
The Problem and Why an IBS Is Needed

The Frequency and Severity of Banking Crises

The recent history of banking crises points to a striking finding: *during the past 15 years, banking crises in developing countries have been unusually frequent and severe*—relative to both their own record during the preceding three decades and to experience in industrial countries (Caprio and Klingebiel 1996a, 1996b; Honohan 1996; Kaminsky and Reinhart 1995; Lindgren, Garcia, and Saal 1996; Sheng 1996; Sundararajan and Balino 1991).

According to Lindgren, Garcia, and Saal (1996), 73 percent of the International Monetary Fund's (IMF) member countries experienced at least one bout of significant banking-sector problems from 1980 to 1996.¹ In Africa, Asia, and the transition economies of Central and Eastern Europe, this figure rises to more than 90 percent. Appendix A details the countries and time periods involved.

As to the severity of banking crises, bank losses or public-sector resolution costs amounted to 10 percent or more of GDP in at least a dozen developing-country episodes during the past 15 years. Table 2.1, adapted from Caprio and Klingebiel (1996a), lists these severe banking crises.

1. Lindgren, Garcia, and Saal (1996) define banking crises as cases where there were bank runs or other substantial portfolio shifts, collapses of financial firms, or massive government intervention. They use the adjective "significant" to describe extensive banking-sector unsoundness short of a crisis. Using this methodology, they classify 41 episodes (in 36 countries) as crises, and another 108 episodes as significant banking-sector problems. As a whole, the identification of banking crises is quite consistent across different studies.

Table 2.1 Severe banking crises, 1980–96

Country (time period of crisis)	Estimate of total losses/costs (percentage of GDP)
Latin America	
Argentina (1980–82)	55
Chile (1981–83)	41 ^a
Venezuela (1994–95)	18
Mexico (1995)	12–15 ^b
Africa	
Benin (1988–90)	17
Cote d'Ivoire (1988–91)	25
Mauritania (1984–93)	15
Senegal (1988–91)	17
Tanzania (1987–95)	10 ^c
Middle East	
Israel (1977–83)	30 ^d
Transition countries	
Bulgaria (1990s)	14
Hungary (1995)	10
Industrial countries	
Spain (1977–85)	17
Japan (1990s)	10 ^e

a. 1982–85.

b. accumulated losses to date.

c. in 1987.

d. in 1983.

e. estimate of potential losses.

Source: Caprio and Klingebiel (1996a).

Employing the less demanding definition of a crisis as an exhaustion of all or most of the banking system's capital, Caprio and Klingebiel (1996a) find that there have been 67 such crises since 1980, involving 52 developing countries; moreover, this clearly represents a lower bound on the true number of developing-country banking crises, since information for many of the transition economies was not available.

One recent study by Honohan (1996) estimated that resolution costs of banking crises in developing and transition economies since 1980 have approached \$250 billion.² While industrial countries have had some nota-

2. Honohan (1996) arrives at this figure using a two-step procedure. In the first step, he regresses resolution costs of banking crises on the share of nonperforming loans, using a sample of developing countries for which data on both variables are available. In the second step, he uses that estimated regression to predict resolution costs for those developing countries where only data on nonperforming loans are available.

ble banking crises of their own over this period (Spain, 1977-85; Finland, Norway, and Sweden, in the late 1980s/early 1990s; and the current Japanese bad loan problem), they have typically been less severe (relative to GDP) than in developing countries.³ For example, the US saving and loan debacle of 1984-91 (with an estimated resolution cost of two to three percent of GDP) does not even make Caprio and Klingebiel's (1996a) global list of systemic banking crises; instead, it becomes grouped with other borderline and smaller banking crises.⁴

The recent wave of banking crises in developing countries apparently does not reflect a return to the incidence of crises in earlier periods; historical studies can find no historical precedent for the last quarter century's dismal track record of banking problems (Honohan 1996).⁵ Within the last 25 years, the frequency of banking crises among emerging economies and smaller industrial countries has been much higher during the 1980s and 1990s than during the 1970s.⁶

The Costs of Banking Crises: Impact on Local Economies and Potential Spillover Effects to Industrial Countries

A second important finding is that *banking crises are costly for the local economies involved* (Bank for International Settlements [BIS] 1996; Caprio and Klingebiel 1996b; Goldstein and Turner 1996; Lindgren, Garcia, and Saal 1996). In addition, *the increasing weight and integration of emerging economies in international financial markets have made potential spillover effects to industrial and to other developing countries a more relevant concern* (BIS 1996; Goldstein and Turner 1996; G-10 1996).

3. As illustrated in table 2.1, the Spanish banking crisis of 1977-85 is an exception to this general proposition; the Japanese banking crisis of the 1990s may also, in the end, have resolution costs (relative to GDP) that are high by industrial-country standards. Caprio and Klingebiel (1996a) place the resolution costs of the Finnish (1991-93), Swedish (1991), and Norwegian (1987-89) banking problems at 8, 6, and 4 percent of GDP, respectively.

4. Similarly, Lindgren, Garcia, and Saal (1996) classify the US saving and loan problem as a significant banking problem but not as a crisis.

5. Although the 1950-75 period was an unusually tranquil one in terms of banking failures, Honohan (1996) makes some rough comparisons with periods and episodes prior to 1950 to support his claim that recent bank crashes are unprecedented in terms of their size and frequency.

6. In their sample of 20 emerging economies and smaller industrial countries, Kaminsky and Reinhart (1995) find that the average annual frequency of banking crises has climbed from 0.3 in the 1970s to 1.4 in the 1980-95 period.

Table 2.2 Role of banks in financial intermediation in developing countries, 1994

Country	Bank share^a in financial intermediation
India	80
Indonesia	91
Korea, South	38
Malaysia	64
Singapore	71
Taiwan	80
Thailand	75
Argentina	98
Brazil	97
Chile	62
Colombia	86
Mexico	87
Venezuela	92

a. Percentage of the assets of banks and nonbank financial institutions.

Source: Goldstein and Turner (1996).

Banks hold the lion's share of financial assets in developing countries (see table 2.2). Banks operate the payments system, provide liquidity to fledgling securities markets, and are major purchasers of government bonds. And over the past two decades, bank liabilities have grown much faster than economic activity in developing countries (Honohan 1996). It is not surprising then that banking crises in developing countries are associated with large and wide-ranging negative externalities.

As indicated above, banking crises have been linked to massive government bailouts, making it more difficult to control fiscal deficits in developing countries.⁷ But the costs for the local economies involved go well beyond the fiscal implications. Specifically, research suggests that banking crises exacerbate downturns in economic activity, prevent savings from flowing to its most productive use, reduce the availability and increase the cost of credit to small- and medium-sized firms, and seriously constrain the flexibility of monetary policy (including, among other things, the willingness to increase interest rates to deal with large, abrupt shifts in international capital flows) (Bernanke 1983; BIS 1996; Caprio and Klingebiel 1996b; De Gregorio and Guidotti 1992; Goldstein and Turner 1996; Kaminsky and Reinhart 1995; Lindgren, Garcia, and Saal 1996; Mishkin 1994).

