SOME LESSONS FOR BANK REGULATION FROM RECENT CRISES

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ABSTRACT

The causes of systemic bank distress are complex and multi-dimensional involving economic, financial, regulatory and structural weaknesses. This also means that regulatory approaches also need to be multi-dimensional. The paper suggests that an optimum "regulatory regime" needs to incorporate seven key components: regulation (the rules imposed by official agencies), official supervision, incentive structures within banks, market discipline, intervention arrangements in the event of distress, corporate governance arrangements with banks, and the accountability of regulatory agencies. All are necessary but none alone are sufficient for systemic stability. As there are trade-offs between the components, regulatory strategy needs to focus on the overall impact of the regime rather than only the regulation component.

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1 INTRODUCTION AND OUTLINE

Our objective is to consider the experience of recent banking crises in both developed and developing countries, and to draw lessons most especially with respect to the regulation and supervision of banks, and the design of an optimum 'regulatory regime'. This will be done by setting out a series of general principles designed to lower the probability of banking distress. Just as the causes of banking crises are multi-dimensional, so the principles of an effective *regulatory regime* also need to incorporate a wider range of issues than externally imposed rules on bank behaviour. What will be termed a *regulatory regime* also includes the arrangements for intervention in the event of bank distress and failures. This is because they have incentive and moral hazard effects, which potentially influence future behaviour of banks and their customers and the probability of future crises.

The focus of the paper is a consideration of alternative approaches to achieving the objectives of regulation: systemic stability and consumer protection. A central theme is that what are often regarded as 'alternatives' are in fact complements within an overall regulatory strategy. As the *regulatory regime* is wider than the rules and monitoring conducted by regulatory agencies, the skill in constructing a regulatory strategy lies in how the various components of the *regime* are combined.

When a particular regulatory problem emerges, the instinct of a regulator is often to create new rules. This implies an *incremental approach* to regulation by focusing upon the rules component of the *regulatory regime*. The paper argues that there are serious problems with such an incremental rules-approach in that it may blunt the power of the other mechanisms and may, in the process, reduce the overall effectiveness of the regime in achieving its core objectives.

Although there is considerable academic debate about whether or not banks should be regulated at all, this issue is not addressed. Some studies (notably those of Benston and Kaufman, 1995) argue that the economic rationale for bank regulation has not been robustly established and that, in some cases, banking problems have their origin in regulatory rather than market failure. In particular, emphasis is given to the moral hazard effects of safety-net arrangements. A similar approach is found in Schwartz (1995).

The general economic rationale for financial regulation (in terms of externalities, market imperfections, economies of scale in monitoring, grid-lock problems, and moral hazard associated with safety nets) has been outlined elsewhere, (Llewellyn, 1999). For purposes of the present paper, the economic rationale for regulation is taken as given.

A central theme is that the various components of the *regulatory regime* need to be combined in an overall regulatory strategy, and that while all are necessary, none are sufficient. 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, the efficiency of the necessary monitoring and supervision of banks by official agencies and the market, and corporate governance arrangements within banks. External regulation is only one component of regimes to create safe and sound banking systems which, if it is pressed too far, may blunt other mechanisms and in the process compromise the impact of the overall regime.

A sustained theme is that the *regulatory regime* is defined more widely than externally imposed regulation on financial institutions. In current conditions it would be a mistake to rely wholly, or even predominantly, on external regulation, monitoring and supervision by the 'official sector'. 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 and compliant behaviour. There is a danger of thinking only in terms of incremental change to regulation, rather than strategically with respect to the overall regime. This needs to be set in the context of trade-offs between the various components. In some circumstances the more emphasis that is given to one of the components (e.g. regulation) the less powerful becomes one or more of the others (e.g. market discipline on financial firms, or the effectiveness of corporate governance arrangements) and to an extent that may reduce the overall impact.

The skill in formulating regulatory strategy lies not so much in choosing between various options, but in combining the seven components of the regime. The objective is to move towards an optimum mix, combined with careful choice of regulatory instruments within each. It is not, therefore, a question of choosing between either regulation or market disciplines; or between regulation and supervision on the one hand or competition on the other. The concept of a *regulatory strategy* is that these are not alternatives but components of an overall approach to achieve the objective of systemic stability. A key issue for the regulator is how its actions can not only contribute to the objectives directly, but how they impact on the other components of the regime: in particular, the

issue is how regulation affects incentive structures within firms, and also the role that can be played by market discipline and monitoring.

The optimum mix of the components will change over time. It is argued that, over time and as the market environment in which banks operate becomes more complex, four structural shifts within the *regulatory regime* are desirable: (1) external regulation needs to become less prescriptive, more flexible and differentiated as between different institutions, (2) more emphasis needs to be given to incentive structures and the contribution that regulation can make to creating appropriate incentive structures, (3) market discipline and market monitoring of banks need to be strengthened, and (4) corporate governance mechanisms for banks need to be strengthened.

The outline of the paper is as follows. It begins with a brief overview of recent banking crises. Section 3 considers some common elements in banking crises. This is followed in section 4 by a discussion of the multi-dimensional nature of recent crises. Section 5 reviews the impact of liberalisation where a distinction is made between the transitional effects associated with the shift from one regime to another, and the steady-state characteristics of a de-regulated financial system. Section 6 discusses the nature of a *regulatory regime* and the trade-offs between its components, and proceeds to draw together the implications of the nature and origin of banking crises by setting out a set of principles designed to lower the probability of distress in the banking sector. Section 7 offers conclusions and an overall assessment.

2 RECENT BANKING CRISES

Given their incidence and variety of banking crises over the past fifteen years, banking crises (in both developing and industrial economies) are clearly not random or isolated events. Around the world, banks have had high levels of non-performing loans, there has been a major destruction of bank capital, banks have failed, and massive support operations have been necessary. The failure rate amongst banks has been greater than at any time since the great depression of the 1920s. In the case of Indonesia, Malaysia, South Korea and Thailand, non-performing loans of banks recently amounted to around 30 percent of total assets. Banking crises have involved substantial costs. In around 25 per cent of cases the cost has exceeded 10 per cent of GNP (e.g. in Spain, Venezuela, Bulgaria, Mexico, Argentina, Hungary). Evans (2000) suggests that the costs of crises amounted to 45 percent of GDP in the case of Indonesia, 15 percent in the case of Korea and 40 percent in the case of Thailand. These figures include the costs of meeting obligations to depositors under the blanket guarantees that the authorities introduced to handle systemic crises, and public sector payments to financing the recapitalisation of insolvent banks.

Almost always and everywhere banking crises are a complex interactive mix of economic, financial and structural weaknesses. Lindgren et.al.(1996) give an excellent survey of the two-way link between banking systems and macro policy. The trigger for many crises has been macro-economic in origin and has often been associated with a sudden withdrawal of liquid external capital from a country. As noted by Brownbridge and Kirkpatrick (2000), 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). The link between balance of payments and banking crises is certainly not a recent phenomenon and has been extensively studied, (e.g. Kaminsky and Reinhart, 1998; Godlayn and Valdes, 1997; Sachs, et.al, 1996).

Almost invariably, systemic crises (as opposed to the failure of individual banks within a stable system) are preceded by major macroeconomic adjustment, which often leads to the economy moving into recession after a previous strong cyclical upswing. While financial crises have been preceded by sharp fluctuations in the macro economy, and often in asset prices, it would be a mistake to ascribe financial instability entirely to macroeconomic instability. While macro instability may be the proximate cause of a banking crisis, the crisis usually emerges because instability in the

macro economy reveals existing weaknesses within the banking system. The seeds of a problem (e.g. over-lending, weak risk analysis and control, etc.) are usually sown in the earlier upswing of the cycle: mistakes made in the upswing emerge in the downswing. The downswing phase reveals previous errors and over-optimism. In South East 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 banking crises is that expectations have been volatile, and asset prices (including property) have been subject to wild swings. A sharp (sometimes-speculative) rise in asset prices is often followed by an equally dramatic collapse. An initial rise in asset prices has often induced over-optimism and euphoria which in turn has lead to increased demand for borrowed funds and an increased willingness of banks to lend, (Llewellyn and Holmes, 1991).

3 SOME COMMON ELEMENTS IN BANKING DISTRESS

Analysis of recent financial crises in both developed and less-developed countries indicates that they are not exclusively (or even mainly) a problem of the rules being wrong, (see, for instance, Brealey, 1999; Corsetti, et al, 1998; and Lindgren, et al, 1996). Five common characteristics have been weak internal risk analysis, management and control systems within banks; inadequate official supervision; weak (or even perverse) incentives within the financial system generally and financial institutions in particular; inadequate information disclosure, and inadequate corporate governance arrangements both within banks and their large corporate customers. An unstable or unpredictable macro-economic environment is not a sufficient condition for banking crises to emerge: it is an illusion to ascribe such crises to faults in the macro economy alone. The fault also lies internally within banks, and with failures of regulation, supervision, and market discipline on banks.

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. A period of rapid growth in bank lending within a short period, and unrealistic expectations and euphoria about economic prospects, often form the backdrop to subsequent crises. These are frequently aggravated by sharp and unsustainable rises in asset prices (part of euphoria speculation) which lead to unrealistic demands for credit and a willingness of banks to supply loans. In the process, inadequate risk premia are often incorporated in the rates of interest on loans. This is a version of the standard Fisher and Minsky thesis: debt accumulation in the upswing leading to problems for banks in the downswing.

During the period of substantial growth in bank lending, concentrated loan portfolios (often with a high property content) often emerge. This is partly because, in periods of rapid asset-price inflation, property appears to be either an attractive lending proposition or a secure form of collateral against bank loans. However, it is in essence speculative lending and the bubble bursts when the over-capacity in the property sector becomes evident. This means that, while individual project risks may be accurately assessed, overall portfolio risks are often not. It is also the case that, in periods of rapid growth in bank lending, insufficient attention is given to the value of collateral most especially in periods of asset-price inflation.

Banks do not always operate as totally independent agents and in many crisis countries bank decisions have involved political influences and insider relationships. Such government involvement

in lending decisions has the effect of weakening incentive structures, and eroding discipline on lenders through the perception of an implicit guarantee.

