated with regime changes (as the system moves from one regime to another) rather than the inherent characteristics of the new regime *per se*. A deregulated system is not to be discredited because of the problems sometimes associated with moving toward it.

The policy implication is that care is needed in the process of liberalization and that supervision of financial institutions needs to move in pace with liberalization. Deregulation without enhanced supervision is likely to be hazardous irrespective of the long-run benefits of liberalization and the erosion of financial repression. Liberalization is often not accompanied by necessary changes in regulation and supervision, corporate governance reforms, and enhanced market monitoring and control.

4.2. The steady state

However, there is an argument that while some of the financial distress is associated with the transition from one regime to another, a more competitive market environment is potentially more risky than an uncompetitive market structure. This is because the value of the banking franchise is reduced by competition. The more valuable the franchise, the less likely are owners to risk losing it. Keeley (1990), for example, analyzes how deregulation and increased competition can induce banks to behave with less regard to risk because it lowers

the value of the banking franchise. Similar conclusions are found in Caprio and Summers (1993) and Demsetz, Saidenberg, and Strahan (1997). Using data to proxy bank franchise values, Hellman, Murdock, and Stiglitz (1995) examine the relationship between bank franchise values and financial-market Liberalization as a test of the argument that moral hazard increases as banks' franchise values fall. Their results confirm that banking crises are more likely to occur in countries with a liberalized financial sector and that franchise values tend to be lower when financial markets are liberalized.

In many previous cases, highly regulated regimes acted as a protection to financial institutions by effectively limiting competition. The extent of the economic rents that were created in this regime were probably underestimated by the regulatory authorities. In many cases, they underestimated the extent to which deregulation and liberalization would increase competition in the banking industry even though that was one of the public-policy objectives. These errors inhibited appropriate responses in the areas of prudential regulation and monitoring and supervision.

5. Robust financial system

Given this experience it is instructive to consider the basic characteristics of a robust financial system—that is, one that satisfies the test of markets. Basically, robustness refers to the ability of the financial system to remain stable and efficient under a wide range of market conditions and shocks. We may identify three particular elements in this: *flexibility* (the ability of the financial system to operate in all circumstances and to change the way it operates as market conditions alter), *resilience* (the ability to continue to function in the face of external shocks including instability in the macroeconomy), and *internally stable* (the ability of the financial system not to generate its own shocks or magnify shocks in the macroeconomy).

Regulation can contribute toward a robust financial system through six main routes: by prescribing risk-taking activity and establishing certain basic prudential standards (such as minimum capital-adequacy requirements), by affecting inventive structures and limiting moral hazard within the financial system, by requiring a high degree of information disclosure and transparency, by establishing a robust basic financial infrastructure, by setting corporate governance standards and structures, and by monitoring and supervising financial institutions. These are discussed in some detail in later sections.

5.1. The infrastructure

A central prerequisite for a robust financial system is to create an institutional setting and financial infrastructure for sound credit culture and effective market functioning. This includes aspects such as legal arrangements, information

disclosure and availability, and the basic tools of sound accountancy and auditing. Several particular elements are identified:

- A strong legal framework to ensure that property rights are well defined and easily and reasonably costlessly exercisable (this implies creating a legal environment where the terms and conditions of contracts are observed and the rights and obligations of all agents involved in loans or transactions in financial assets are well-defined, understood, and enforceable without undue delay or cost);
- A legal framework for the pledging of collateral and the ability to take possession of collateral (without these conditions moral hazard and adverse incentives are created with bank borrowers);
- Clearly defined bankruptcy laws and codes, along with effective enforcement mechanisms;
- Good-quality, timely, and relevant information disclosure available to all market participants and regulators so that asset quality, creditworthiness, and the condition of financial institutions can be assessed (this includes timely publication of relevant financial data on the soundness of financial institutions and the adoption of comprehensive and well-defined accounting principles that conform to agreed international standards);
- Effective rating agencies operating independently of government authorities;
- Robust payment, settlement, and custody arrangements and systems; and
- A wide variety of financial instruments (including derivatives) and markets that can assist financial institutions in the management of risks.

These considerations relate to the basic infrastructure of a financial system, and many require public-policy initiatives by public agencies with responsibility for systemic stability. Lindgren, Garcia, and Saal (1996) found that an inadequate legal framework was a common characteristic in the sample of developing and transition economies that had experienced banking crises.

6. The regulatory regime

Having discussed some of the common origins of banking distress, we turn now to consider a set of principles to reduce the future probability of crises. In the final analysis, regulation is about changing the behavior of regulated institutions. One of the key questions is the extent to which behavior is to be altered by externally imposed *rules* or through creating *incentives* for firms to behave in a particular way. The arguments against reliance on detailed and prescriptive rules are outlined in Goodhart et al. (1998). Regulation can be endogenous within the financial firm as well as exogenous. A major issue, therefore, is whether regulation should proceed through externally imposed, prescriptive, and detailed rules or by the regulator creating incentives for appropriate behavior.