7. See Edwards (1995) on how large-scale public bailouts of banks have handicapped efforts at fiscal consolidation in Latin America. Note that even if the fiscal costs of bank bailouts are viewed as simply a transfer payment, the way this transfer is financed (e.g., inflation or other taxes) can be costly (Honohan 1996; Caprio and Klingebiel 1996b).

Between 1991 and mid-1994, the share of nonperforming loans in Mexico's banking system increased from about 4 to 8 percent. Calvo and Goldstein (1996) have argued that banking-system fragility best explains why from April to December 1994 the Mexican authorities engaged in a large-scale substitution of lower-yielding dollar-indexed government securities (*tesobonos*) for higher-yielding peso-denominated ones (*cetes*) while acting to offset the effects of declining private capital inflows and international reserves on the money supply. These actions were aimed at limiting the rise in interest rates and buying time for the banks to recover. Yet, by thwarting the adjustment process, Mexican authorities magnified the fall in international reserves and turned a currency crisis into a debt crisis. So long as the local banking system is close to the edge, authorities will be responding to volatile private capital flows with one hand tied behind their backs.

Because developing countries are now larger importers, debtors, and recipients of international capital flows than they used to be, there is also an increased risk that banking crises in emerging economies will have unfavorable externalities on industrial countries (as well as other developing countries). Indeed, as will be emphasized, such spillovers provide one of the incentives for industrial-country support of an IBS.

Developing countries now account for approximately 45 percent of global output (using purchasing-power-parity weights), 36 percent of global foreign direct investment inflows, 30 percent of global portfolio capital flows, 11 percent of global stock market capitalization, 12 percent of global issuance of international bonds, and 11 to 13 percent of global banking assets (Barth, Nolle, and Rice 1996; IFC 1996; IMF 1995, 1996a; Quereshi 1996; World Bank 1997). Two of the world's six largest foreign exchange trading centers (Hong Kong and Singapore) are not G-10 countries (BIS 1996). By each of these indicators, the weight of developing countries in the global economy is considerably larger than it was 5 or 10 years ago.⁸

Industrial countries are increasingly affected by the economic fortunes of developing countries. The latter now purchase roughly 25 percent of industrial-country exports. From 1990 to 1996, developing countries received nearly \$1.1 trillion in net private capital flows from industrial countries (IMF 1996a). By the end of 1995, banks in the BIS reporting area had over \$717 billion in outstanding claims against developing-country banks (\$46 billion more than their liabilities to these banks); moreover, there were some large net claims on banks in individual developing countries/territories (e.g., \$215 billion on banks in Hong Kong, \$117 billion on banks in Singapore, \$68 billion on banks in Thailand, and \$45 billion

8. For example, in 1990 the developing-country share of global foreign direct investment flows was roughly 15 percent, while its share of global portfolio equity flows was less than 2 percent (World Bank 1997).

on banks in Korea)(IMF 1996a).⁹ Nonresidents reportedly held about 80 percent of the *tesobonos* outside the banking system at the time of the Mexican crisis (BIS 1995). From 1990 to 1994, more than 30 percent of new international investments by US mutual funds were directed at emerging markets, and by the end of 1995, US-based open-end mutual funds had approximately \$36 billion invested in emerging markets. The analogous figure for US pension funds is estimated at \$50-70 billion (World Bank 1997). Empirical studies indicate that banking crises in developing countries (as in the recent Mexican case) often are linked to subsequent currency crises (Kaminsky and Reinhart 1995), and the prominent role banks play in developing-country equity and bond markets suggests that these asset markets might also be affected. For example, bank stocks (in 1995) comprised 14 percent of the International Financing Corporation's (IFC) emerging-market composite equity index, and there are a number of emerging economies (e.g., Jordan, the Philippines, Poland, Portugal, Sri Lanka, and Thailand) where the financial sector (including insurance and real estate) had the largest share (typically exceeding 45 percent) of the local equity market's capitalization (IFC 1996). The Mexican crisis also revealed that the contagion of financial disturbances across developing countries can be marked, at least in the short term.¹⁰

As noted above, bank losses often become liabilities of developing-country governments. In turn, over the past 15 years, all IMF loans have gone to developing countries.

As table 2.3 shows, private credit-rating agencies continue to assess the likelihood that banks in developing countries might need financial assistance at significantly higher levels, on average, than in industrial countries. Whereas over 90 percent of the developing-country banks listed in table 2.3 fall into one of Moody's bottom-five financial strength rating categories, less than 40 percent of industrial-country banks do.

To be sure, the potential cross-border spillover effects of developing-country banking crises should be kept in perspective. Spillovers are not yet nearly as large as those that would be associated with banking crises in the major industrial countries (Herring and Litan 1995).¹¹ Some claims on developing countries are collateralized (e.g., repurchase agreements), and now that private capital flows to developing countries are comprised markedly less by bank loans and more by equity and bond flows, the investor base in industrial countries is better diversified than it was at the outbreak of the 1980s debt crisis (when US money-center banks found

9. The figures refer to net outstanding credit at year end 1995.

10. For evidence of such contagion, see IMF (1995) and Calvo and Reinhart (1996).

11. Whereas exposure to emerging markets has been growing rapidly over the past five years, US pension funds and mutual funds have only about 2 percent of their total assets invested in emerging markets (World Bank 1997).

Table 2.3 Moody's bank financial strength ratings: industrial versus developing countries, May 1996

	A	B+	B	C+	C	D+	D	E+	E	Total
Industrial Countries										
Australia	0	0	3	4	4	1	0	0	0	12
Austria	0	0	1	2	2	2	0	0	0	7
Belgium	0	2	2	2	1	0	0	0	0	7
Canada	0	1	5	4	0	0	0	0	0	10
Denmark	0	0	1	1	1	0	0	0	0	3
Finland	0	0	0	0	0	3	0	0	1	4
France	1	2	5	4	5	5	4	0	1	27
Germany	3	2	4	8	6	3	0	0	0	26
Hong Kong	0	0	2	0	5	0	0	0	0	7
Italy	0	0	3	6	4	2	0	1	2	18
Japan	0	0	3	0	10	9	17	7	3	49
Luxembourg	0	0	3	0	0	0	0	0	0	3
Netherlands	3	1	0	1	0	0	0	0	0	5
Norway	0	0	0	0	3	1	0	0	0	4
Spain	1	3	5	1	2	0	0	0	0	12
Sweden	0	0	0	1	4	0	0	0	0	5
Switzerland	1	2	1	1	1	1	0	0	0	7
United Kingdom	1	5	9	5	5	1	1	0	0	27
United States	3	21	68	113	80	11	0	0	0	296
Total	13	42	115	154	135	39	22	8	7	535
Developing countries										
Argentina	0	0	0	0	2	3	4	1	0	10
Brazil	0	0	0	2	1	8	3	1	2	17
Chile	0	0	0	4	3	3	0	0	0	10
China	0	0	0	0	0	1	1	3	0	5
Colombia	0	0	0	1	3	0	2	0	0	6
Czech Republic	0	0	0	0	0	2	2	1	0	5

(continued on next page)

their impaired claims on developing countries to be larger than their capital) (Cline 1995; World Bank 1997). Still, the potential spillover effects of developing-country banking crises are already far from trivial.¹² In addition, most analysts expect industrial- and developing-country financial interdependence to increase over the medium term.