The origins of crises have been 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. 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.

It is also the case that banking crises often follow major changes in the *regulatory regime* which create unfamiliar market conditions. Periods of rapid balance sheet growth, most especially when they occur after a regime shift and in a period of intense competition, 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 under-priced in order to gain market share; internal control systems tend to weaken in periods of rapid balance sheet growth; growth itself generates unwarranted optimism and a 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 over-indebted and more risky which in turn increases the vulnerability of the lending banks.

4 A MULTI-DIMENSIONAL PROBLEM

The recent banking crises in South East Asia have, as always, been complex and the causes have been multi-dimensional. While evident macro policy failures and volatile and structurally weak economies have been contributory factors, 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 fails to capture the complex interactions involved in almost all-banking and financial crises.

This suggests that the response to avoid future crises also needs to be multi-dimensional involving 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 the main components of recent banking crises. While the experience of each country varies in detail, there is a remarkable degree of commonalty including 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 multi-dimensional aspect of financial distress, the main causal factors are considered under eight headings: (1) volatility in the macro-economy; (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 regulation; (6) weak monitoring and supervision by official agencies; (7) the absence of effective market discipline against hazardous bank behaviour 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 South East Asia is a product of a volatile economy (with strong speculative elements) combined with bad banking practices, weak regulation, ineffective supervision both by official agencies and the market, and hazardous incentive structures. All of this induced excessive lending and risk-taking by banks.

(1) The macro-economy

Although growth in the countries of South East Asia had been strong for many years before the onset of recent crises, structural weaknesses in some of the region's economies were also evident. In many cases, exceptionally high investment rates concealed inefficiencies in the allocation of investment funds 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 over-stated by inaccurate accounting procedures.

Many financial crises have 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. There is something of an accelerator effect in this: a rise in asset prices produces an increase in the value of collateral which raises the borrowing capacity of agents and a greater willingness of banks to extend credit. This in turn re-reinforces the rise in asset prices.

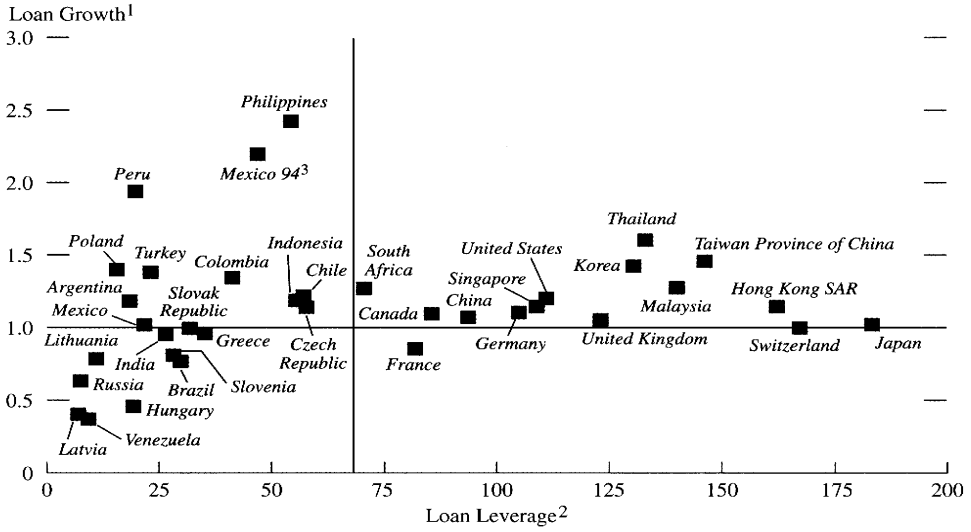
Table 1 STOCK MARKET PRICE INDEX

	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	1154.00	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 PRICES INDEX (PROPERTY SECTOR)

	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	312.00	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

Figure 2.13. Financial Sector Lending: Growth and Leverage, 1990–96



Sources: International Monetary Fund, *International Financial Statistics,* and *World Economic Outlook.*

[1]Loan growth is the ratio of growth in loans to private sector (bank and nonbank) versus nominal GDP growth from year-end 1990 to year-end 1996.

[2]Loan leverage is defined as the ratio of loans to private sector versus nominal GDP as of year-end 1996.

[3]Loan growth from 1990–94 and loan leverage is as of year-end 1994.

Note: Loan growth of the following countries and regions started at different years: Hong Kong SAR, Poland, and Slovenia (1991); Malaysia (1992); and Russia, the Czech Republic, Latvia, Lithuania, and the Slovak Republic (1993).

A key factor in the macro-economic 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 with a net inflow of $41 billion in 1996 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 several other countries (see, Cole and Kehoe, 1996 and Sachs, et.al. 1996). In this context one interpretation of the origin of the crises is that they were precipitated by a change of view by international investors about the economic prospects of the region, (e.g. Corbett, et al, 1999). The issue is discussed in more detail in Corsetti, et. al., (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 inter-bank lines. Strategies based on funding high interest rate loans in domestic currency through low interest rate foreign currency deposits created a substantial interest rate and exchange rate exposure for banks.

Table 3 PRIVATE CAPITAL FLOWS TO ASIAN COUNTRIES

	1990	1991	1992	1993	1994	1995	1996	1997
Asia								
Total net private capital inflows	19.1	35.8	21.7	57.6	66.2	95.8	110.4	13.9
Net foreign direct investment[1]	8.9	14.5	16.5	35.9	46.8	49.5	57.0	57.8
Net portfolio investment	–1.4	1.8	9.3	21.6	9.5	10.5	13.4	– 8.6
Other	11.6	19.5	– 4.1	0.1	9.9	35.8	39.9	– 35.4
Net external borrowing from official creditors	5.6	11.0	10.3	8.7	5.9	4.5	8.8	28.6
Affected countries' net private capital inflows[2]	24.9	29.0	30.3	32.6	35.1	62.9	72.9	– 11.0
Net foreign direct investment[1]	6.2	7.2	8.6	8.6	7.4	9.5	12.0	9.6
Net portfolio investment	1.3	3.3	6.3	17.9	10.6	14.4	20.3	11.8
Other	17.4	18.5	15.4	6.1	17.1	39.0	40.6	– 32.3
Affected countries' net external borrowing from official creditors	0.3	4.4	2.0	0.8	0.7	1.0	4.6	25.6

Sources: International Monetary Fund, *International Financial Statistics* and *World Economic Outlook* database

[1] Net Foreign direct investment plus net portfolio investment plus net other investment.

[2] Indonesia, Korea, Malaysia, the Philippines, and Thailand.

(2) The inheritance

Many of the crisis countries had a long tradition of intrusive government involvement and ownership in the banking system and elsewhere in the economy. This frequently meant that funds were channelled to ailing industries under overt or covert political pressure. Bisignano (1998) argues that such selective credit allocation was a factor retarding the development of effective risk analysis and management systems in banks. In many South East Asian countries directed lending in the pre-liberalisation phase often carried explicit or implicit guarantees (see Corbett, et al, 1999; Stiglitz, 1999; Rodrik, 1999). In effect, banks have not always acted 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 a climate that neither borrowers nor banks would be allowed to fail. This in turn aggravated a tendency towards imprudent lending. These issues are discussed further in Martinez, et.al., (1998).

This is not a problem restricted to the less developed countries of South East Asia. With respect to Japan, 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 non-market criteria, it may undermine the effectiveness of monetary policy, and it may undermine fiscal discipline.

The 'inheritance problem' also included weak corporate structures with powerful links between companies in a way that enabled them to avoid normal market discipline on corporate behaviour. This in turn was often aggravated by weak corporate governance arrangements, and the non-feasibility for the market in corporate control to operate. Both of these weaknesses muted normal market disciplines.

Before financial liberalisation was instigated, many of the crisis countries operated on the basis of fairly rigid public control and/or direction. Some of the subsequent problems emanated from losses (which were often concealed) incurred during the previously repressed financial regime. It is also evident that the true financial condition of many banks had been concealed in the pre-liberalisation period through 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 lax and to

an extent that banks were reporting positive net income even during a banking crisis, (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 have been 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, et.al., 1993).

(3) Bad banking practices

Several elements of 'bad banking' which were concealed during the optimism generated during the previous period of rapid economic growth also played a central role in the emergence of financial fragility and the subsequent failure of banks. Common examples of 'bad banking' include:

· Banks operating on the basis of low capital ratios which were sometimes below minimum capital adequacy standards set by the regulatory authorities, and which were not addressed by the regulators.

· Substantial foreign currency exposures incurred because foreign currency borrowing appeared to be cheap, because the alleged commitment to a fixed exchange rate was not questioned, and because of the general expectation of 'bail-outs' in the event of difficulty.

- Rapid growth in bank lending in a short period. As already noted, a common feature of bank crises (including in advanced economies) is that they are preceded by a period of rapid growth in bank lending. This is indicated for the crisis countries of South East Asia in tables 4 and 5 which show the high rates of growth in lending to the private sector. Rapid growth of bank lending is not in itself hazardous. However, periods of rapid growth frequently conceal emerging problems: it is more difficult to distinguish good from bad loans (Hausmann and Gavin, 1998); it often involves banks lending in areas with which they are not familiar; herding behaviour develops; credit standards are weakened in a phase of euphoria, and some 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, management and control systems within banks.
- Concentrated loan portfolios often with 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 South East Asia is given in table 6.
- Bank lending on the basis of an unsustainable rise in asset prices.

· Substantial connected lending by banks to companies within the same group and on the basis of poor (or non-existent) risk assessment and non-market criteria.

- The failure to incorporate risk premia in interest rates on loans. The BIS has noted that in many crisis countries the lending margin was low (and was declining during the period of rapid growth) which indicates that insufficient risk premia were being charged, (BIS, 1998).
- Inaccurate accounting standards and weak loan classification and provisioning which had the effect of over-stating 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). The growth of lending was substantially in excess of the growth of GDP in the distress countries of South East Asia (figure 2). This produced high leverage ratios (ratio of credit to the private sector relative to GDP). The study notes that in many of the countries where bank distress was most marked (Korea, Malaysia and Thailand) 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, 1998; Benink and Llewellyn, 1994) show that rapid credit growth and high and sharply rising leverage are significant factors in banking crises in both developing and developed countries.