Financial systems are changing substantially to an extent that may undermine traditional approaches to regulation and most especially the balance between regulation and supervision and the role of market discipline. In particular, globalization, the pace of financial innovation and the creation of new financial instruments, the blurring of traditional distinctions between different types of financial firm, the speed with which portfolios can change through banks trading in derivatives and other products, and the increased complexity of banking business all create a fundamentally new—in particular, more competitive—environment in which regulation and supervision are undertaken. They also change the viability of different approaches to regulation, which, if it is to be effective, must constantly respond to changes in the market environment in which regulated firms operate.

A robust financial system requires three particular properties: (1) proper decision making and control within financial institutions with effective risk analysis, management, and control systems; (2) an efficient regulatory and supervisory regime for financial institutions; and (3) sound incentive structures for all parties, including regulators. These three dominant themes may, on the face of it, seem fairly obvious. However, when the detailed implications are considered, they are not so obvious. Some of the measures designed to achieve what is required are difficult to implement, and the transactions costs of change can be substantial.

A sustained theme in this article is that a regulatory regime is to be viewed more widely than externally imposed regulation on financial institutions. Regulation is only one of six key components: regulation, incentive structures, monitoring and supervision (private and official), intervention and sanctions, market discipline, and corporate governance. Under current conditions (such as globalization) it would be a mistake to rely wholly, or even predominantly, on external regulation, monitoring, and supervision by the "official sector" of the regulatory regime. The world of banking and finance is too complex and volatile to be able to rely on a simple set of prescriptive rules for prudent behavior.

The key to optimizing the effectiveness of a regulatory regime is the portfolio mix of the six core components. All are necessary, but none alone is sufficient. Particular emphasis is given to incentive structures because, in the final analysis, if these are perverse or inefficient, no amount of formal regulation will prevent problems emerging in the banking sector. In practice, there needs to be a switch in emphasis from prescriptive regulation to creating appropriate incentive structures.

Having established the general framework of the "regulatory regime," the following sections outline a set of general principles designed to reduce the probability of banking distress. They are focused on each of the six core components: regulation, incentive structures, monitoring and supervision, official intervention in the event of bank distress, the role of market disciple, and corporate governance arrangements.

6.1. Regulation

Goodhart et al. (1998) argue that there is always an inherent danger of overregulation because consumers perceive regulation to be a costless activity (and hence is overdemanded) and regulatory agencies tend to be risk averse (which means that regulation may be oversupplied). The case for regulation of banks depends on various market imperfections and failures (especially externalities and asymmetric information), which, in the absence of regulation, produce suboptimal results and reduce consumer welfare. In other words, the objective of regulation should be limited to correcting identified market imperfections and failures. Six main principles are suggested.

6.1.1. The objectives of regulation need to be clearly defined and circumscribed. Financial regulation should have only a limited number of objectives. In the final analysis the objectives are to sustain systemic stability and to protect the consumer. Regulation should not be overloaded by being required to achieve other and wider objectives, such as social outcomes. Constructing effective and efficient regulation is difficult enough with limited objectives, and the more it is overburdened by wider considerations, the more likely it is to fail in all of them.

6.1.2. The rationale of regulation and supervision should be limited. The rationale for regulation lies in correcting for identified market imperfections and failures, incorporating externalities, achieving economies of scale in monitoring, breaking gridlock, and limiting the moral hazard associated with safety nets (see Llewellyn, 1999). Regulation, in general, and regulatory measures, in particular, need to be assessed according to these criteria. If they do not satisfy any of these criteria, particular regulatory measures should be abandoned.

6.1.3. Regulation should be seen in terms of a set of contracts. Laws, regulations, and supervisory actions provide incentives for regulated firms to adjust their actions and behavior and to control their own risks internally. They can usefully be viewed as *incentive contracts* within a standard principal-agent relationship where the principal is the regulator and the agent is the regulated firm. Within this general framework, regulation involves a process of creating incentive-compatible contracts so that regulated firms have an incentive to behave in a way consistent with the objectives of systemic stability and investor protection. Similarly, there need to be incentives for the regulator to set appropriate objectives, to adopt well-designed rules, not to overregulate, and to act in a timely fashion (for instance, in the face of pressure for forbearance). If incentive contracts are well designed, they will induce appropriate behavior by regulated firms. Conversely, if they are badly constructed and improperly designed, they might fail to reduce systemic risk (and other hazards that regulation is designed to avoid) or have undesirable side effects on the process of financial intermediation (such as imposing high costs). At center stage is the

issue of whether all parties have the right incentives to act in a way that satisfies the objectives of regulation.

6.1.4. The form and intensity of regulatory and supervisory requirements should differentiate between regulated institutions according to their relative portfolio risk and efficiency of internal control mechanisms. While the objective of competitive neutrality in regulation is something of a mantra, this is not satisfied if unequal institutions are treated equally. In this respect, equality relates to the risk characteristics of institutions. It might be argued that to maintain competitive neutrality two banks with different risk characteristics and quality of risk-management systems should be treated equally because they are both banks and in competition with each other. However, in terms of satisfying the objectives of regulation, a suboptimum outcome will emerge if they are subject to the same regulatory requirements. One of the hazards of a detailed and prescriptive rule-book approach is that it may fail to make the necessary distinctions between nonhomogeneous firms because the same rules are applied to all; it reduces the scope for legitimate differentiations to be made. The adoption of an internal model's approach, such has been introduced by the Group of 10 (G-10) countries (the governments of nine IMF countries—Belgium, Canada, France, Italy, Japan, the Netherlands, Switzerland, the United Kingdom, and the United States—and the central banks of two others, Germany and Sweden) after the Market Risk Amendment of the Basle accord, recognizes this point. Other considerations that should govern the setting of minimum capital-adequacy requirements for individual banks include the quality of management; the quality, reliability, and volatility of the bank's earnings; and the bank's liability and liquidity profile.