Among the factors expected to drive increasing private capital flows to developing countries over the next decade are: relatively high expected

12. A recent report on sovereign liquidity crises by the Deputies of the G-10 (1996, iv) arrived at a similar conclusion: "... The Working Party recognized that structural weaknesses in the banking systems of debtor [developing] countries could seriously aggravate liquidity crises and pose difficulties for financial systems in lender [industrial] countries." Likewise, W. White (1996, 22) concludes that "... many emerging economies already have domestic financial systems of such a size that systemic problems locally could have important systemic effects internationally."

Table 2.3 (continued)

	A	B+	B	C+	C	D+	D	E+	E	Total
Hong Kong	0	0	2	0	5	0	0	0	0	7
Hungary	0	0	0	0	0	2	2	1	0	5
India	0	0	0	0	0	2	2	1	1	6
Indonesia	0	0	0	0	0	3	4	2	2	11
Korea	0	0	0	0	1	4	3	2	0	10
Malaysia	0	0	0	1	0	0	0	0	0	1
Mexico	0	0	0	0	0	0	3	4	2	9
Oman	0	0	0	0	0	3	1	0	0	4
Panama	0	0	0	0	1	0	0	0	0	1
Philippines	0	0	0	1	1	5	2	0	0	9
Poland	0	0	0	0	0	3	3	1	0	7
Singapore	0	3	0	1	2	0	0	0	0	6
South Africa	0	0	0	0	3	2	0	0	0	5
Taiwan	0	0	0	0	5	0	0	0	0	5
Thailand	0	0	0	2	1	1	3	0	0	7
Venezuela	0	0	0	0	0	2	3	0	0	5
Total	0	3	2	12	28	44	38	17	7	151

Note: As described in IMF (1996b), Moody's Investors Service introduced a new rating system for financial institutions in 1995, called the Bank Financial Strength Rating (BFSR). Whereas an institutions's long-term debt rating indicates the agency's assessment of the likelihood of default, the BFSR represents an opinion of a bank's intrinsic strength, or alternatively, the likelihood that the institution will require financial assistance from third parties such as its owners or the government. The BFSR does not incorporate the probability that such support will be forthcoming, only the probability that it will be needed. Hence, a bank may have a relatively low BFSR, but a higher long-term credit rating, reflecting the opinion that third-party support would be forthcoming to prevent a default. In arriving at the BFSR, Moody's considers the bank's financial fundamentals, its franchise value, its main risk factors, the macroeconomic environment, and the quality of banking regulation and supervision. Differences in average BFSRs across countries, therefore, could indicate relative weaknesses in the overall soundness of the banking system, due either to poor bank performance or inadequacies in the regulatory infrastructure.

Sources: Moody's Investors Source; IMF (1996b).

rates of return (based in part on projected growth rates of real output in the developing countries that are about twice as high as for the industrial countries), large untapped opportunities for risk diversification by industrial-country investors (optimal portfolio considerations suggest that the share of developing-country securities in the portfolios of industrial-country institutional investors should be at least four or five times greater than the existing share), globalization of production, growing liquidity and maturity of developing-country securities markets, growing importance of institutional investors, and liberalization and policy reform in developing countries.¹³ As but one additional indicator of recent trends,

13. See World Bank (1997)

in 1992 there were 449 international emerging-market equity funds with \$29 billion in net assets; by 1995, there were 1254 such funds with almost \$109 billion in net assets.

Because banking crises in developing countries, inter alia, depress growth and foreign trade, strain debt-servicing capacity, and eventually often wind up as liabilities of developing-country governments, industrial countries too have a stake in promoting stronger banking systems in the developing world.

The Origins of Banking Crises in Developing Countries

If banking crises in developing countries¹⁴ are pervasive and costly, what lies behind these crises? Recent research shows that *banking crises in developing countries have multiple origins.*

Developing-country banks operate within a more volatile environment than do their industrial-country counterparts. Volatility in the terms of trade, cost of borrowing on international markets, private capital flows, real exchange rates, and growth and inflation rates have been much higher on average during the past two decades in developing countries than in industrial countries.¹⁵ Banks in those countries, therefore, face relatively high credit and market risk. Moreover, as I shall document later on banks in developing countries—with several notable exceptions—have not chosen to compensate for this higher risk either by holding significantly more capital than banks in the largest industrial countries, or by being more conserva-

14. The arguments summarized in this subsection are developed more fully in Goldstein and Turner (1996).

15. Hausman and Gavin (1995) estimate that over the past 20 years the standard deviation of changes in the terms of trade in Latin American emerging markets is about twice as high on average as in industrial countries. Caprio and Klingebiel (1996a) show that three-quarters of developing countries experiencing a banking crisis suffered at least a 10 percent decline in their terms of trade just prior to a banking crisis. Studies by Calvo, Leiderman, and Reinhart (1993) and Dooley, Fernandez-Arias, and Kletzer (1994) suggest that movements in international interest rates explain between one-half and two-thirds of the surge in private capital inflows to developing countries in the 1990s. Owing mainly to highly variable inflation rates, Hausman and Gavin (1995) report that the volatility of real exchange rates in Latin America has been about twice that of industrial countries over the past two decades. BIS (1996) and Hausman and Gavin (1995) document the greater volatility of growth and inflation rates in developing countries (vis-a-vis industrial countries) over the past 15 years; countries with the most variable growth and inflation performance also tend to display relatively high variability in bank deposits and bank credit growth (BIS 1996). Kaminsky and Reinhart (1995) provide evidence that recessions have been one of most reliable leading indicators of banking crises in developing countries. On the whole, the operating environment for banks has been more volatile in Latin American emerging economies than for Asian ones.

Table 2.4 Foreign-owned banks

Country	Percentage share of total assets
Hong Kong	78.0 ^a
India	7.3
Indonesia	3.7
Korea	5.1
Malaysia	15.9
Singapore	80.0
Taiwan	4.7
Thailand	7.1
Argentina	21.7
Brazil	9.4
Chile	21.4
Colombia	3.6
Mexico	1.2
Venezuela	1.2
Russian Federation	2.2
Israel	0.0
South Africa	3.3
Germany	3.9
Japan	1.8
United States	22.0

Note: Figures refer to latest available year.

a. Refers to all overseas-incorporated authorized institutions.

Sources: OECD, central banks, ministries of finance, and Goldstein and Turner (1996).

tive in provisioning for bad loans. While some emerging economies have diversified in the face of local volatility by permitting a higher market share for foreign-owned banks,¹⁶ many others have discouraged such a role for foreign banks (Dermine 1996).¹⁷ Table 2.4 shows the percentage share of banking assets accounted for by foreign-owned banks in a group of developing countries.

In short, with low macroeconomic stability, limited diversification, and a relatively small financial cushion against large changes in the value of bank assets or liabilities (i.e., bank capital and loan-loss provisions), banks in many developing countries have been skating on thin ice.