The authors of the IMF study suggest that, with respect to figure 2, countries in the early stages of economic development are normally in the north-west quadrant (high loan growth with low leverage) but as they advance in their development they are expected to converge to the border between the south-east and north-east quadrants. The figure shows, however, that Korea, Thailand and Malaysia each had both high growth rates of bank lending and high leverage ratios. A

Table 4 BANK LENDING TO PRIVATE SECTOR (% growth)

	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	10.80	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	19.80
Hong Kong		10.17	20.15	19.94	10.99	15.75	20.10
China	19.76	20.84	43.52	24.58	24.23	24.68	20.96
Taiwan	21.25	28.70	19.46	16.18	10.00	6.00	8.92

Table 5 BANK LENDING TO PRIVATE SECTOR (% of GDP)

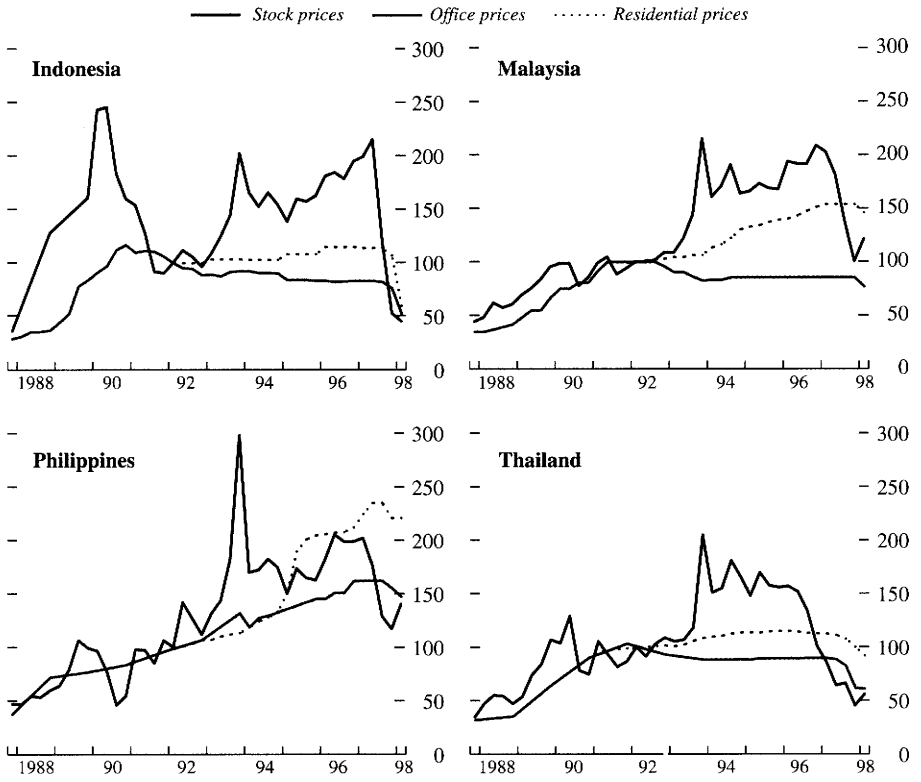
	1990	1991	1992	1993	1994	1995	1996	1997
Korea	52.54	52.81	53.34	54.21	56.84	57.04	61.81	69.79
Indonesia	49.67	50.32	49.45	48.90	51.88	53.48	55.42	69.23
Malaysia	71.36	75.29	74.72	74.06	74.61	84.80	93.39	106.91
Philippines	19.17	17.76	20.44	26.37	29.06	37.52	48.98	56.53
Singapore	82.20	83.34	85.06	84.14	84.21	90.75	95.96	100.29
Thailand	64.30	67.70	72.24	80.01	91.00	97.62	101.94	116.33
Hong Kong		141.84	134.20	140.02	149.00	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: JP Morgan 'Asian Financial Markets', January 1998.

Figure 2.15. Real Estate and Stock Prices in Selected Asian Countries[1]
(Indices, March 1992 = 100)



Sources: International Finance Corporation; and Jones Lang Wootton.
[1]Real estate and stock prices in local currencies, except for Indonesia, where prices are in U.S. dollars.

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.

(4) Incentive structures and moral hazard

A maintained theme of this paper is that incentive structures and moral hazards faced by decision-makers (bank owners and managers, lenders to banks, borrowers and central banks) are major components of the *regulatory regime*. This means that the regulator needs to consider the impact its own rules have on regulated firms' incentive structures; whether they might have perverse effects, and what regulation can do to improve incentives. Incentive structures are at the centre of all aspects of regulation in that if they are perverse it is unlikely that other mechanisms in the regime will achieve the desired objectives. Regulatory strategy needs not only to consider how the

various components of the regime impact directly on the objectives, but also how they operate indirectly through their impact on the incentives of regulated firms and others. Some analysts ascribe recent banking crises in part to various moral hazards and perverse incentive structures such as fixed exchange rate regimes, anticipated lender-of-last-resort actions, what have been viewed as bail-outs by the IMF, and safety-net arrangements.

Schinasi et.al. (1999) argue that banks have complex incentive structures including internal incentive structures (i.e. incentives that motivate key decision-makers involved with risk), corporate governance mechanisms (such as accountability to shareholders), the external market in corporate control, market disciplines which may affect the cost of capital and deposits, and accountability to bank supervisors. The presence of regulation and official supervision adds a particular dimension to the structure of incentives faced by decision-makers. The key is to align incentives of the various stake-holders in the decision-making process: between the objectives set by regulators and supervisors (systemic stability and consumer protection) and those of the bank; between the overall business objectives of the bank and those of actual decision-makers in the management structure, and between managers and owners of banks. Conflicts can arise at each level which complicates incentive structures. A central role of regulation is to create incentives for managers and shareholders to behave in a way consistent with the objectives that are set for regulation when these may not always be in the immediate interests of either managers or owners of banks.

Several potential 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 may have induced imprudent and unhedged foreign currency borrowing both by banks and companies.
- Expectations of bail-outs or support for industrial companies (which had at various times been in receipt of government support) meant that the bankruptcy threat was weak.
- A belief in the role of the lender-of-last-resort and 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 (1983-87), Malaysia (1985-88) and Indonesia (1994).
- Close relationships between banks, the government, other official agencies and industrial . corporations often meant that relationships (e.g. lending) that would normally be conducted at arms-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.

It has frequently been argued (e.g. Drage and Mann, 1999) that, in the recent case of South East Asia, the expectation and actual injection of funds by the International Monetary Fund 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 the effect of encouraging imprudent capital inflows and bank lending in the future. 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.

However, this view has been challenged on the grounds that, in the case of South East Asia, investors did in fact lose value, and that governments are reluctant to resort to IMF facilities because of the resultant conditionality that is applied, (Brealey, 1999). It is relevant in this regard that, in the years before the crisis, the countries of this region had grown at a faster rate, and for longer, than any countries in history. There were, therefore, powerful economic reasons for capital inflows irrespective of any expectation of 'bail outs' in the event of sovereign problems. International fund managers were also motivated by a desire to develop globally diversified portfolios including assets in fast-growing regions. In addition, a substantial proportion of the inflows were in forms that could not expect any rescue. Overall, the idea that capital inflows were motivated largely by the expectation of a 'bail out' in the event of distress is less than convincing, (Adams, et.al, 1998). 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.

If incentive structures are hazardous, regulation will always face formidable difficulties. There are several dimensions to incentive structures within banks: the extent to which reward structures are based on the volume of business undertaken; the extent to which the risk characteristics of decisions are incorporated into the reward structures; the nature of the internal control systems within banks; internal monitoring of the decision-making of loan officers; the nature of profit-sharing schemes and the extent to which decision-makers also share in losses, etc. High staff turnover, and the speed with which officers are moved within the bank, may also create incentives for excessive risk-taking. A similar effect can arise through herd behaviour.

It is clear that some incentive structures can lead to dysfunctional behavioural responses (Prendergast, 1993). This may often emerge when incentives within regulated firms relate to volume rather than their risk-adjusted profitability, i.e. there is a clear bias towards writing business. Thus, bank managers may be rewarded by the volume of loans made . Many cases of bank distress have been associated with inappropriate incentive structures creating a bias in favour of balance sheet growth, and with moral hazard created by anticipated lender-of-last-resort actions. Dale (1996) suggests that profit-related bonuses were an important feature in the Barings collapse. One potentially hazardous feature of bank management is the tendency towards herd behaviour. Fink and Haiss (2000) argue that there is often an unwillingness on the part of managers to risk rejection by the 'in-group' within the bank. They also argue that it is necessary to curb herd behaviour by altering the incentive structures faced by various stake-holders.

Some analysts find that, under some circumstances, there can be a negative relationship between risk and return within banks. This may be because banks in distress seek risky projects, (Bowman, 1982). According to Prospect Theory, bankers have an asymmetric view of risk-taking and risk-avoidance. Performance expectations may raise the need or desire to take excessive risk, (Kahneman and Tuersky, 1979).

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 behaviour, 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 a powerful ingredient in bank distress. Lindgren, et.al. (1996) found, for instance, that banks that are, or were recently, state-owned or controlled were a factor in most of the instances of unsound banking in their sample of crises.

(5) Ineffective regulation

In all crisis countries, banks have been regulated and supervised and, in principle, most countries nominally adopted standard international norms of regulation. However, the adoption of such standards was often weak and uncertain. There are many elements of weak regulation in the origin of banking crises in recent years and which aggravated the effect of other dimensions of distress:

- Capital adequacy regulations were often either not fully in place or were not effectively enforced.
- Regulatory requirements for capital, while nominally 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 banks' risk characteristics (BIS, 1998).
- 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 over-stated, (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 (e.g. property) were often 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 regulatory authorities having substantial discretion as to when and whether to intervene, and often being subject to political pressure of one kind or another.

(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 (e.g. central banks). In practice, 'some form of supervisory failure was a factor in almost all the sample countries' (Lindgren, et.al., 1996). 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 or 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.