6.1.5. In some areas the regulator could offer a menu of contracts to regulated firms requiring them to self-select into the correct category. There is an information, and possibly efficiency, loss if a high degree of conformity in the behavior of regulated firms is enforced. If, alternatively, firms have a choice about how to satisfy the regulator's stated objectives and principles, they would be able to choose their own, least-cost, way of satisfying these objectives. The regulator could offer a menu of self-selecting contracts rather than the same one to all institutions. Equally, banks could offer their own contracts. An example of this approach is the variable add-on in the *multiplication factor* of the Basle internal models approach. Since this add-on varies with the performance of a value-at-risk (VaR) Model during back-testing procedures, a bank has the choice between using a simple (less precise) model with a higher capital requirement for market risk or incurring costs in developing a better model and benefit from a lower capital requirement. However, empirical tests of VaR Models show that the fixed part of 3 in the Basle multiplication factor is already so high that there is little incentive to use the best models because of the relatively small variable add-on (between 0 and 1). Our suggestion, therefore, is to lower the fixed part of the multiplication factor and to increase the variable part.

Another approach that could be adopted for more qualitative measures of internal control and risk-management quality is risk-related examination schedules. Here, financial institutions can be given a risk rating (say, between 0 and 10) on the basis of a series of internal control indicators. The higher the rating, the greater the perceived overall risk and the more frequent and intrusive would be on-site examinations. A more far-reaching proposal is the precommitment approach, which gives a bank the possibility to preannounce a maximum trading loss and incur regulatory penalties or other incentives in proportion to the extent to which preannounced maximum losses are exceeded (this is discussed below).

6.1.6. Capital regulation should create incentives for the correct pricing of absolute and relative risk. If differential capital requirements are set against different types of assets (for example, through applying differential risk weights), the rules should be based on actuarial calculations of relative risk. If risk weights are incorrectly specified, perverse incentives can be created for banks because the implied capital requirements are more or less than justified by true relative-risk calculations. A major critique of the current Basle capital requirements is that the risk weights bear little relation to relative-risk characteristics of different assets and that the loan book carries a uniform risk weight even though the risk characteristics of different loans within a bank's portfolio vary considerably.

6.2. Incentive structure

Emphasis has been given to the central importance of incentives within banks and the role that regulation can have in positively creating appropriate incentives. As banking crises frequently occur when there are weak incentives to act prudently, a necessary ingredient of a robust and stable financial system is the creation of appropriate and efficient incentives and disciplining mechanisms for all market participants and most especially bank owners, bank managers, and financial system supervisors. These are now briefly considered.

6.2.1. There should be appropriate incentives for bank owners. Bank owners play an important role in the monitoring of bank management and their risk taking. In the final analysis, bank owners absorb the risks of the bank. There are several ways in which appropriate incentives for bank owners can be developed:

- One route is to ensure that banks have appropriate levels of equity capital. Capital serves three main roles as far as incentive structures are concerned: a commitment of the owners to supply risk resources to the business (which they can lose in the event that the bank makes bad loans), an internal insurance fund, and the avoidance of the bank becoming the captive

of its bad debtors. In general, the higher is the capital ratio, the more the owners have to lose, and hence the greater the incentive for them to monitor the behaviour of managers. Low capital creates a moral hazard in that, given the small amount owners have to lose, the more likely they are to condone excessive risk-taking in a gamble-for-resurrection strategy. This was evidently the case at times during the savings and loan crisis in the United States.

- Corporate governance arrangements should be such that equity holders actively supervise managers.
- Supervisors and safety-net agencies should ensure that owners lose out in any restructuring operations in the event of failure. Failure to penalize shareholders in the restructuring of unsuccessful banks has been a major shortcoming in some rescue operations in Latin America.
- In some countries (such as New Zealand) the incentive on owners has been strengthened by experimenting with a policy of increased personal liability for bank directors.

6.2.2. There should be appropriate internal incentives for management. The right incentive structures for the managers of financial institutions are equally as important as those for the owners. In fact, the two should be seen in combination. In the final analysis, all aspects of the behavior of a firm are corporate governance issues. Several procedures, processes, and structures can reinforce internal risk-control mechanisms. These include internal auditors, internal audit committees, procedures for reporting to senior management (and perhaps to the supervisors), and making a named board member responsible for compliance and risk-analysis and management systems. Supervisors can strengthen the incentives for these by, for instance, relating the frequency and intensity of their supervision and inspection visits (and possibly rules) to the perceived adequacy of the internal risk-control procedures and compliance arrangements. In addition, regulators can create appropriate incentives by calibrating the external burden of regulation (such as number of inspection visits and allowable business) to the quality of management and the efficiency of internal incentives.