16. This diversification arises because the portfolios of foreign-owned banks are less concentrated in lending to firms of the host country and because these banks have access to external sources of liquidity and foreign exchange (from their parents abroad) (Gavin and Hausman 1996a, 1996b).

17. In 1992, for example, Dermine (1996) reports that the permissible foreign ownership share was less than 30 percent (of voting rights) in Mexico, less than 20 percent in Malaysia, less than 10 percent in Korea, and less than 5 percent in Singapore.

Vulnerability has also been linked (especially in Latin America) to a *tendency for developing-country banks (like their industrial-country counterparts) to lend too freely during the upswing of the business cycle, with such lending booms stoked by large-scale capital inflows and made more fragile by an excessive concentration of credit in real estate and equity markets* (Gavin and Hausman 1996a; Mishkin 1994).¹⁸ In addition, normal banking liquidity and maturity mismatches have frequently been magnified by a rapid expansion in bank liabilities, a short-term orientation of the financial system, and an excessive resort to foreign-currency denominated borrowing—all within a context of highly variable international reserves, interest rates, and exchange rates.

Honohan (1996) notes that, driven by deregulation and innovation, the past 15 years have witnessed a sharp increase in the ratio of broad monetary aggregates (M2) to GNP—without a commensurate increase in bank capital; that is, bank leverage has increased.¹⁹ Calvo and Goldstein (1996) argue that the same forces have made it easier for residents of emerging economies to alter the currency composition of their bank deposits whenever they get nervous about potential exchange rate changes.²⁰ Rojas-Suarez and Weisbrod (1995) show that banks in the largest industrial countries, when compared to their developing-country counterparts, have access to longer-term funding (on the liability side) and receive greater assistance from securities markets in spreading risks (on the asset side). Meanwhile, the recent Mexican crisis provides a graphic illustration of the risks banks face when there are large currency mismatches.²¹ Between December 1993 and December 1994, the Mexican peso dropped from 3.1 to 5.3 to the dollar and the foreign-currency denominated liabilities of Mexican banks increased from 89 billion pesos to 174 billion pesos (BIS 1996); the December 1994 peso devaluation likewise resulted in a sharp fall in net worth for the business customers of Mexican banks (Mishkin 1996). Some countries have purchased extra protection against such liquid-

18. BIS (1996) finds that the volatility of equity prices has been much greater over the past decade in emerging countries than in large European industrial countries. Kaminsky and Reinhart (1995) report that large equity price declines have been good leading indicators of banking crises in emerging economies. See Caprio, Atiyas, and Hanson (1994) and Goldstein et al. (1993) on the bursting of property price bubbles during banking crises.

19. Using a sample of 59 developing countries, Honohan (1996) calculates that for 1980-93, the ratio of M2 to GNP has gone from 28 to 35 percent in unweighted terms and from 32 to 48 percent in weighted terms.

20. Calvo and Goldstein (1996) also show that the gap between the banking system's liquid liabilities and the stock of international reserves was much higher in Mexico just prior to the crisis than in several other Latin American emerging economies.

21. See Sheng (1996) on how in 1980 a large net foreign liability exposure subjected developing countries to large revaluation losses from subsequent devaluations under structural adjustment programs.

ity and currency mismatches by keeping banks' reserve requirements high during noncrisis times and/or by holding a relatively large stock of international reserves—but this has been the exception more than the rule.

Inadequate preparation for financial liberalization also has taken a toll (e.g., Brazil, Chile, Finland, Indonesia, Mexico, Norway, Sweden, the United States, and Venezuela). Studies have revealed that financial liberalization is often accompanied by both rapid credit expansion (caused by pent up demand for credit and reductions in banks' reserve requirements) and high real interest rates (as banks and other financial-market participants take up new opportunities for risk taking). Credit managers and bank supervisors often do not have the expertise to deal with new credit and market risks, and, prior to liberalization, governments have frequently been reluctant to increase the training and resources devoted to bank supervision. Kaminsky and Reinhart (1995) report that the financial sector had been liberalized some time during the previous five years in 18 of the 25 banking crises in their sample.

The rap here is not against financial liberalization per se, which is widely acknowledged to offer substantial long-term benefits to emerging economies; it is instead a caveat about the risks involved if financial liberalization is not implemented in an appropriate way, that is, if it is not *preceded* by a strengthening of banking supervision.

Heavy government involvement in the banking sector and/or loose controls on connected lending also have been at the root of many developing-country banking crises, as the political objectives of governments or the personal interests of bank insiders come to supersede the commercial, profit-maximizing objectives of banks.

While privatization of state-owned banks has been on the rise, state-owned banks still account for a dominant share of banking assets in many emerging economies (see table 2.5). State-owned banks have often served as a vehicle for channeling government assistance to ailing industries. Governments often prefer this channel because it does not show up in traditional measures of the fiscal stance (e.g., the nonfinancial public-sector borrowing requirement); since they are “off-budget,” such operations are more easily shielded from public scrutiny.²² All too often, state-owned banks lack the incentive to maintain strict standards of credit quality, to identify problem loans at an early stage, to innovate, and to control costs. Loan-loss experience is typically much worse than that of privately owned banks. By the end of 1994, one-third of all loans were nonperforming in Argentina's public banks—more than three times as much as in private banks. Nonperforming loans have likewise been particularly heavy in state- or provincial-owned banks in Brazil, China, India,

22. See Mackenzie and Stella (1996) for a comprehensive analysis of the quasi-fiscal operations of public financial institutions.

Table 2.5 State-owned banks: percentage share of banking assets, 1994

Country	Percentage share
Hong Kong	0
India	87 ^a
Indonesia	48
Korea	13
Malaysia	8
Singapore	0
Taiwan	57
Thailand	7
Argentina	36 ^b
Brazil	48
Chile	14
Colombia	23
Mexico	28
Venezuela	30
Germany	50 ^c
Japan	0
United States	0

a. Data refer to 1993.

b. Data refer to June 1996.

c. Not strictly comparable.

Source: IBCA Ltd., central banks, and Goldstein and Turner (1996).

and Indonesia. Even when banks are privately owned, however, efforts by governments to turn banks into their quasi-fiscal agents—by, inter alia, influencing the allocation of credit to particular sectors and industries, requiring banks to lend or to hold government bonds at below market interest rates, preventing private banks from engaging in certain profitable activities, and directing banks to borrow abroad and assume excessive currency risks—have often undermined banks' viability (BIS 1996; Caprio and Klingebiel 1996a, 1996b; Folkerts-Landau et al. 1995; Honohan 1996; Lindgren, Garcia, and Saal 1996; Mackenzie and Stella 1996; Rojas-Suarez and Weisbrod 1996b). For example, 10 years after banks were privatized in Korea, policy loans accounted for almost half of commercial bank loans (Nam 1993).

Connected lending (i.e., loans extended to bank owners and managers or their related businesses) compromises objectivity in credit assessment and produces undue concentration of credit risk. In some developing countries, connected lending is closely linked with high concentration of wealth (Rojas-Suarez and Weisbrod 1996d). Sheng (1996) and Lindgren, Garcia, and Saal (1996) cite connected lending as an important contributory factor to past banking problems in Argentina, Bangladesh, Brazil, Chile, Indonesia, Malaysia, and Thailand. Folkerts-Landau et al. (1995)

also argue that bank supervisors in developing countries have been handicapped in their efforts to monitor connected lending by borrowers' use of dummy accounts and fictitious names and by bank examiners' lack of authority to trace the use of funds.