There has often been a lack of political will on the part of supervisory agencies to exercise strong supervision. This may be associated with adverse incentive structures faced by politicians and others who may gain from imprudent banking, (Fink and Haiss, 2000). While prudent banking is a public good, hazardous behaviour can be beneficial to some stake-holders. Others have noted the

lack of political will to exercise strong supervision in the transitional economies of Eastern Europe (Baer and Gray, 1996).

A further dimension to supervisory failure has been that supervisory intensity has often not been adjusted in line with liberalisation in financial systems and the new business operations and risk characteristics of banks that emerged in a more de-regulated 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 de-regulation. The nature and intensity of official supervision needs to reflect the nature of the regulatory environment. In practice, while the latter changed this was often not accompanied by sufficiently intensified supervision.

(7) Weak market discipline on banks

Monitoring is not only conducted by official agencies whose specialist task it is. In well-developed financial regimes, the market also monitors the behaviour of financial firms. The disciplines imposed by the market can be as powerful as any sanctions imposed by official agencies. However, in practice, the disciplining role of markets (including the inter-bank market which is able to impose powerful discipline through the risk premia charged on inter-bank loans) was weak in the crisis countries of South East Asia. This was due predominantly to the lack of disclosure and transparency of banks and the fact that little reliance could be placed on the quality of accountancy data provided in bank accounts. In many cases standard accounting and auditing procedures were not rigorously applied, and in some cases there was wilful mis-representation of the financial position of banks and non-financial companies. Market disciplines can work effectively only on the basis of full and accurate disclosure and transparency.

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, et.al., 1996)

(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, hazardous corporate structures of banks' lack of internal control systems, weak surveillance by (especially non-executive) directors, and ineffective internal audit arrangements. Corporate governance arrangements were evidently weak and under-developed in banks in many of the distress countries. Moral hazard can be created through lack of owner accountability and weak accountability of regulatory agencies, (Krugman, 1998).

Some bank ownership structures tend to produce ineffective corporate governance. In some cases, particular corporate structures (e.g. banks being part of larger conglomerates) encourage connected lending and weak risk analysis of borrowers. This was found to be the case in a significant number of bank failures in the countries of South East Asia and Latin America. Some corporate structures also make it comparatively easy for banks to effectively conceal losses and unsound financial positions.

Assessment

The central theme of this section has been that recent banking crises have been multi-dimensional 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. We return to this issue in section 6.

5 LIBERALISATION: STOCK-ADJUSTMENT *V* STEADY STATE

Many financial crises have been associated with changes in the regulatory regime and a process of liberalisation. For decades, the economies of South East Asia were highly regulated with interest rate ceilings, limitations on lending growth by financial institutions, restrictions on foreign entry into the banking system, etc. At various times during the 1990s, these restrictions were relaxed, and the pace of financial liberalisation accelerated.

Williamson and Mahar (1998) show that almost all of their sample of thirty-four economies (both industrialised and developing) that undertook financial liberalisation over the 1980s and 1990s experienced varying degrees of financial crisis. Similarly, Kaminsky and Reinhart (1998) found that in the majority of cases in their sample of countries that had experienced banking crises, the financial sector had been liberalised during the pervious five years. They conclude that financial liberalisation helps predict banking crises across a range of countries. Goldstein and Folkerts-Landau (1993) observe a general pattern of de-regulation inducing more competition being followed by increasing financial fragility.

Demirguc-Kunt and Detragiache (1998) find that financial liberalisation increases the probability of a banking crisis. However, they also find that the probability is reduced the stronger are the institutional pre-conditions for liberalisation and market discipline in terms of contract enforcement, lack of corruption, bureaucratic interference in lending decisions, etc. This reinforces the established wisdom that liberalisation involves a significant change in the market environment and that, for the new regime to be stable and efficient, certain basic pre-requisites of a well-functioning market system need to be in place. The key is that institutional structures and mechanisms need to be consistent with the prevailing market regime. Problems arise when a change to the market regime is made without there also being corresponding changes in institutional mechanisms.

While in both developed and less developed countries banking distress has often followed periods of de-regulation and liberalisation, 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* liberalised financial system. The instabilities that may occur in the transition period do not necessarily carry over into the new steady-state.

The Transitional Phase

The universal evidence is that financial liberalisation enhances efficiency in the financial system, and that financial repression distorts the incentives for saving and investment. However, financial liberalisation often create instability most especially in the transition period:

- One effect of increased competition that results from liberalisation is an erosion of the economic rents enjoyed by financial firms associated with the previously uncompetitive environment. The subsequent lower profitability may induce financial institutions into taking more risk.
- As discussed earlier, and noted by Corbett, et al, (1999), 'A key mistake, which led to the vulnerability of the financial system, appears to be that the old-style financial system continued into the new era of liberalisation'. This often included the continuation of old-style guarantees which are described in detail in Krugman (1999).
- In the stock-adjustment phase (i.e. during the period when the new regime is being introduced) uncertainty is created as financial firms are unfamiliar with the characteristics and management requirements of the new regime. Previously protected institutions need to adapt behaviour though this may occur only with a considerable time lag. New behaviour patterns need to be learned. Some mistakes during the process of financial liberalisation occur because banks do not adjust quickly enough to the new regime. Behaviour which 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, liberalisation may increase inflationary pressure as banks' balance sheet restraints are lifted and financial firms increase their lending rapidly in a relatively short period. This is often associated with a sharp rise in asset prices. The implication is that financial liberalisation needs to be accompanied by an appropriate stabilisation policy to reduce the potential impact on inflation which can distort lending decisions.
- In many countries that liberalised 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 lowered *equilibrium* and *disequilibrium* credit rationing and risk thresholds, (Llewellyn and Holmes, 1991); bank lending margins were squeezed, and bank profitability at first rose due to this expansion, but later deteriorated sharply due to massive loan losses.
- The rapid growth in lending during the stock-adjustment phase also increased risks because banks' internal control systems that were weak in the previous regime were carried forward into the new environment. This was compounded when banks adopted 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).
- 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 result that bank loans are under-priced.
- The initial stock-adjustment reaction often involves a phase of over-reaction by lenders as balance sheet structures are taken beyond long-run sustainable positions. There are several reasons for this: reaction times in financial markets are short, adjustments can be made quickly, and financial systems are often characterised by oligopolistic competition. As a result, competitive pressures induce firms to move together: the 'herd instinct'. Some analysts ascribe this 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 managers subject to peer-group pressure to follow the same strategy.
- Liberalisation may also reveal inherent weaknesses in the banking system both with respect to structure and the traditional way of conducting business.
- In some cases, some basic infrastructure of markets had not been created ahead of liberalisation: a strong legal framework to ensure that property rights are well-defined and easily exercisable; a legal framework for the pledging of collateral and the ability to take possession of collateral, and clearly defined bankruptcy laws and codes along with enforcement mechanisms.
- If supervision is not intensified in line with liberalisation, the financial system is more likely to become crisis prone. When liberalising their financial systems, the countries of South East Asia ignored the risks posed by rapid liberalisation when it is not accompanied by significant strengthening of regulation and supervision of bank behaviour, (Furman and Stiglitz, 1998). In this, they followed the earlier experience of the Scandinavian countries. Bisignano (1998) suggests that this experience represents a combination of 'excess momentum' by the private sector and 'excess inertia' by the regulatory authorities. Put another way, there is a trade-off 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. The IMF has argued thus: '...bank supervision may need to be restructured before financial market liberalisation to cope with the new challenges and risks liberalisation entails.' (IMF, 1993).

These are essentially (though not exclusively) problems of transition. A distinction is made between what happens during a *stock-adjustment* phase of liberalisation, and the characteristics of a

steady-state, deregulated financial system. Although the evidence indicates that a liberalised financial system is more efficient and contributes more substantially to economic development, when moving from one regime to another (especially from a highly controlled financial system to a more market-orientated system) instability may be created as new behaviour patterns need to be learned. The fact that instability may occur during the transitional, stock-adjustment period does not necessarily 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 liberalisation measures were adopted. Crises have often been a function of 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*.

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

The Steady State

However, while some of the financial distress is associated with the transition from one regime to another, it may also the case that a more competitive market environment tends to be more risky. This is because the value of the banking franchise is reduced by competition. Keeley (1990), for example, analyses how de-regulation and increased competition can induce banks to behave with less regard to risk because it lowers the value of the banking franchise. The higher is the expected future value of the banking franchise, the more owners and managers have to lose through excessive risk-taking which raises the probability of the bank failing. An IMF study (Goldstein and Folkerts-Landau, 1993) suggests that risks in banking increased over the 1980s due to a combination of increased competition and the existence of safety-nets. Similar conclusions are found in Caprio and Summers, (1993), and Demsetz, et.al., (1997). Using data to proxy bank franchise values, Hellman and others (1995) examine the relationship between bank franchise values and financial market liberalisation 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 liberalised financial sector, and that franchise values tend to be lower when

financial markets are liberalised. Shafer (1987) suggests that de-regulation is likely to create financial markets with a permanently greater tendency for instability.

In many cases previous, highly regulated, regimes acted as a protection to financial institutions by effectively limiting competition. The extent of the economic rents that were created were probably under-estimated by the regulatory authorities. In many cases the extent to which deregulation and liberalisation would increase competition in the banking industry was underestimated 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.

The potential conflict and trade-off between stability and efficiency is highlighted by Sijben (1999) where efficiency considerations require de-regulation and liberalisation in financial systems, though by enhancing competition this may compromise the objective of stability. Hellweg (1995) suggests that the low rate of bank failures in Switzerland between the late 1930s and the 1970s was due, in part, to the absence of disintermediation threat and the generally weak climate of competition in the Swiss banking system. The resultant high margins in banking enhanced franchise values and also enabled capital to be quickly replenished following write-downs due to loan write-offs. In the Hellweg analysis, increased competition in the banking industry produces higher levels of risk in banks because it creates incentives for higher risk-taking. At the same time, the ability of banks to quickly replenish capital.