Specific measures have been designed to create correct incentive structures:

- Strong and effective risk-analysis, management, and control systems should be in place in all financial institutions for assessing risks *ex ante* and asset values *ex post*. Systems and incentives are required for timely and accurate provisioning against bad or doubtful debts. In the final analysis, most bank failures are ultimately due to weaknesses in this area. Regulatory agencies have a powerful role in promoting and insisting on effective systems of internal management and risk control in financial institutions by strict accountability of owners, directors, and senior management.
- Managers should also lose if the bank fails. This requires a high degree of professionalism in bank managers and decision makers and penalties

(including dismissal) for incompetence among bank managers. Remuneration packages may be related to regulatory compliance

- Subject to prudential standards being maintained, proper incentives can be created by the fostering of competition in the financial sector. This can be achieved, for instance, by removing restrictions on business activity, allowing the entry of foreign banks and other financial institutions, and forcing the abandoning of restrictive practices, cartels, and other anticompetitive mechanisms.
- Mechanisms need to be in place to ensure that loan valuation, asset classification, loan concentrations, interconnected lending, and risk-assessment practices reflect sound and accurate assessments of claims and counterparties. This also requires mechanisms for the independent verification of financial statements and compliance with the principles of sound practice through professional external auditing and on-site inspection by supervisory agencies.
- Ownership structures need to foster shareholder monitoring and oversight. This includes private ownership of banks to strengthen the monitoring of management performance and to reduce distortions in incentives for managers.
- Large banks need to be required to establish internal audit committees.

The key is that appropriate internal incentives need to be developed for management to behave in appropriate ways and that the regulator has a role in ensuring that internal incentives are compatible with the objectives of regulation. Combining appropriate incentives for owners and managers contributes to a robust financial system, and, in principle, the market would evolve such incentives. However, experience indicates that, in many areas, and most especially when the competitive environment is changing and the regulatory regime is being adjusted, it is hazardous to rely on the market evolving appropriate incentives.

6.3. Monitoring and supervision

Because of the nature of financial contracts between financial firms and their customers (for example, many are long-term in nature and involve a fiduciary obligation), there is a need for continuous monitoring of the behavior of all financial firms. Because most (especially retail) customers are not, in practice, able to undertake such monitoring and because there are substantial economies of scale in such activity, an important role of regulatory agencies is to monitor the behavior of financial firms on behalf of customers. In effect, consumers delegate the task of monitoring to a dedicated agency.

The key issue is who is to undertake the monitoring. Several parties can potentially monitor the management of banks: bank owners, bank depositors, rating agencies, official agencies (such as the central bank or other regulatory

body), and other banks in the market. In general, excessive emphasis has been given to official agencies. There may even be an adverse incentive effect in that, given that regulatory agencies conduct monitoring and supervision on a delegated basis, this may reduce the incentive for others to conduct efficient monitoring. The role of other potential monitors (and notably the market) needs to be strengthened in many, including well-developed, financial systems. This in turn requires adequate information disclosure and transparency in banking operations. There need to be greater incentives for other parties to monitor banks in parallel with official agencies. A major advantage of having agents other than official supervisory bodies to monitor banks is that it removes the inherent danger of having monitoring and supervision being conducted by a monopolist with less than perfect and complete information with the result that inevitably mistakes will be made. Two principles related to official monitoring and supervision are suggested.

6.3.1. Official agencies need to have sufficient powers and independence to conduct effective monitoring and supervision. This means that they need to be independent of political authorities and able to license, refuse to license, and withdraw licenses from banks. They need to have the authority and ability to monitor the full range of banks' activities and business and be able to monitor and assess banks' systems for risk analysis and control. Because of the moral hazard created in some bank structures, the agency needs to have power to establish rules on ownership and corporate structure of banks and to be able to establish minimum requirements for the competency and integrity of bank management.

6.3.2. Less emphasis should be placed on detailed and prescriptive rules and more on internal risk-analysis, -management, and -control systems. Externally imposed regulation in the form of prescriptive and detailed rules is becoming increasingly inappropriate and ineffective. More reliance should be placed on institutions' own internal risk-analysis, management, and control systems. This relates not only to quantitative techniques such as value-at-risk (VaR) Models but also to the management culture of those who handle models and supervise traders. There should be a shift of emphasis toward monitoring risk-control mechanisms and a recasting of the nature and functions of external regulation away from generalized rule-setting and toward establishing incentives and sanctions to reinforce such internal control systems. The recently issued consultative document by the Basle Committee on Banking Supervision (Basle Committee, 1999, p. 41) explicitly recognizes that a major role of the supervisory process is to monitor banks' own internal capital-management processes and "the setting of targets for capital that are commensurate with the bank's particular risk profile and control environment. This process would be subject to supervisory review and intervention, where appropriate."

6.4. Intervention

Regulation and supervision sometimes fail, at times to a degree that requires official intervention to maintain systemic stability. The way such intervention is made has signaling and incentive effects for the future behavior of financial institutions. The conditions under which intervention is made, the manner of intervention, and its timing may, therefore, have powerful moral-hazard effects.

Care is evidently needed when devising bank restructuring policies. There also need to be appropriate incentives for intervention agencies. Several principles can be established to guide the timing and form of intervention.