Weaknesses in the accounting, disclosure, and legal framework are another culprit. In many developing countries, accounting conventions are not rigorous enough to prevent banks and their borrowers from concealing the true size of the nonperforming loan portfolio. Often, bad loans are made to look good by additional lending to troubled borrowers (so-called evergreening of bad loans). If loan classification is dependent only on the loan's payment status—without regard to the borrower's creditworthiness or to the market value of collateral—then the potential delay in recognizing bad loans can be considerable (De Juan 1996). And if nonperforming loans are systematically understated, loan-loss provisions are apt to be too low, and bank net income and capital will be systematically overstated (Sheng 1996; Dziobek, Frecaut, and Nieto 1995). Without accurate information on the true financial condition of banks, it is difficult for private investors and bank supervisors to monitor and discipline errant banks.

Gavin and Hausman (1996a) show that publicly reported figures on nonperforming loans gave little hint of banking crises in Chile and Colombia in the early 1980s.²³ Folkerts-Landau et al. (1995) note that in some developing countries of the Asia Pacific Economic Cooperation (APEC) forum, a loan is classified as nonperforming only after it has been in arrears for at least six months, and, in some cases, it was bank managers—not bank supervisors—that set the classification criteria. Rojas-Suarez and Weisbrod (1996d, 8), evaluating accounting and supervisory practices in Latin America, conclude that “. . . the most common failing is to provide adequate classification procedures for loan risk, resulting in underprovisioning of loans.” Sheng (1996) cites one South Asian country that, until recently, allowed loans that had not been serviced for more than three years to be treated as performing. Mexican banks' planned transition to international accounting standards is expected to double the amount of past-due loans reported.

Once problem loans are identified, adequate loan-loss provisions must be established. But studies suggest that guidelines in many developing countries are unclear, weak, or altogether absent. For example, Lindgren, Josefsson, and van der Vossen (1995) reported that as of August 1995, a group of transition economies (Armenia, Azerbaijan, Georgia, Tajikistan, and Ukraine) did not have regulations obliging banks to make provisions for problem loans. Where there are such guidelines, there appears to be wide variation in coverage across countries. Table 2.6, from Goldstein and Turner (1996), presents provisioning-coverage ratios (i.e., the ratio of

23. See also Rojas-Suarez and Weisbrod (1996c).

Table 2.6 Provisioning coverage for nonperforming loans

Country	Loan loss reserves ^a (A) (percentage of total loans)	Nonperforming loans ^b (B) (percentage of total loans)	Coverage ratio (A/B)
Hong Kong	2.2 ^b	3.1	0.7
India	—	19.5 ^c	—
Indonesia	2.6	11.2	0.2
Korea	1.5	1.0	1.5
Malaysia	9.6	8.2	1.2
Singapore	—	—	1.2
Taiwan	1.1	2.6	0.4
Thailand	1.7	7.6	0.2
Argentina	10.2 ^b	10.5	1.0
Brazil	1.6	5.9	0.3
Chile	3.5	1.0	3.5
Colombia	1.9	2.5	0.8
Mexico	3.1 ^d	14.8	0.2
Venezuela	7.0	17.7	0.4
Japan	1.0	3.3	0.3
United States	2.7	1.6	1.7

Note: These figures may not be strictly comparable.

- Average 1990–94.
- Average 1994–95.
- Relates only to public sector banks.
- Average 1992–94.

Sources: Office of the Comptroller of the Currency, IBCA Ltd., central banks, and Goldstein and Turner (1996).

loan-loss reserves to nonperforming loans) for a sample of developing countries in the early 1990s. On average, the developing countries with the highest share of nonperforming loans tend to be the ones with the lowest provisioning coverage ratios, although there are a few exceptions (e.g., Argentina and Malaysia) where coverage in the face of a high nonperforming loan share is quite conservative.

On the disclosure side, failure to present financial and prudential information on a globally consolidated basis, differences in accounting standards across countries, lack of uniform domestic reporting requirements for banks, and an absence of serious penalties for submitting or publishing inaccurate information have often thwarted efforts by market participants to distinguish weak from strong banks (Krivoy 1996; Padoa-Schioppa 1996; Folkerts-Landau et al. 1995). While private credit-rating agencies have expanded significantly their operations in developing countries over the past decade, their coverage of banks is still much more limited than in industrial countries. Typically, large banks are rated by three of the largest such rating agencies (International Bank Credit Analyst [IBCA], Moody's Investor Service, and Standard and Poors) in only about 25 to 30 developing countries.

Legal constraints on the ability of banks to seize or transfer loan collateral, on the prompt resolution of bankruptcy cases, and on the statutory authority of bank supervisors to carry out their mandate, have increased banks' credit losses and reduced the effectiveness of supervisors in reining in excessive risk taking.²⁴

A system of incentives that does not give bank owners, managers, and creditors "enough to lose" if they bring a bank to insolvency and does not give tax payers and/or bank supervisors enough institutional protection against strong pressures for regulatory forbearance has played an important role as well.

Bank capital is intended to act not only as a cushion against losses but also as an incentive for bank owners to refrain from excessive risk taking. That is, appropriate capital standards supposedly make bank owners have enough of their own money at stake to temper high-risk gambles; when capital is low, the downside risk will be disproportionately borne by the public safety net. As shown later in this chapter, bank capital in most emerging economies does not appear to be commensurate with the risks facing those economies. In addition, as highlighted by Rojas-Suarez and Weisbrod (1996d), in those developing countries with high levels of connected lending, bank owners may rather easily sidestep the intent of capital requirements by borrowing for their equity contribution from either their own bank or from the bank of a related party.²⁵ Where this occurs, bank owners will have no net exposure in the bank and therefore will not be restrained by fear of losing their own funds. Working in the same direction, bank restructuring programs in some developing countries have failed to penalize shareholders.²⁶ Again, this distorts incentives because those who would receive the lion's share of the rewards of a successful high risk investment do not symmetrically bear the lion's share of unsuccessful outcomes.

If bank managers exercise poor oversight and/or engage in imprudent behavior that leads to the insolvency of a bank, a nontrivial penalty—ranging from reduced pay or termination of employment to legal action—

24. Rojas-Suarez and Weisbrod (1996c) note that in Mexico the legal prohibition on using inventory as collateral for short-term business loans means that borrowers wind up paying the higher unsecured rate for these loans. Folkerts-Landau et al. (1995) emphasize that bank supervisors must have the legal authority to issue "cease and desist" orders and/or to close an insolvent bank if the supervisors' mandate is to have any credibility.

25. Consistent with this argument, Rojas-Suarez and Weisbrod (1996d) illustrate that bank owners in Latin American countries have been able to raise large amounts of capital relative to their capital base over short periods of time; in contrast, growth rates of bank capital in the larger industrial countries tend to be much lower.