6 THE REGULATORY REGIME

Having discussed some of the common origins of banking distress, we turn to consider a set of principles to reduce the future probability of crises. Emphasis has been given to inadequate regulation and supervision of banks. In the final analysis, regulation is about changing the behaviour of regulated institutions. A key issue is the extent to which behaviour is to be altered by externally imposed *rules*, or through creating *incentives* for firms to behave in a particular way.

A sustained theme is that a *regulatory regime* is to be viewed more widely than externally-imposed regulation of financial institutions. Regulation is only one of seven key components. Regulation needs to be viewed and analysed not solely in the narrow terms of the rules and edicts of regulatory agencies, but in the wider context of a *regulatory regime*. This concept has seven components:

- the **rules** established by regulatory agencies (the regulation component)
- **monitoring and supervision** by regulatory agencies;
- the **incentive structures** faced by regulatory agencies, consumers and, most especially, regulated firms;
- the role of **market discipline and monitoring;**
- **intervention arrangements** in the event of compliance failures of one sort or another;
- the role of **corporate governance** arrangements in financial firms, and
- the **disciplining and accountability** arrangements applied to regulatory agencies.

In current conditions, it would be hazardous to rely wholly, or even predominantly, on external regulation, monitoring and supervision by the official sector. 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 behaviour.

The key to optimising the effectiveness of a *regulatory regime* is the portfolio mix of the seven core components. All are necessary but none alone are 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.

Trade-offs within the Regime

Regulatory strategy is set in the context of trade-offs between the various components. In some circumstances the more emphasis that is given to one of the components (e.g. regulation) the less

powerful becomes one or more of the others (e.g. market discipline on banks) and to an extent that may reduce the overall impact. Thus, while regulation may be viewed as a response to market failures, weak market discipline, and inadequate corporate governance arrangements, causation may also operate in the other direction with regulation weakening these other mechanisms.

Within the *regulatory regime* trade-offs emerge at two levels. In terms of regulatory strategy, choices have to be made about the balance of the various components and the relative weight to be assigned to each. For instance, a powerful role for official regulation with little weight assigned to market discipline might be chosen, or alternatively a relatively light touch of regulation but with heavy reliance on the other components.

The second form of trade-off relates to how the components of the regime may be causally related. For instance, the more emphasis that is given to detailed, extensive and prescriptive rules, the weaker might be the role of incentive structures, market discipline and corporate governance arrangements with financial firms. This has been put by Simpson (2000) as follows: 'In a market which is heavily regulated for internal standards of integrity, the incentives to fair dealing diminish. Within the company culture, such norms of fair dealing as 'the way we do things around here' would eventually be replaced by 'It's OK if we can get away with it.' In other words, an excessive reliance on detailed and prescriptive rules may weaken incentive structures and market discipline.

Similarly, an excessive focus on detailed and prescriptive rules may weaken corporate governance mechanisms within financial firms, and may blunt the incentive of others to monitor and control the behaviour of banks. Weakness in corporate governance mechanisms may also be a reflection of banks being monitored, regulated and supervised by official agencies. The way intervention is conducted in the event of bank distress (e.g. whether forbearance is practised) may also have adverse incentive effects on the behaviour of banks and the willingness of markets to monitor and control their risk-taking.

An empirical study of regulation in the United States by Billett, et.al (1998) suggests that some types of regulation may undermine market discipline. They examine the costs of market discipline and regulation and show that, as a bank's risk increases, the cost of uninsured deposits rises and the bank switches to insured deposits. This is because changes in regulatory costs are less sensitive to changes in risk than are market costs. They also show that when rating agencies down-grade a bank, the bank tends to increase its use of insured deposits. The authors conclude:

'The disparate costs of insured deposits and uninsured liabilities, combined with the ability and willingness of banks to alter their exposure to each, challenge the notion that market discipline can be an effective deterrent against excessive risk taking.' This type of evidence demonstrates that, under some circumstances, regulatory arrangements can have the effect of blunting market discipline.

The public policy objective is to optimise the outcome of a regulatory strategy in terms of mixing the components of the regime, bearing in mind the possibility of negative trade-offs. However, the optimum mix in a *regulatory regime* will change over time as financial structures, market conditions and compliance cultures change. For instance, the combination of external regulation and market discipline that is most effectiveness and efficient in one set of market circumstances, and one type of financial structure in a country, may become ill-suited if structures change. Also, if the norms and compliance culture of the industry change, it could become appropriate to rely less on detailed and prescriptive regulation, at least for some firms.

Neither does the same approach and mix of components in the *regulatory regime* need to be the same for all regulated firms. On the contrary, given that banks are not homogeneous in their risk profiles, it would be sub-optimal to apply the same approach. A key strategic issue is the extent to which differentiations are to be made between different regulated firms.

Financial systems are changing substantially and to an extent that may undermine traditional approaches to regulation and most especially the balance between regulation and official supervision, and the role of market discipline. In particular, globalisation, 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 etc., and the increased complexity of banking business, 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.

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 six of the core components: (I) regulation, (II) incentive structures, (III) monitoring and

supervision, (IV) official intervention in the event of bank distress, (V) the role of market discipline, and (VI) corporate governance arrangements.

(I) Regulation

Four particular issues need to be considered with respect to the regulation part of the regime: the weight to be given to formal and prescriptive rules of behaviour; the type of rules in the regime; the impact that rules may have on the other components of the regulatory regime, and the extent to which regulation and supervision differentiate between different banks

Prescriptive rules

A former US regulator has noted that: 'Financial services regulation has traditionally tended towards a style that is command-and-control, dictating precisely what a regulated entity can do and how it should do it.....generally, they focus on the specific steps needed to accomplish a certain regulatory task and specify with detail the actions to be taken by the regulated firm', (Wallman, 1999). His experience in the US suggests that the interaction of the interests of the regulator and the regulated may tend towards a high degree of prescription in the regulatory process. Regulators tend to look for standards they can easily monitor and enforce, while the regulated seek standards they can comply with. The result is that regulators seek precision and detail in their requirements, while regulated firms look for certainty and firm guidance on what they are to do. Wallman suggests that: 'The result is specific and detailed guidance, not the kind of pronouncements that reflect fundamental concepts and allow the market to develop on its own.'

The arguments against reliance on detailed and prescriptive rules are outlined in Goodhart, et.al (1998). Although precise rules have their attractions for both regulators and regulated firms, there are several problems with a highly prescriptive approach to regulation:

- An excessive degree of prescription may bring regulation into disrepute if it is perceived by the industry as being excessive, with many redundant rules.
- Risks are usually too complex to be covered by simple rules.
- Balance-sheet rules reflect the position of an institution only at a particular point in time, although its position can change substantially within a short period.
- An inflexible approach based on a detailed rule book has the effect of impeding firms from choosing their own least-cost way of meeting regulatory objectives.
- Detailed and extensive rules may stifle innovation.

- A prescriptive regime tends to focus upon firms' processes rather than outcomes and the ultimate objectives of regulation. The precise rules may become the focus of compliance rather than the objectives they are designed to achieve. In this regard, it can give rise to a perverse culture of 'box ticking' by regulated firms. The letter of regulation may be obeyed but not the spirit or intention.
- A prescriptive approach is inclined towards 'rules escalation' whereby rules are added over time, but few are withdrawn.
- A highly prescriptive approach may create a confrontational relationship between the regulator and regulated firms, or alternatively cause firms to overreact, engaging in excessive efforts at internal compliance out of fear of being challenged by the regulator. In this sense, regulation may in practice become more prescriptive and detailed than originally intended by the regulator.
- Forcing a high degree of conformity on regulated firms causes an information loss. If firms are given leeway in satisfying the regulator's objectives, more may be learned about how different behaviour affects regulatory objectives, and also about the properties of different rules.
- In the interests of 'competitive neutrality', rules may be applied equally to all firms, although firms may be sufficiently heterogeneous to warrant different approaches. Treating as equal firms that in practice are not equal is not competitive neutrality, and a highly prescriptive approach to regulation reduces the scope for legitimate differentiations.
- A highly prescriptive rules approach may in practice prove to be inflexible and insufficiently responsive to market conditions.
- There is a potential moral hazard as firms may assume that, if something is not explicitly covered in regulation, there is no regulatory dimension to the issue.
- Detailed rules may also have perverse effects in that they are regarded as actual standards to be adopted rather than minimum standards with the result that, in some cases, actual behaviour of regulated firms may be of a lower standard than they would have chosen without the rule. This is most especially the case if each firm assumes that its competitors will adopt the minimum regulatory standard (adverse incentive) or if firms who would adopt a higher standard were to exit the market (adverse selection).

The limitations of a prescriptive rules and rigid formula approach to regulation is highlighted in Estrella (1998) who argues that, while there is a clear role for regulation, what really matters is how the bank behaves and the quality of its risk analysis and management systems rather than whether particular detailed rules are applied within the bank.

Types of rules

A second issue relates to the choice about the type of rules. This may have implications for enforcement as trade-offs are involved. Black (1994) distinguishes different types of rules along three dimensions: *precision* (how much is prescribed and covered in the rule), *simplicity* (the degree to which the rule may be easily applied to concrete situations), and *clarity*. The trade-off is between precision and ease of enforcement, in that the more precise is the rule the easier it is to enforce. On the other hand, the more precise is the rule the less flexibility is created within the overall regime.

Impact of rules

A third issue is whether the degree of precision in rules has a positive or negative impact on the other components of the regime. For reasons already suggested, precision and detail may have a negative effect on compliance and compliance culture. Conversely, a regime based more on broad principles than detailed and extensive rules has certain advantages: principles are easily understood and remembered; they apply to all behaviour, and they are more likely to have a positive impact on overall compliance culture. It might also be the case (as suggested in Black, 1994) that principles are more likely to become board issues with the board of financial firms adopting compliance with principles as a high level policy issue, rather than a culture of 'leaving it to the compliance department'. As put by Black, 'it helps chief executives to see the moral wood for the technical trees.'

Differentiation

A central issue in regulation for financial stability is the extent to which it differentiates between different banks according to their risk characteristics and their risk analysis, management and control systems. Most especially when supervisory resources are scarce, but also in the interests of efficiency in the banking system, supervision should be more detailed and extensive with banks which are considered to be more risky than others. In the UK the Financial Services Authority plans to adopt a risk-based approach to supervision.