6.4.1. The design and application of safety-net arrangements (lender of last resort and deposit insurance) should create incentives for stakeholders to exercise oversight and to act prudently to reduce the probability of recourse being made to public funds. It is well 0 established that, depending on how deposit insurance schemes are constructed (especially with respect to which deposits are insured and the extent of any coinsurance), serious moral hazard can be created: depositors may be induced to act with less care, under some circumstances they may be induced to seek risky banks on the grounds that a one-way-bet is involved, insured institutions may be induced to take more risk because they are not required to pay the full risk premium on insured deposits, risk is therefore subsidised, banks may be induced to hold less capital, and the cost of deposit protection is passed to others who have no say in the risk-taking activity of the insured bank.

6.4.2. The extent and coverage of deposit insurance schemes should be strictly limited. Maintaining the integrity of the banking system requires that some bank liability holders are to be protected from the consequences of bank failure. But this should be limited because such protection may create adverse incentives. In particular, and in order to avoid the potential moral hazards emerging, coverage should be explicit (rather than assumed) and restricted to comparatively small deposits and there should always be an element of coinsurance to the extent that less than 100 percent of any deposit is insured. There should be a clear and public commitment to the limits imposed.

6.4.3. There needs to be a well-defined strategy for responding to the possible insolvency of financial institutions. A response strategy in the event of bank distress has several possible components:

- Being prepared to close insolvent financial institutions;
- Taking prompt corrective action to address financial problems before they reach critical proportions;
- Closing unviable institutions promptly, and vigorously monitoring weak and/or restructured institutions;

- Undertaking a timely assessment of the full scope of financial insolvency and the fiscal cost of resolving the problem.

6.4.4. There should be a clear bias (though not a bar) against forbearance when a bank is in difficulty. Regulatory authorities need to build a reputation for tough supervision and, when necessary, decisive action in cases of financial distress. Supervisory authorities may, from time to time, face substantial political pressure to delay action in closing hazardous financial institutions. They may also be induced to "gamble for resurrection" by allowing an insolvent (or near-insolvent) institution to make an attempt to trade out of its difficulty. There are additional dangers of regulatory capture and risk-averse regulators that simply delay intervention to avoid blame. The need to maintain credibility creates a strong bias against forbearance, and a large number of cases of unsuccessful forbearance reinforces this conclusion. However, there are circumstances where this general presumption is appropriately overridden.

6.4.5. Time-inconsistency and credibility problems should be addressed through precommitments and graduated responses with the possibility of overrides. There is an active debate about rules versus discretion with respect to intervention in the case of distressed or insolvent banks: to what extent should intervention be circumscribed by clearly defined rules (so that intervention agencies have no discretion about whether, how, and when to act), or should there always be discretion simply because relevant circumstances cannot be set out in advance? The danger of discretion is that it increases the probability of forbearance. A rules-based approach, by removing any prospect that a hazardous bank might be treated leniently, also has the advantage that it enhances the incentives for bank managers to manage their banks prudently so as to reduce the probability of insolvency (Glaessner and Mas, 1995). It also enhances the credibility of the regulator's threat to close institutions.

Many analysts have advocated various forms of predetermined intervention though a general policy of structured early intervention and resolution (SEIR). Goldstein and Turner (1996) argue that SEIR is designed to imitate the remedial action that private bond holders would impose on banks in the absence of government insurance or guarantees. In this sense it is a mimic of market solutions to troubled banks. An example of the rules-based approach is to be found in the Prompt Corrective Action (PCA) rules in the United States. These specify graduated intervention by the regulators with predetermined responses triggered by capital thresholds.

A major issue for the credibility, and hence authority, of a regulator is whether rules and decisions are time-consistent. There may be circumstances where a rule or normal policy action needs to be suspended. The priors are that there is a strong case for precommitment and rules of behavior for the regulator. There is also a case for a graduated-response approach since, for example, there is no magical capital ratio below which an institution is in danger and above which it is safe. Other things being equal, potential danger gradually increases as the capital ratio declines. This in itself suggests that there should be a graduated

series of responses from the regulator as capital diminishes. No single dividing line should trigger action, but there should be a series of such trigger points with the effect of going through any one of them relatively minor, but the cumulative effect large. No distinction in these graduated responses should be made between losses caused by idiosyncratic or general market developments.

Under a related concept (the "precommitment approach" to bank supervision) banks own assessments of their capital needs (as determined by their own internal risk models) are used as the basis of supervision. At the beginning of each period the bank evaluates its need for capital, and the bank is subsequently required to manage its risks so that its capital does not fall below the precommitment level. Penalties are imposed to the extent that capital falls below the declared levels. There should also be a decision as to what market movements are so extreme as to merit government support to withstand them. Banks would be required to hold capital to meet shocks up to this limit in stress tests of proprietary models.

However, even in a precommitment and graduated response regime there may be cases where predetermined rules are to be overridden. The problem, however, is that if this is publicly known, the credibility of the regulator could be seriously compromised bearing in mind that it is to create and sustain such credibility that the precommitment rule is established in the first place. Can there be any guarantee that such an override would not turn regulation into a totally ad hoc procedure? One solution is to make the intervention agency publicly accountable for its actions and decisions not to intervene.