26. See Rojas-Suarez and Weisbrod (1996a).

should be imposed to discourage such behavior in the future. In some developing-country cases, such penalties have been absent.²⁷

Another obstacle to market discipline is the widespread practice of bailing-out bank creditors during episodes of strain or insolvency. The problem lies less with *de jure* deposit insurance (which is either absent or provides only partial coverage in most developing countries) than with *de facto* government financial assistance to protect uninsured creditors of banks.²⁸ Such intervention may be motivated by systemic concerns (e.g., a bank that is deemed “too large to fail”) or by other perceived adverse consequences of bank failures. Meltzer (1995), for example, cites the bail-out of branches of foreign banks in Uruguay in the 1980s after their parents made such a rescue a condition for renewing loans. If the official safety net assumes a good part of the downside risk associated with lending to banks, creditors will have much less incentive to monitor bank soundness and differentiate weak from strong banks.

If anything, political pressures for regulatory forbearance are apt to be stronger in developing countries than in industrial ones. As noted earlier, developing-country banks have a dominant role in financial intermediation and are well connected politically, the government is often heavily involved in the banking system, and there is less of a tradition of bank supervisor independence.²⁹ Also, as in industrial countries, recognition of problems at a bank can subject the supervisor to intense criticism—justified or otherwise—since the supervisor may be blamed for allowing the problem to develop. Yet the longer corrective actions or bank closure is delayed, the greater the risk that weakly capitalized or insolvent banks “gamble for resurrection.” Bank supervisors end up increasing the ultimate taxpayer bill by delaying closure.³⁰

27. Caprio and Klingebiel (1996b) find that bank managers were replaced in the majority of bank restructuring cases in their sample, but there were some prominent examples (e.g., Hungary in the 1990s) of senior managers merely being reassigned to other posts.

28. Padoa-Schioppa (1996), citing a Basle Committee survey, reports that of the 70 countries that at present have no formal deposit insurance coverage, all but one are developing countries; also, Lindgren, Garcia, and Saal (1996) show that most developing countries offer partial coverage in their deposit insurance arrangements, usually for retail depositors.

29. In analyzing official safety nets in Latin America, Garber (1996, 10) summarizes the political pressures facing bank supervisors as follows: “Closing down or stringently disciplining a bank is inherently a political act in all countries. It is relatively easy to close a small bank; to close a large bank requires much more assent from the political authorities. Political authorities tend to avoid closures and overregulation of banks because they rely on the banks, first to undertake investment projects that are politically beneficial to them and second, to use the banks as funding mechanisms for their own activities. The banks can be used as a means of providing unappropriated expenditures to a particular region or sector from the fiscal authority.”

30. In discussing the lessons of the US saving and loan crisis, Seidman (1996, 12) concludes that “. . . insolvent banks require government action, tailored to fit the individual situation,

In addition to prudential banking regulations, there are various mechanisms and institutional arrangements to reduce or offset the “moral hazard” aspects of the official safety net and the penchant to grant regulatory forbearance. These include risk-weighted deposit insurance premiums and “narrow bank” proposals that further limit the assets and permissible activities of banks receiving official safety net protection. Also relevant are depositor preference laws that put uninsured creditors—including sellers of interbank funds—at the back of the line (behind insured depositors and the deposit insurance fund) in case of bank insolvency. Finally, there are rule-based supervisory regimes that try to mimic (via government-directed corrective actions) the pressures the private market would impose on errant banks if there were no official safety net, prescribe bank closure while the bank still has positive net worth, require greater public accountability from senior policymakers that invoke “too large to fail” emergency financial assistance, and require bank supervisors to implement “prompt corrective action” once bank capital falls below specified multiple capital-zone trip wires.³¹ However, such incentive-compatible institutional arrangements have rarely been present and operative in developing countries. (They have been the exception in industrial countries as well.)

Poor information systems on the creditworthiness of bank customers, along with its adverse consequences for the quality of the credit review process, have also been a serious handicap.

Kane (1995) has highlighted the constraints that poor information systems have placed on efforts by developing-country banks to exercise due diligence in making new loans and monitoring outstanding ones. Kane notes that evaluation of the creditworthiness of would-be borrowers is hampered by the fact that data on the traditional “five Cs” of creditworthiness—cash flow, capital, collateral, character, and conditional economic vulnerability—are often lacking. Computer software routinely used by banks in industrial countries for credit scoring and tracking the changing probability of default after making a loan is not yet in use in most developing countries. In addition, Kane points out that private credit bureaus and rating agencies—which could help fill these information gaps—are just beginning to set up or expand operations in many developing countries.

and the longer the corrective action is delayed the more costly and destabilized the problems will be.”

31. Several of these mechanisms were incorporated in US banking reform as part of the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA)—see Benston and Kaufman (1996) and chapter 3 of this study. See Litan (1987) for the argument in support of “narrow banks.” Yet another mechanism for resisting pressures for regulatory forbearance is to house banking supervision in a relatively autonomous government agency.

In many developing countries, these weaknesses in the credit review process are compounded by failures on the part of bank supervisors to evaluate rigorously the credit analysis performed by banks. De Juan (1996) has argued that high quality on-site inspection of the loan portfolio is essential because bank reports are unreliable when banks are in trouble; to perform this on-site inspection properly, supervisors need direct access to individual borrowers' files. De Juan (1996) blames Spanish bank examiners' lack of on-site examination skills in the late 1970s and early 1980s for the failure to discover insolvencies until very late in the game.

Finally, *the exchange rate regime has sometimes complicated crisis prevention and management efforts*—either because a long overvalued fixed exchange rate has invited speculative attack against the currency (and brought increased strains on the banking system in its wake),³² or because exchange rate commitments have limited the central bank's ability to act as lender-of-last-resort to illiquid but solvent banks. For example, Argentina's Convertibility Law put strong constraints on the responses of the Central Bank of Argentina to a large deposit withdrawal from the banking system in the immediate aftermath of the 1994-95 Mexican economic crisis; indeed, if the Argentinean authorities could not have injected liquidity by reducing relatively high reserve requirements, the banking system might have found its capacity to cope with that threat wanting (Fernandez 1996).³³

The Adequacy of Existing International Banking Agreements

The problems in developing-country banking systems outlined above are not being addressed adequately by existing international agreements³⁴ on banking supervision.

Quite apart from macroeconomic and exchange rate policies (which lie outside the realm of financial supervision), many of the factors instrumental in developing-country banking crises (e.g., heavy government ownership/involvement in the banking system, poor asset classification and provisioning practices, a high degree of connected lending, weak informa-

32. Hausman and Gavin (1995) conclude that unsustainable exchange rate pegs have contributed more than any other factor to the relatively high volatility of GNP growth rates in Latin American developing countries over the past two decades. Kaminsky and Reinhart (1995) find that no other leading indicator of banking crises in developing countries has performed better than real exchange rate overvaluation.

33. Because of the constraints that a currency board places on the central bank's ability to act as a lender of last resort, countries with such exchange arrangements may find it useful to find other institutions (e.g., a group of international commercial banks) that can play the role during a liquidity crisis; see Williamson (1995).