The objective of 'competitive neutrality' in regulation does not mean that all banks are to be treated in the same way if their risk characteristics are different. With respect to capital adequacy requirements, and reflecting the practice in the UK, Richardson and Stephenson (2000) argue that the FSA (and formerly the Bank of England) treats the requirements of the Basle Accord as minima and requires individual banks to hold more capital than the minima dependent upon the

bank's risk exposure. Capital requirements are set individually for each bank. The authors list the major factors that are taken into account when setting individual bank's capital requirements. These include experience and quality of the bank's management; the bank's risk appetite; the quality of risk analysis, management and control systems; the nature of the markets in which the bank operates; the quality, reliability and volatility of the bank's earnings; the quality of the bank's capital and access to new capital; the degree of diversification; exposure concentrations; the complexity of a bank's legal and organisational structure; the support and control provided by shareholders, and the degree to which a bank is supervised by other jurisdictions. The authors' note that: 'these considerations imply that the appropriate margin above the minimum regulatory capital requirements will differ across banks.'

Goodhart, et.al. (1998) argue that, because regulation is not supplied through a market mechanism, the perception is that it is a free good which means that it is likely to be over-demanded. If this is coupled with risk-averse regulators, there is an inherent danger of over-regulation. In this context six main principles for the regulation component of the regime are outlined:

(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 over-burdened by wider considerations, the more likely it is to fail in all of them.

(2) The rationale and motivation of regulation and supervision should be limited

The rationale for regulation lies in correcting for identified market imperfections and failures which, in the absence of regulation, produce sub-optimal results and reduce consumer welfare: such imperfections include externalities; economies of scale in monitoring; breaking a 'grid lock', and limiting 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. In other words, regulation should be limited to correcting identified market imperfections and failures. If they do not satisfy any of these criteria, particular regulatory measures should be abandoned.

(3) Regulation should be viewed in terms of a set of contracts.

Laws, regulations, and supervisory actions provide incentives for regulated firms to adjust their actions and behaviour, 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 ways consistent with systemic stability and investor protection. If incentive contracts are well-designed they will induce appropriate behaviour by regulated firms. Conversely, if they are badly constructed and improperly designed, they might fail to reduce systemic risk (and other hazards regulation is designed to avoid) or have undesirable side-effects on the process of financial intermediation (e.g. impose high cost). At centre stage is the issue of whether all parties have the right incentives to act in a way that satisfies the objectives of regulation.

(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, what in practice are unequal institutions, are treated equally. In this respect, 'equality' relates to the risk characteristics of institutions. A hazard of a detailed and prescriptive rule book approach is that it may fail to make the necessary distinctions between non-homogeneous firms because the same rules are applied to all. In this regard, it reduces the scope for legitimate differentiations to be made.

(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 behaviour of regulated firms is enforced. If, alternatively, firms have a choice about how to satisfy the regulator's stated objectives, they would be able to choose their own, least-cost way of satisfying these objectives. One approach is for regulators to offer a menu of self-selecting contracts rather than the same contract to all institutions. Equally, banks could offer their own contracts. A particular proposal in this regard is the pre-commitment approach which gives banks the possibility

to pre-announce a maximum trading loss and incur regulatory penalties or other incentives in proportion to the extent to which pre-announced maximum losses are exceeded (this is discussed below).

(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 (e.g. through applying differential risk weights) the rules should be based on actuarial calculations of relative risk. If risk weights are incorrectly specified, perverse incentives are created for banks because the implied regulatory capital requirements are more or less than justified by true relative risk calculations. This in turn distorts the relative and absolute pricing of risks. 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 the loan book carries a uniform risk weight even though the risk characteristics of different loans within a bank's portfolio vary considerably. This is recognised in the BIS discussion document on capital adequacy (Basle Committee, 1999a) which outlines a proposal for a wider range of risk weights attached to bank assets.

(II) Incentive structures

A sustained theme is that incentive structures and moral hazard faced by decision-makers (bank owners and managers, lenders to banks, borrowers and regulators) are central components of the *regulatory regime*.

The overall theme is two-fold: (1) there need to be appropriate internal incentives for management to behave in appropriate ways, and (2) the regulator has a role in ensuring internal incentives are compatible with the objectives of regulation. Overall, more understanding is needed about incentive structures within financial firms and whether, for instance, incentive structures align with the objectives of regulation. Research is needed into how regulation impacts positively and negatively on incentives within regulated firms. The possibility that detailed rules may have a negative effect

of blunting compliance incentives and other components of the *regulatory regime* have already been considered.

With respect to internal incentives for owners and management of financial firms, several procedures, processes and structures may reinforce internal risk control mechanisms. These include internal auditors, internal audit committees, procedures for reporting to senior management (and perhaps to supervisors), and making a named board member of financial firms responsible for compliance and risk analysis and management systems. In some countries (e.g. New Zealand) incentives faced by bank managers have been strengthened through increased personal liability for bank directors; bank directors are personally liable in cases involving disclosure of incomplete or erroneous information. The Financial Services Authority in the UK has recently proposed that, under some circumstances, individual directors and senior managers of financial firms should be made personally liable for compliance failures.

Supervisors can also strengthen incentives 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 internal compliance arrangements. In addition, appropriate incentives can be created by calibrating the external burden of regulation (e.g. number of inspection visits, allowable business etc.) to the quality of management and the efficiency of internal incentives.

Evans (1999) suggests several routes through which incentive structures in banks can be improved: greater transparency and information disclosure by financial institutions; subjecting local banks to foreign competition; ensuring a closer alignment of regulatory and economic capital; greater use of risk-based incentives by supervisors, and lower capital adequacy requirements for banks headquartered in jurisdictions which comply with the BIS core principles of supervision.

Deposit insurance has two opposing sets of incentive structures with respect to systemic risk. By reducing the rationality of bank runs (though this is dependent on the extent and coverage of the deposit insurance scheme and the extent of any co-insurance) deposit insurance has the effect of lowering the potential for financial instability. On the other hand, the moral hazard implicit in deposit insurance may increase risk in the system. Given that there is little firm empirical evidence for bank runs in systems without deposit insurance, the second factor probably outweighs the first. This reinforces the case for deposit insurance to be accompanied by regulation to contain risk-taking by banks. Reviewing the experience of bank crises in various countries, Demirguc-Kunt and

Datragiache (1998) argue: 'Our evidence suggests that, in the period under consideration, moral hazard played a significant role in bringing about systemic banking problems, perhaps because countries with deposit insurance schemes were not generally successful at implementing appropriate prudential regulation and supervision, or because the deposit insurance schemes were not properly designed.'

Bhattacharya, et.al. (1998) consider various schemes to attenuate the moral hazard associated with deposit-insurance. These include cash-reserve requirements, risk-sensitive capital requirements and deposit insurance premia, partial deposit insurance, bank closure policy, and bank charter value.

There is an additional issue with respect to the incentive structure faced by state-owned, or state-controlled, banks as 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 behaviour, 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 a powerful ingredient in bank distress. Lindgren, et.al. (1996) found that banks that are, or were recently, state-owned or controlled were a factor in most of the instances of unsound banking in their sample of banking crises.

In its recent consultation document on capital adequacy the Basle Committee recognises 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 argues: '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, 1999a).

The key challenge, therefore, is how to align the incentives of financial firms with those of the regulatory objectives and at the same time minimise moral hazard for both consumers and regulated firms. Two general principles are outlined.

(7) There should be appropriate incentives for Bank Owners.

Bank owners have an important role in the monitoring of bank management and their risk-taking as, in the final analysis, bank owners absorb the risks of the bank. There are several ways in which bank owners can be appropriately incentivised:

- 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 and 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 particular moral hazard in that, because of the small amount owners have to lose, the more likely they are to condone excessive risk-taking in a gamble-for-resurrection strategy.
- Corporate governance arrangements should be such that equity holders actively supervise managers.
- Ownership structures should foster shareholder monitoring and oversight. This includes private ownership of banks to strengthen the monitoring of management performance and to minimise adverse incentives for managers
- Supervisors and safety net agencies should ensure that owners lose out in any re- , structuring operations in the event of failure. Failure to penalise shareholders in the restructuring of unsuccessful banks was a major shortcoming in some rescue operations in Latin America.
- In some countries (e.g. New Zealand) the incentive on owners has been strengthened by experimenting with a policy of increased personal liability of bank directors.

(8) **There should be appropriate internal incentives for management.**

Creating the right incentive structures for managers of financial institutions is equally as important as those for owners. Specific measures could include:

- Strong and effective risk analysis, management and control systems to be in place in all financial institutions for assessing risks *ex ante*, and asset values *ex post*. This includes systems and incentives 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 insisting upon 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 amongst bank managers. Remuneration packages may be related to regulatory compliance.
- Mechanisms need to be in place to ensure that loan valuation, asset classification, loan concentrations, inter-connected 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.
- A requirement for large banks to establish internal audit committees.

The key is that there need to be effective internal incentives for management to behave in appropriate ways, and the regulator has a role in ensuring 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.

(III) Monitoring and supervision

Because of the nature of financial contracts between financial firms and their customers (e.g. many are long-term in nature and involve a fiduciary obligation) there is a need for continuous monitoring of the behaviour of all financial firms. 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 (e.g. the central bank or other regulatory body), and other banks in the market. In practice, there can be only a limited monitoring role for depositors due to major information asymmetries which cannot easily be rectified, and because depositors face the less costly option of withdrawal of deposits. Saunders and Wilson (1996) review the empirical evidence on the role of informed depositors. The funding structure of a bank may also militate against effective monitoring in that, unlike with non-financial companies, creditors tend to be large in number but with each having a small stake.

Because most (especially retail) customers, and many other creditors, 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 behaviour of financial firms on behalf of customers. In effect, consumers delegate the task of monitoring to a dedicated agency.

However, in the process, adverse incentive effects may emerge in that, given that regulatory agencies conduct monitoring and supervision on a delegated basis, they 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 involved in the monitoring of 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.