6.4.6. Intervention authorities need to ensure that parties that have benefited from risk taking bear a large proportion of the cost of restructuring the banking system. This implies, for example, that shareholders should be the first to lose their investment along with large holders of long-term liabilities such as subordinated debt. Also, delinquent borrowers must not be given favorable treatment at public expense.

6.4.7. Prompt action should be taken to prevent problem institutions from extending credit to high-risk borrowers or from capitalizing unpaid interest on delinquent loans into new credit. Execution of this principle is designed to reduce the moral-hazard risk in bank restructurings that arises when institutions with low and declining net worth continue to operate under the protection of public policies designed to maintain the integrity of the banking system. This implies that, when practicable, insolvent institutions should be removed from the hands of current owners, whether through sale, temporary nationalization, or closure.

6.4.8. Society must create the political will to make restructuring a priority in allocating public funds while avoiding sharp increases in inflation. Use of public funds in rescue operations should be kept to a minimum and, whenever used, be subject to strict conditionally. This follows from previous principles in that their execution requires adequate funding to pay off

some liability holders with negative net worth. Attempts should always be made to recover public funds over a period of time (by, for instance, asset sales from resolution trusts).

6.4.9. Barriers to market recapitalization should be minimized. A particular barrier that is often encountered relates to the market in corporate control. Governments or regulatory agencies frequently have rules regarding the ownership of banks and the extent to which banks can be taken over through the market in corporate control. There are often particular limitations on the extent to which foreign banks can purchase domestic banks. And yet these are often solutions for an insolvent bank that can be effectively recapitalized by being purchased by a stronger domestic or foreign bank.

6.4.10. Regulators should be publicly accountable through credible mechanisms. Regulatory agencies have considerable power over both regulated firms and the consumer through their influence on the terms on which business is conducted. For this reason agencies need to be accountable and their activities transparent. In addition, public accountability can also be a protection against political interference in the decisions of the regulatory agency and is also likely to create incentives against forbearance. Difficulties can arise when it may be prudent for a central bank's success in averting a bank failure or systemic crisis to remain secret. One possible approach is create an audit agency of the regulator with the regulator being required to report on a regular basis to an independent person or body. The report would cover the objectives of the regulator and the measures of success and failure. The audit authority would have a degree of standing that would force the regulatory agency to respond to any concerns raised. In due course, the reports of the regulator to the agency would be published.

6.4.11. Assessment. In the process of restructuring following a financial crisis, financial-market functioning needs to be restored as quickly as possible while minimizing market disruption. Balance-sheet assets of weak institutions need to be restructured and placed on a sound footing. This should be designed to ameliorate the moral hazard that weak banks become the captive of their bad customers and, in the process, bad loans drive out good loans. In addition, the management and recovery of loans should be separated from the ongoing activity of banks so that a proper focus can be given to the efficient management of the continuing activity of banks.

Lessons can be learned about how to respond to crises when they emerge. The experience of Mexico, for example, demonstrates how a serious banking crisis can be managed and the banks restored to viability. The experience is instructive as an object lesson in how, if appropriate measures are taken, a banking crisis can be transformed. Several policy measures were adopted both to restore the banking system and to prevent (or lessen the probability of) similar crises occurring again:

- Foreign competition in banking was encouraged. There was subsequently a major influx of foreign banks and foreign capital into the banking sector associated with the privatization of banks and the relaxation of entry barriers. As a result, foreign ownership of banks in Mexico now exceeds 20 percent.
- Consolidation of the banking system was supported and encouraged.
- Regulation and supervision was tightened and made more explicit.
- Accountancy and disclosure standards and requirements were tightened.
- Links between bankers and politics were broken.

When a banking crisis emerges, policy strategy has to be able to reconstitute the banking system (including recapitalizing banks) and apply measures designed to significantly lower the probability of a crisis reemerging.

6.5. Market discipline

Within the general framework of monitoring a major dimension is the extent to which the market undertakes monitoring and imposes discipline on the risk taking of banks. A central theme of this article is that, given how the business of banking has evolved and the nature of the market environment in which banks now operate, less reliance should be placed on supervision by official agencies and a greater role should be played by the market. Market disciplines need to be strengthened. The issue is not so much about market versus agency discipline but the mix of all aspects of monitoring, supervision, and discipline.

In its recent consultation document on capital adequacy the Basle Committee has recognized that supervisors have a strong interest in facilitating effective market discipline as a lever to strengthen the safety and soundness of the banking system. It goes on to argue: "market discipline has the potential to reinforce capital regulation and other supervisory efforts to promote safety and soundness in banks and financial systems. Market discipline imposes strong incentives on banks to conduct their business in a safe, sound and efficient manner" (Basle Committee, 1999, p. 42).

Some analysts (e.g., Calomiris, 1997) are skeptical about the power of official supervisory agencies to identify the risk characteristics of banks compared with the power and incentives of markets. Along with others, Calomiris has advocated that banks be required to issue a minimum amount of subordinated and uninsured debt as part of the capital base. Subordinated debt holders would have an incentive to monitor the risk taking of banks. Discipline would be applied by the market as the markets' assessment of risk would be reflected in the risk premium in the price of the traded debt. In particular, because of the nature of the debt contract, holders of a bank's subordinated debt capital do not share in the potential upside gain through the bank's risk taking but stand to lose if the bank fails. They therefore have a particular incentive to monitor the risk profile of the bank compared with shareholders who, under some circumstances, have an incentive to support a high-risk profile.