34. See chapter 3 of this study for an explanation of why *international* banking agreements can sometimes overcome obstacles that *national* reform efforts cannot.

tion and disclosure systems, and intense political pressures for regulatory forbearance) are simply not covered by existing international agreements. Perhaps the Basle Committee on Banking Supervision did not see some of these problems as so pressing in the G-10 countries. Or maybe differences in practices and/or attitudes on some issues (e.g., asset classification and provisioning rules, closure procedures for failed banks, the mix between discretion and rules in bank supervision) were too wide even among the G-10 to merit pursuit of an international guideline. Perhaps the judgment was made that even if agreement could be reached, a more comprehensive international banking standard would be too intrusive or costly to implement. Or maybe the G-10 composition of the Basle Committee just made it less attuned more generally to the banking problems of developing countries. Whatever the explanation, the current situation is that developing countries who are looking for international guidelines on which to model their own banking reform efforts have thus far had relatively little to latch on to. As the chairman of the Basle Committee, Padoa-Schioppa, recently acknowledged (Padoa-Schioppa 1996, 13):

For such (emerging market) countries, the Basle rules may not provide sufficient support to the fulfillment of the basic prerequisites for sound banking, or be too sophisticated and difficult to comply with, or disregard specific problems that are not acute in G-10 economies. Where capital and markets are thin, or competition among banks is not working properly, supervisors may well need to interfere more deeply with the operation of the market.

In a similar vein, W. White (1996, 32) concludes:

... market discipline in developing countries might be enhanced by having some international agreement as to what constitutes prudent behavior. At the moment, there is no such agreement.

When specific banking problems have been addressed by international agreement (e.g., inadequate bank capital, lack of effective consolidated supervision by home supervisors, weak cooperation between home and host-country supervisors), questions have arisen about whether the particular circumstances of developing countries have been taken adequately into account and about the degree of developing-country implementation of those agreements.

Consider the 1988 Basle Capital Adequacy Accord for credit risk.³⁵ This accord sets minimum capital requirements for internationally active banks. More specifically, it assigns different risk weights to various categories of bank assets (including off-balance-sheet items), defines elements to be counted as bank capital, and establishes ratio requirements of 4

35. The Basle Capital Adequacy Accord was amended in December 1995 to include market risk (Basle Committee on Banking Supervision 1996; IMF 1995).

Table 2.7a Basle capital adequacy accord: risk weights

Assets included	Risk category	Risk weight (percent)
Balance sheet items:		
Cash and loans to governments and central banks	1	0
Claims on public sector entities	2	10
Claims on OECD banks	3	20
Loans secured by mortgages on residential property	4	50
All other assets, including commercial loans	5	100
Off-balance-sheet items:		
Each off-balance-sheet item is scaled by a conversion factor	6	Applicable weight

Table 2.7b Basle capital adequacy accord: tier 1 and tier 2 capital

Capital measure	Components	Recommended ratio
Tier 1	Paid-up capital (common stock) and disclosed reserves.	At least 4 percent.
Tier 2	Undisclosed, revaluation, and general loan-loss reserves; subordinated debt; and hybrid debt instruments.	Limited to 100 percent of tier 1 capital.
Total	Tier 1 plus tier 2 (where tier 1 can range from 50 percent to 100 percent of the total).	At least 8 percent of which at least 4 percent is tier 1 capital.

Source: Lindgren, Garcia, and Saal (1996).

percent of risk-weighted assets for tier 1 capital and 8 percent for total capital (tier 1 plus tier 2 capital). Table 2.7 summarizes key features of the accord.

From the perspective of developing countries, the Basle Capital Adequacy Accord has been criticized on two grounds: first, it does not provide an incentive for banks operating in countries with more volatile environments to hold higher capital, and second, the significance of meeting the minimum capital ratio is reduced if other elements of the prudential/supervisory framework are substandard.

For many developing countries, average volatilities for the variables relevant to credit risk can be two or three times higher (if not more) than those in industrial countries (Hausman and Gavin 1995; Goldstein and Turner 1996). Reflecting, inter alia, this empirical regularity, virtually all analysts conclude that banks in most developing countries should be holding much higher capital than those in industrial countries (Gavin

and Hausman 1996a; Goldstein and Turner 1996; Kane 1995; Krivoy 1996).³⁶ Yet, the accord applies the same risk weight to a commercial loan in Venezuela as it does in the United States. Similarly, the accord assigns the same risk weight to a Brazilian bank's holding of local-currency-denominated and -funded Brazilian government bonds as it does to a Dutch bank's holding of Dutch government bonds (even though the default history is quite different).³⁷ The point is that (ex ante) default rates between industrial and developing countries within a given Basle risk-weight class (say, for commercial loans) may differ by more than default rates across risk-weight classes (say, between home mortgage loans and commercial loans) within a developing country. That is, what the risk-weighting process does not consider may be more important for developing-country banks than what it does consider.³⁸

Implicit in the Basle Accord is the assumption that there is appropriate provisioning for bad loans. Where that is the case, bad loans can be written off without reducing the bank's capital, that is, bank capital will be tapped only when major unforeseen loan problems arise. As noted earlier, however, there are many developing countries where loan-loss provisioning rules and practices are weak. In such an environment, bank capital provides a much smaller cushion of safety than when provisioning is adequate. (That is, the second line of defense against credit losses is more vulnerable if the first line of defense is porous.) This has led Dziobek, Frecaut, and Nieto (1995, 13) to conclude:

Applying the Basle 8 percent rule without adequate provisioning distorts the informational value of the capital ratio. Worse than that, compliance with the 8

36. Kaufman (1996a, 11) offers the following conclusion: "The 8 percent risk-based capital standard was developed for major banks in industrialized countries. . . . The standards were not meant for other countries. Nevertheless, they have been 'borrowed' by other countries that have much greater macroeconomic stability, narrower financial markets, and less effective supervision. As a result, the 8 percent standard is far too low for most, if not all, of these countries. Moreover, the risk weights applied to the assets are even less appropriate than they are for the developed countries . . ."

37. Assigning a low risk weight to bank holdings of government debt in developing countries has also been criticized for facilitating governments' implicit and off-budget taxation of the banking system (Krivoy 1996). By making holding of government bonds (often at below market interest rates) more attractive for meeting bank capital requirements, the government finds it easier to finance budget deficits. Dziobek, Frecaut, and Nieto (1995) also argue that the 20 percent risk weight on interbank loans is inappropriate (too low) for developing countries because the liquidity of the market and quality of information on counterparts are typically much below those in industrial countries.

38. The accord does take some recognition of sovereign risk by placing a higher risk weight on bank loans to foreign governments that are not members of the Organization for Economic Cooperation and Development (OECD) or do not subscribe to the IMF General Agreement to Borrow. In this sense, the accord provides incentives for developing-country banks to hold higher capital against loans to other developing countries but not against loans made domestically.