Two principles related to official monitoring and supervision are indicated:

(9) Official agencies need to have sufficient powers and independence to conduct effective monitoring and supervision.

This means they need to be independent of political authorities and able to licence, refuse to licence, and to withdraw licences 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 agencies need to have power to establish rules about ownership and corporate structure of banks, and be able to establish minimum requirements for the competency and integrity of bank management.

(10) 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 needs to 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. A shift in emphasis towards monitoring risk-control mechanisms is needed, together with a recasting of the nature and functions of external regulation away from generalised

rule-setting towards establishing incentives and sanctions to reinforce such internal control systems. The recently issued consultative document by the Basle Committee on Banking Supervision (Basle Committee, 1999a) explicitly recognises that a major role in the supervisory process is the monitoring of 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.'

(IV) Intervention

A key component of a *regulatory regime* are intervention arrangements by regulatory agencies in the event of financial distress. The issue focuses on when and how intervention is to be made. The experience of banking crises (in both developed and developing countries) is that a well-defined strategy is needed for responding to the possible insolvency of financial institutions. The way such intervention is made has signalling and incentive effects for the future behaviour of financial institutions. The conditions under which intervention is made, the manner of intervention and its timing may, therefore, have powerful moral hazard effects. Important issues related to the credibility of intervention agencies also arise.

A key issue in this area relates to rules *versus* discretion in the event of bank distress: 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 because all the relevant circumstances cannot be set out in advance? The obvious *prima facie* advantage of discretion is that it is impossible to foresee all future circumstances and conditions for when a bank might become distressed and close to (or actually) insolvent. It might be judged that it is not always the right policy to close a bank in such circumstances.

On the other hand, there are strong arguments against allowing discretion and in favour of a rules approach to intervention. Firstly, it enhances the credibility of the intervention agency in that market participants, including banks, have a high degree of certainty that action will be taken. Secondly, the danger of discretion is that it increases the probability of forbearance which experience suggests usually eventually leads to higher costs when intervention is finally made. Thirdly, and based on the experience of some countries which have recently experienced banking distress, it removes the danger of undue political interference in the disciplining of banks. Experience in many countries indicates that supervisory authorities face substantial pressure to

delay action and intervention. Fourthly, it is likely to have a beneficial impact on *ex ante* behaviour of financial firms. A rules-based approach, by removing any prospect that a hazardous bank might be treated leniently, enhances the incentives for bank managers to manage 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. Finally, a rules approach guards against the hazard associated with risk-averse regulators who themselves might be inclined not to take action for fear that intervention will be interpreted as a regulatory failure, and who might be tempted to allow a firm to trade-out of its difficulty. This amounts to the regulator 'gambling for resurrection'. In this sense, a rules approach may be of assistance to the intervention agency as its hands are tied.

The BIS has argued as follows: 'Above all, reducing incentives to excessive risk-taking will depend on the credibility of the authorities commitment to limiting intervention to the necessary minimum in the event of turmoil. In much the same way as the monetary authorities' anti-inflation commitment, it needs to be demonstrated in consistent action', (BIS, 1991). The need to maintain the credibility of supervisory agencies creates a strong bias against forbearance. The overall conclusion is that there should be a clear bias (though not a bar) against forbearance when a bank is in difficulty**.** While there should be a strong presumption against forbearance, and that this is best secured through having clearly-defined rules, there will always be exceptional circumstances when forbearance might be warranted in the interests of systemic stability. However, when it is exercised the regulatory agency should be made accountable for its actions.

In some respects there is a trade-off between credibility and flexibility with respect to intervention arrangements. Bruni and Paterno (1994) analyse the trade-off between rules and discretion in bank supervision in a game-theoretic framework. They argue that time-consistency and credibility play a central role. They conclude that the optimum arrangement is for a no bail-out commitment fixed by law but with special exemptions.

The transition to a no-bail-out strategy is unlikely to be a smooth, trouble-free process because of the incentive structures of supervisors. This is partly a reflection of the interaction between the incentive structures of supervisors and those of politicians. Kane (1991) suggests that a conflict of interest can emerge (an 'incentive breakdown') and that this partly explains the bail-out of the US savings and loans institutions in the 1980s. He argues that supervisors intervened under political pressure and that this resulted in a bail-out of insolvent institutions.

Intervention arrangements also have important implications for the total cost of intervention (e.g. initial forbearance often has the effect of raising the eventual cost of subsequent intervention), and the distribution of those costs between tax-payers and other agents. Different intervention arrangements may 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.

All this amounts to the need for care when devising bank restructuring policies, and the need for appropriate incentives for intervention agencies. Several principles can be established to guide the timing and form of intervention:

(11) 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 so as to reduce the probability of recourse being made to public funds.

It is well established that, dependent upon how deposit insurance schemes are constructed (most especially with respect to which deposits are insured and the extent of any co-insurance) moral hazards can be created: depositors may be induced to act with less care, and under some circumstances they may be induced to seek risky banks on the grounds that a one-way-bet is involved. At the same time, 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.

(12) 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. There should always be an element of co-insurance to the extent that less than 100 percent of any deposit is insured.

(13) There needs to be a well-defined strategy for responding to the possible insolvency of financial institutions.

A regulatory regime that avoided any possibility of bank failure would certainly imply over-regulation to an extent that would impose economic costs on society and the efficiency of the financial system. Occasional bank failures will always be a part of a well-functioning financial system. This means it is necessary to have a strategy with respect to how to respond to bank failures when they occur or when the predicament of individual banks is evidently deteriorating. 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 enviable 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.

(14) There should be a clear bias (though not a bar) against forbearance when a bank is in difficulty.

A central 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 in favour of a strong case for pre-commitment and rules of behaviour 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 there should be a graduated series of responses from the regulator as capital diminishes.

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. There is an additional danger of regulatory capture, and that a risk-averse regulator may simply delay intervention in order to avoid blame. The need to maintain credibility creates a strong bias against forbearance.

(15) Time-inconsistency and credibility problems should be addressed through pre-commitments and graduated responses with the possibility of over-rides

Some analysts have advocated various forms of pre-determined intervention though a general policy of Structured Early Intervention and Resolution. Goldstein and Turner (1996) argue that SEIR is designed to imitate the remedial action which 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 US. These specify graduated intervention by regulators with pre-determined responses triggered by capital thresholds.

Under a related concept (the 'pre-commitment 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 pre-commitment level. Penalties are imposed when capital falls below these levels. There are several advantages to a pre-commitment strategy: it avoids the necessity of detailed and prescriptive regulation, it creates powerful incentives for bank decision-makers (the choice of an excessive amount of capital imposes costs on the bank while choosing too low a level of capital risks the imposition of penalties), and it is flexible as it offers scope for each bank to choose a level of capital which is appropriate to its own particular circumstances. On the other hand, Estrella (1998) argues that the precise design of the penalty structure is likely to be complex.

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

(16) 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 favourable treatment at public expense.

(17) Prompt action should be taken to prevent problem institutions extending credit to high risk borrowers, or capitalising unpaid interest on delinquent loans into new credit.

Execution of this principle is designed to reduce the moral hazard risk in bank restructuring 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 nationalisation, or closure.

(18) 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, etc.

(19) Barriers to market re-capitalisation should be minimised.

A particular barrier that is often encountered relates to the market in corporate control. Governments or regulatory agencies frequently impose 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 are allowed to purchase domestic banks, even though this is often a solution for an insolvent bank which can be effectively re-capitalised by being purchased by a stronger domestic or foreign institutions.

(20) Regulators should be publicly accountable through credible mechanisms.

Regulatory agencies have considerable power 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 be a protection against political interference in the decisions of regulatory agencies, and it can 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 to 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.

Assessment

In the process of re-structuring following a financial crisis financial market functioning needs to be restored as quickly as possible while minimising 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 on-going 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 a banking crisis can be transformed if appropriate measures are taken. Several policy measures were adopted both to restore the banking system and to lower the probability of similar crises re-occurring:

- 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 privatisation of banks and the relaxation of entry barriers. As a result, foreign ownership of banks in Mexico now exceeds 20 per cent.
- 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, the policy strategy has to be to reconstitute the banking system (including re-capitalising banks) and to apply measures designed to significantly lower the probability of a crisis re-emerging.

(V) Market discipline

Monitoring is not only conducted by official agencies whose specialist task it is. In well-developed regimes, the market also has incentives to monitor the behaviour of financial firms. The disciplines imposed by the market can be as powerful as any sanctions imposed by official agencies. The disciplining role of the markets (including the inter-bank market) was weak in the crisis countries of South East Asia in the 1990s. This was due predominantly to the lack of disclosure and transparency of banks, and the fact that little reliance could be placed on the quality of accountancy data provided in bank accounts. In many cases standard accountancy and auditing procedures were not rigorously applied, and in some cases there was wilful mis-representation of the financial position of banks and non-financial companies.

Within the general framework of monitoring, a particular dimension is the extent to which the market undertakes monitoring and imposes discipline on the risk-taking of banks. Given how the business of banking has evolved and the nature of the market environment in which banks now operate, less reliance can be placed on supervision by official agencies, and a greater role needs to be played by the market. Market disciplines need to be strengthened. The issue is not so much focussed on market *versus* agency discipline, but the mix of all aspects of monitoring, supervision and discipline. It has been noted that 'Broader approaches to bank supervision reach beyond the issues of defining capital and accounting standards, and envisage co-opting other market participants by giving them a greater stake in bank survival. This approach increases the likelihood that problems will be detected earlier....[it involves] broadening the number of those who are directly concerned about keeping the banks safe and sound,' (Caprio and Honahan, 1998)

A potentially powerful disciplining power of markets derives from 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, et.al., 1996)

Some analysts (e.g. Calomiris, 1997) are sceptical 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, he advocates banks being required to issue a minimum amount of subordinated and uninsured debt as part of the capital base. This would involve having private sector funds that could not be withdrawn from the bank and which would effectively be put at risk because the authorities would have no incentive to rescue the holders of such debt. Subordinated debt holders would therefore 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 traded debt. In particular, because of the nature of debt contracts, holders of a bank's subordinated debt 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. Movements in the price of a bank's subordinated debt also serve as a signal to official supervisors.