The merit of increasing the role of market disciplines is that large, well-informed creditors (including other banks) have the resources, expertise, market knowledge, and incentives to conduct monitoring and to impose market discipline. For instance, it has been argued that the hazardous state of BCCI was reflected in market prices and interbank interest rates long before the Bank of England closed the bank.

6.5.1. Regulation should not impede competition but should enhance it and, by addressing information asymmetries, make it more effective in the market place. However well-intentioned, regulation has the potential to compromise competition and to condone (and in some cases endorse) unwarranted entry barriers, restrictive practices, and other anticompetitive mechanisms. Historically, regulation in finance has often been anticompetitive in nature. But this is not an inherent property of regulation. As there are clear consumer benefits and efficiency gains to be secured through competition, regulation should not be constructed in a way that impairs it. Regulation and competition need not be in conflict: on the contrary, properly constructed they are complementary. Regulation can, therefore, enhance competition. It can also make it more effective in the market place by, for instance, requiring the disclosure of relevant information that can be used by consumers in making informed choices.

Discipline can also be exerted by competition. Opening domestic financial markets to external competition can contribute to the promotion of market discipline. There are many benefits to be derived from foreign institutions entering a country. They bring expertise and experience, and because they themselves are diversified throughout the world, what is a macro shock to a particular country becomes a regional shock, and hence they are more able to sustain purely national shocks that domestic institutions are unable to do. It is generally the case that competition that develops from outside a system tends to have a greater impact on competition and efficiency than purely internal competition. Foreign institutions tend to be less subject to domestic political pressures in the conduct of their business and are also less susceptible to local euphoria, which, at times, leads to excessive lending and overoptimistic expectations.

6.5.2. Regulation should reinforce, not replace, market discipline, and the regulatory regime should be structured to provide greater incentives than exist at present for markets to monitor banks. Where possible, market disciplines (such as through disclosure) should be strengthened. This means creating incentives for private markets to reward good performance and penalize hazardous behavior. Regulation and supervision should complement and support, and never undermine, the operation of market discipline.

6.5.3. Regulators should, whenever possible, utilize market data in their supervisory procedures. The evidence indicates that markets can give signals about the credit standing of financial firms, which, when combined with

inside information gained by supervisory procedures, can increase the efficiency of the supervisory process. If financial markets are able to assess a bank's market value as reflected in the market price, an asset-pricing model can in principle be used to infer the risk of insolvency that the market has assigned to each bank. Such a model has been applied to U.K. banks by Hall and Miles (1990). Similar analysis for countries that had recently liberalized their financial systems has been applied by Fischer and Gueyie (1995). On the other hand, there are clear limitations to such an approach (see Simons and Cross, 1991), and hence it would be hazardous to rely exclusively on it. For instance, it assumes that markets have sufficient data on which to make an accurate assessment of the risk profile of banks, and it equally assumes that the market is able to efficiently assess the available information and incorporate this into an efficient pricing of banks' securities.

6.5.4. There should be a significant role for rating agencies in the supervisory process. Rating agencies have considerable resources and expertise in monitoring banks and making assessments of risk. It could be made a requirement, as in Argentina, for all banks to have a rating, which would be made public.

6.5.5. Assessment. While market discipline is potentially very powerful, it has its limitations. This means that, in practice, it is unlikely to be an effective *alternative* to the role of official regulatory and supervisory agencies:

- Markets are concerned with the private cost of a bank failure and reflect the risk of this in market prices. The social cost of bank failures, on the other hand, may exceed the private cost (Llewellyn, 1999), and hence the total cost of a bank failure may not be fully reflected in market prices.
- Market disciplines are not effective at monitoring and disciplining public-sector banks.
- In many countries, limits are imposed on the extent to which the market in corporate control (the takeover market) is allowed to operate. In particular, there are frequently limits, if not bars, on the extent to which foreign institutions are able to take control of banks, even though they may offer a solution to undercapitalized banks.
- The market is able to efficiently price bank securities and interbank loans only to the extent that relevant information is available. Disclosure requirements are, therefore, an integral part of the market disciplining process.
- It is not self-evident that market participants always have the necessary expertise to make risk assessment of complex, and sometimes opaque, banks.
- In some countries, the market in debt of all kinds (including securities and debt issued by banks) is limited, inefficient, and cartelized.
- When debt issues are very small, it is not always economic for a rating agency to conduct a full credit rating on the bank.

While there are clear limitations on the role of market discipline (discussed further in Lane, 1993), the global trend is appropriately in the direction of placing more emphasis on market data in the supervisory process. The theme is not that market monitoring and discipline can effectively replace official supervision but that it has a potentially powerful role that should be strengthened within the overall regulatory regime. In addition, Caprio (1997) argues that broadening the number of those who are directly concerned about the safety and soundness of banks reduces the extent to which insider political pressure can be brought to bear on bank regulation and supervision. In fact, the recent consultative document issued by the Basle Committee on Banking Supervision (Basle Committee, 1999, p. 60) incorporates the role of market discipline as one of the three pillars of a proposed new approach to banking supervision. The Committee emphasizes that its approach "will encourage high disclosure standards and enhance the role of market participants in encouraging banks to hold adequate capital."

6.6. Corporate governance

A key issue in the management of banks is the extent to which corporate governance arrangements are suitable and efficient for the management and control of risks. Corporate governance arrangements include issues of corporate structure, the power of shareholders to exercise accountability of managers, the transparency of corporate structure, the authority and power of directors, internal audit arrangements, and lines of accountability of managers. In the final analysis, shareholders are the ultimate risk takers, and agency problems may induce managers to take more risks with the bank than the owners would wish. This in turn raises issues of what information shareholders have about the actions of the managers to which they delegate decision-making powers, the extent to which shareholders are represented on the board of directors of the bank, and the extent to which shareholders have power to discipline managers.

The OECD has published a set of Principles of Corporate Governance that apply to all companies, and these are relevant to banks (Table 7 for a summary). With respect to banks the following general principle should apply:

6.6.1. Corporate governance arrangements should provide for effective monitoring and supervision of the risk-taking profile of banks. These arrangements would provide for, *inter alia,* a management structure with clear lines of accountability; independent nonexecutive directors on the board, an independent audit committee, and a four-eyes principle for important decisions involving the risk profile of the bank; transparent ownership structure with internal structures that enabled the risk profile of the bank to be clear, transparent, and managed; and monitored risk-analysis and management systems.

Table 7. Summary of OECD principles of corporate governance.

The OECD Principles of Corporate Governance are intended to assist member and nonmember governments in their efforts to evaluate and improve their own legal, institutional, and regulatory framework for corporate governance, rather than to provide a prescription for national legislation or regulation. They have been grouped under five headings, which are listed below along with the underlying reasoning:

The rights of shareholders

- Basic shareholder rights should be protected. These include the rights to share in profits, vote on appropriate issues, transfer shares, access relevant and timely information, and have secure registration of ownership.
- Capital structures that allow certain shareholders to obtain a disproportionate degree of control should be disclosed.
- The market for corporate control should be allowed to function efficiently, transparently, and in a manner that is fair for all shareholders.

The equitable treatment of shareholders

- All shareholders of the same class should be treated equally, including minority and foreign shareholders and those with shares held by custodians or nominees.
- Self-dealing and insider trading should be prohibited.
- Members of the board and managers should be required to disclose material interests in transactions or matters affecting the corporation.

The role of stakeholders in corporate governance.

- The rights of stakeholders, as established by law, should be respected, and there should be effective redress when these rights are violated.
- Where stakeholders do participate in the corporate governance process, they should have access to relevant information.

Disclosure and transparency

- There should be timely and accurate disclosure of information on all material regarding the financial situation, performance, ownership and governance of the company. Information channels should be cost-effective for users.
- Information should be prepared, audited, and disclosed in accordance with high quality standards.
- To provide an objective and external control over the disclosure of financial information, an independent auditor should conduct an annual audit.

The role of the board

- The corporate governance framework should ensure strategic guidance and effective monitoring of the company by the board (the OECD includes a list of key functions that the board should fulfill) and the board's accountability to the company and shareholders.
- Board members should have access to accurate, relevant, and timely information.
- Where board decisions may affect various shareholders groups differently, the board should treat all shareholders fairly.
- The board should ensure compliance with applicable law and take into account the interests of stakeholders.
- The boards should be able to exercise objective judgment on corporate matters, independent of management. The appointment of independent nonexecutive directors should be considered.

Source: *Financial Stability Review* (June 1999).

7. Conclusions and assessment

The purpose of this article has been to outline some of the characteristics of a stable financial system. A key conclusion is that, in one way or another, including through regulation and supervision, mechanisms are needed for the creation of appropriate *incentives* for all the major players including regulators and supervisors. If the incentive structure is wrong, banking and financial problems will always eventually emerge.

When judging the effectiveness and efficiency of a regulatory regime five key criteria are established:

- The extent to which it generates appropriate incentives for banks owners and managers,
- Whether it generates correct pricing of absolute and relative risk of bank loans,
- Whether it minimizes existing and new moral hazards,
- The extent to which sufficient differentiations are made between institutions based on overall portfolio risks, and
- The impact on competitive conditions and whether it is competitively neutral as between different competing firms.

Overall, the lessons of recent banking crises are that there needs to be more effective surveillance of financial institutions both by supervisory authorities and the markets. For markets to complement the work of supervisory agencies, good and timely information is needed about banks activities and balance-sheet positions. Regulation, supervision, and information disclosure are not alternatives.

Effective regulation and supervision of banks and financial institutions have the potential to make a major contribution to the stability and robustness of a financial system. However, there are also distinct limits to what regulation and supervision can achieve in practice. It must be recognized that, in practice, there is no viable alternative to placing the main responsibility for risk management on the shoulders of the management of financial institutions. Management must not be allowed to hide behind the cloak of regulation or pretend that, if regulation and supervisory arrangements are in place, this absolves them from their own responsibility. Nothing should ever be seen as taking away the responsibility of internal supervision within banks by shareholders and managers themselves. External regulation and supervision by official agencies must, therefore, not be viewed as an alternative to robust and effective internal supervision processes and responsibilities. In other words, regulation must be both internal and external.

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