A scheme along these lines has been introduced in Argentina whereby holders of subordinated debt must be entities of substance which are independent of the bank's shareholders, and it is required that the issue of debt must be in relatively lumpy amounts on a regular basis, (Calomiris, 1997). However, while there is a potentially powerful role for market discipline to operate through the pricing of subordinated debt, the interests of holders of such debt do not necessarily precisely coincide with those of depositors or the public interest more generally, (Dewatripont and Tirole, 1994). It is not, therefore, a substitute for official monitoring. It is intended as a mechanism to extend the role of market monitoring.

A further mechanism to enhance market discipline is to link deposit insurance premiums paid by banks to the implied risk of the bank as incorporated in subordinated debt yields or classifications of rating agencies.

The merit of increasing the role of market discipline 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 inter-bank interest rates long before the Bank of England closed the bank.

(21) 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, if not in some cases endorse, unwarranted entry barriers, restrictive practices, and other anti-competitive mechanisms. Historically regulation in finance has often been anti-competitive 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 compared with domestic institutions. It is generally the case that competition that develops from outside a system has a greater impact on competition and efficiency than 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 over-optimistic expectations.

(22) Regulation should reinforce, not replace, market discipline, and the regulatory regime should be structured so as to provide greater incentives than exist at present for markets to monitor banks.

In many countries, market discipline (e.g. through disclosure) need to be strengthened. This means creating incentives for private markets to reward good performance and penalise hazardous behaviour. Regulation and supervision should complement and support, and never undermine, the operation of market discipline.

(23) Whenever possible, regulators should utilise 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. Flannery (1998) suggests that market information may improve two features of the overall process: (1) it permits regulators to identify developing problems more promptly, and (2) it provides regulators with the incentive and justification to take action more quickly once problems have been identified. He concludes that market information should be incorporated into the process of identifying and correcting problems.

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 UK banks by Hall and Miles (1990). Similar analysis for countries which had recently liberalised their financial systems has been applied by Fischer and Gueyie (1995). On the other hand, as there are clear limitations to such an approach (see Simons and Cross, 1991), it would be hazardous to rely exclusively on it. For instance, it assumes that markets have sufficient data upon 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 bank securities.

(24) 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.

Assessment

While market discipline is potentially 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, there are limits imposed on the extent to which the market in corporate control (the take-over market) is allowed to operate. In particular, there are 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 under-capitalised banks.
- The market is able to efficiently price bank securities and inter-bank 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 cartelised.
- 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 to 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 which 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. The recent consultative document issued by the Basle Committee on Banking Supervision incorporates the role of market discipline as one of the three pillars of a proposed new approach to banking supervision. The Committee emphasises that its approach 'will encourage high disclosure standards and enhance the role of market participants in encouraging banks to hold adequate capital.'

(VI) Corporate governance

There are several reasons why corporate governance arrangements operate differently with banks than with other types of firms. Firstly, banks are subject to regulation in the interests of systemic stability and consumer protection which adds an additional dimension to corporate governance arrangements. Regulation is partly a response to limitations in corporate governance mechanisms in banks. Secondly, banks are also subject to continuous supervision and monitoring by official agencies. This has two immediate implications for private corporate governance: shareholders and

official agencies are to some extent duplicating monitoring activity, and the actions of official agencies may have an impact on the incentives faced by other monitors, such as shareholders and even depositors. However, for reasons already outlined, official and market monitoring are not perfectly substitutable. Thirdly, banks have a fiduciary relationship with their customers (e.g. they are holding the wealth of depositors) which is generally not the case with other types of firm. This creates additional principal agent relationships (and potentially agency costs) with banks that generally do not exist with non-financial firms.

A fourth reason why corporate governance mechanisms are different in banks is that there is a systemic dimension to banks and, because in some circumstances (e.g. presence of externalities) the social costs of bank failures may exceed private costs, there is a systemic concern with the behaviour of banks that does not exist with other companies. Fifthly, banks are subject to safety-net arrangements that are not available to other companies. This has implications for incentive structures faced by owners, managers, depositors and the market with respect to monitoring and control.

All of these considerations have an impact on the two general mechanisms for exercising discipline on the management of firms: internal corporate governance and the market in corporate control. While there are significant differences between banks and other firms, corporate governance issues in banks have received remarkably little attention. A key issue, as noted by Flannery (1998), is that little is known about how the two governance systems (regulation and private) interact with each other and, in particular, the extent to which they are complementary or offsetting.

A key issue in the management of financial firms is the extent to which corporate governance arrangements are suitable and efficient for the management and control of risks. The Financial Services Authority in the UK has argued as follows: 'Senior management set the business strategy, regulatory climate, and ethical standards of the firm.....Effective management of these activities will benefit firms and contribute to the delivery of the FSA's statutory objectives.' Corporate governance arrangements include issues of corporate structure, the power of shareholders to exercise accountability of managers, the transparency of corporate structures, the authority and power of directors, internal audit arrangements, and the 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 about 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 Basle Committee has rightly argued that effective oversight by a bank's board of directors and senior management is critical. It suggests that the board should approve overall policies of the bank and its internal systems. It argues in particular that: 'lack of adequate corporate governance in the banks seems to have been an important contributory factor in the Asian crisis. The boards of directors and management committees of the banks did not play the role they were expected to play', (Basle Committee, 1999b).

Useful insights have been provided by Sinha (1999) who concludes, for instance, that while in the UK the regulatory authorities approve the appointment of non-executive directors of banks, such directors are generally considerably less effective in monitoring top management than is the case in manufacturing firms. Sinha compares corporate governance arrangements in banks and manufacturing firms in the UK and finds that top management turnover in banks is less than in other firms, and that turnover seems not to be related to share price performance. Prowse (1997) also shows that accountability to shareholders, and the effectiveness of board monitoring, is lower in banks than in non-financial firms.

An interesting possibility is the extent to which all this results from moral hazard associated with official regulation and supervision: this is a further example of possible negative trade-offs within a *regulatory regime*. It could be the case that, as regulatory authorities impose regulation and monitor banks, the incentive for non-executive directors and shareholders to do so is reduced. The presumption may be that regulators have more information than do non-executive directors and shareholders, and that their own monitoring would only be wastefully duplicating that being conducted by official supervisors. Further research is needed into the role of non-executive directors and institutional investors in the effectiveness of corporate governance mechanisms in banks.

The Basle Committee has recognised that different structural approaches to corporate governance exist across countries. While it has not, therefore, taken a view with respect to any particular ideal model, the Committee encourages any practices which strengthen corporate governance in banks. The general principle should be that:

(25) 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 non-executive directors on the board; an independent audit committee; four-eyes principle for important decisions involving the risk profile of the bank; transparent ownership structure; internal structures that enabled the risk profile of the bank to be clear, transparent and managed; and monitored risk analysis and management systems. According to the Basle Committee, good corporate governance includes:

· establishing strategic objectives and a set of corporate values that are communicated throughout the banking organisation;

· setting and enforcing clear lines of responsibility and accountability throughout the organisation;

• ensuring that board members are qualified for their positions, have a clear understanding of their role in corporate governance and are not subject to undue influence from management or outside concerns;

• ensuring that there is appropriate oversight by senior management;

• effectively utilising the work conducted by internal and external auditors;

· ensuring that compensation packages are consistent with the bank's ethical values, objectives, strategy and control environment;

· conducting corporate governance in a transparent manner.

7 CONCLUSIONS AND ASSESSMENT

The concepts of a *regulatory regime* and *regulatory strategy* have been introduced. Seven components of the regime have been identified: each are important but none alone are sufficient for the objectives of regulation to be achieved. They are complementary and not alternatives. Regulatory strategy is ultimately about optimising the outcome of the overall regime rather than any particular components. Regulation in particular needs to consider that, if it is badly constructed or taken too far, there may be negative impacts on the other components to the extent that the overall effect is diluted. However, there may also be positive relationships between the components, and regulation can have a beneficial effect on incentive structures within financial firms.

Effective regulation and supervision of banks has the potential to contribute to the stability and robustness of financial systems. However, there are also distinct limits to what they can achieve in practice. Although regulation is an important part of the *regulatory regime*, the other components

are equally important. In the final analysis, there is no viable alternative to placing the main responsibility for risk management and general compliance on the shoulders of the management of financial institutions. Management must not be able 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 supervision of financial firms by shareholders, managers and the markets. On the contrary, regulation and supervision can be constructed in a way that enhances this responsibility.

The objective is to optimise the outcome of a regulatory strategy in terms of mixing the components of the regime, bearing in mind that negative trade-offs may be encountered. The emphasis is on the combination of mechanisms rather than alternative approaches to achieving the objectives. The skill of the regulator in devising a regulatory strategy lies in how the various components in the regime are combined, and how the various instruments available to the regulator (rules, principles, guidelines, mandatory disclosure requirements, authorisation, supervision, intervention, sanctions, redress, etc.) are to be used.

Several shifts within the *regulatory regime* have been outlined in order to maximise its overall effectiveness and efficiency:

· Less emphasis to be given to formal and detailed prescriptive rules dictating the behaviour of regulated firms.

· A greater focus to be given to incentive structures within regulated firms, and how regulation might have a beneficial impact on incentives.

· Market discipline and market monitoring of financial firms need to be strengthened within the overall regime.

· Greater differentiation between regulated firms.

- Less emphasis to be placed on detailed and prescriptive rules and more on internal risk analysis, management and control systems. In some areas, externally imposed regulation in the form of prescriptive and detailed rules is becoming increasingly inappropriate and ineffective. For instance, with respect to prudential issues, more reliance should be placed on institutions' own internal risk analysis, management and control systems.
- Corporate governance mechanisms for financial firms need to be strengthened so that owners play a greater role in the monitoring and control of regulated firms, and compliance issues are identified as being the ultimate responsibility of a nominated main board director.

Overall, the lesson of recent banking crises is 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, there needs to be good and timely information about banks' activities and balance sheet positions. Regulation, supervision and information disclosure are not alternatives.

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