Table 2.8 Required and actual bank capital ratios (percentages), 1995

Country	Capital adequacy ratio (national requirements)	Actual risk-based capital ratio
Hong Kong	8 ^a	17.5 ^b
India	8	9.5 ^c
Indonesia	8	11.9
Korea, South	8	9.3
Malaysia	8	11.3
Singapore	12 ^d	18.7 ^d
Taiwan	8	12.2
Thailand	8	9.3
Argentina	12	18.5
Brazil	8 ^e	12.9
Chile	8 ^f	10.7
Colombia	9	13.5
Mexico	8	11.3
Israel	8	10.5 ^g
South Africa	8 ^h	10.1
Japan	8	9.1
United States	8	12.8

Notes: Several European countries have significantly higher capital ratios. Definitions sometimes differ from those applied by the Basle Committee.

- a. 12 percent for some banks, and 16 percent for some nonbanks.
- b. Relates to locally incorporated authorized institutions and is on a consolidated basis.
- c. Relates only to public-sector banks.
- d. Based only on Tier 1 capital.
- e. Plus 1.5 percent on national value of swap operations.
- f. Legislation now before Congress.
- g. 1994.
- h. Higher ratios for some banks.

Source: Goldstein and Turner (1996).

percent capital rule without adequate reserves for loans of doubtful quality renders the ratio meaningless as banks may boost capital ratios at the expense of provisioning.

Following a similar line of reasoning, several other analysts have argued that high levels of connected lending (Rojas-Suarez and Weisbrod 1996d) or weaknesses in other elements of the financial infrastructure (Kane 1995) make the 8 percent capital rule less indicative of bank safety in developing countries than in industrial ones.

In defense of the accord, it could be argued that by specifying the Basle risk-weighted standard as a minimum, sufficient flexibility was already built-in to accommodate those countries that face higher than average risks. They would merely need to compensate for that higher risk by holding higher capital than the minimum. Table 2.8 shows that this expect-

tation has generally *not* been met. With several notable exceptions (e.g., Argentina, Colombia, Hong Kong, and Singapore), developing-country governments have not set national capital standards much above the Basle minimum, and their banks have not held actual capital much above that for banks in countries with significantly more stable operating environments.

Another relevant example of weaknesses in existing international banking agreements is the Basle Committee's 1992 Minimum Standards paper. This paper laid out four principles designed to ensure effective supervision of international banks and good cooperation between home- and host-country authorities (BIS 1996; W. White 1996). One of those principles allows the host country to impose restrictive measures or prohibit the establishment of banking offices if it determines that the home country is not exercising effective consolidated supervision. However, as noted in a recent Basle Committee on Banking Supervision report (1996), host supervisors have no common standard to judge what constitutes effective consolidated supervision by home supervisors. In addition, implementation has proved difficult. Four years after the launch, 20 percent of those countries responding to a Basle Committee survey indicated that they do not yet consolidate financial and prudential information on banks' global operations (Padoa-Schioppa 1996); the remaining 80 percent reported that they still face difficulties in verifying the reliability of such data through on-site inspections, and almost one-fifth of the respondents admitted that they still do not make approval of the home-country authority a condition for the establishment of a foreign bank. This has led the chairman of the Basle Committee, Padoa-Schioppa, to offer the appraisal that the implementation of the minimum standards is proceeding too slowly (Padoa-Schioppa 1996). It also raises the question of whether compliance incentives are strong enough.

Despite these limitations, I do not share the view that existing international agreements on banking supervision have been of no value to developing countries. In the absence of those agreements, effective capital ratios in developing-country banks probably would have been even lower, there would have been a lower degree of cooperation between banking supervisors in those countries and their counterparts in the industrial countries, and there may well have been an even higher incidence of banking crises in developing countries than actually occurred.

Alternative Approaches to Banking and Supervisory Reform in Developing Countries

How can we improve on the existing international banking agreements we already have, with emphasis on quickly bringing more developing countries up to a minimum level of sound banking practice and strong banking supervision?

One approach would be to stand pat with existing international agreements and accept (if only grudgingly) the proposition that the threshold motivation needed for serious banking reform may only occur after a banking crisis. To be sure, there have been cases (e.g., Argentina, Chile, Hong Kong, and the United States) where banking crises were followed by the adoption of an improved incentive and/or supervisory framework. The disadvantages here are twofold:

- because banking crises are so costly, approaches that can motivate reform *before* a crisis takes place should be favored, and
- most banking crises are *not* followed by significant banking reform.

On the latter, Caprio and Klingebiel (1996b) studied 64 episodes of bank restructuring, involving 55 developing countries. Four criteria (financial deepening, development of real credit, real deposit interest rates, and recurrent problems in the banking system after restructuring) were used to evaluate these restructuring exercises. Only Chile and Malaysia were judged to be clear successes.³⁹ Twenty-four restructuring exercises achieved mixed success, and 27 were evaluated as either unsuccessful or not yet resolved.

A second approach would count on expanded bilateral and multilateral technical assistance cum market discipline. The difficulty here is that technical assistance, helpful though it is, will not likely overcome the domestic political resistance to reform. That is, poor banking supervision is not simply a matter of knowing how to do it; it is also a matter of overcoming the political resistance to doing the right thing. Market discipline can be a powerful incentive for errant banks to get their house in order. But experience suggests that market discipline does not operate effectively where there is little/poor publicly available information on the creditworthiness of a borrower or a strong expectation that the public sector will bailout a troubled borrower. As indicated above, the quantity and quality of publicly available information on banks and on their customers are still significantly poorer in developing countries than in the industrial world. In addition, incentives for banks to leverage risk on the official safety net are probably even more pervasive in developing countries than in industrial ones. Calomiris (1996), for example, recounts the tales of Chile during the 1980s and Venezuela during the early 1990s, where political will to limit safety net protection melted away in the heat

39. Caprio and Klingebiel (1996b) regard the bank restructuring exercise as a clear success if the country receives good performance on all four criteria. Good performance on two to three criteria elicits a grade of mixed results, and a score of zero or one puts the country into the unsuccessful or not yet resolved category.

of bank adversity.⁴⁰ Even in the United States, the empirical literature has found it difficult to identify a reliable link between measures of the riskiness of bank assets and interest rate spreads on banks' subordinated debt (Avery, Belton, and Goldberg 1988; Gorton and Santomero 1990).⁴¹ An expanded role for market discipline in many developing countries therefore awaits prior or simultaneous progress on disclosure and on limiting public-sector bailouts. In short, while technical assistance and market discipline are an important part of the banking reform package, they cannot be the whole package.

A third tack would be to rely on host countries where developing-country banks want to do business. As noted, the Basle Committee's Minimum Standards, as well as some national banking legislation (e.g., the United States), permits the host country, *inter alia*, to prohibit foreign banking offices within its borders if it is not satisfied that the home country is implementing effective supervision. This too carries a good deal of potential leverage, at least for banks whose business strategies would be seriously damaged by exclusion from certain large foreign markets. But actual leverage is apt to be much lower. If countries that already have banking offices in the host country are grandfathered, only new entrants will be affected. And concerns about misuse of such a policy for protectionist purposes are likely to constrain its use only to the most flagrant cases of weak supervision. In addition, as noted by Rodrik (1995), it has become much less politically acceptable for one country to try to impose conditionality on another.

This brings us to the fourth approach, namely, the setting and monitoring of an IBS. Such an IBS would go beyond existing international agreements in an attempt to tackle more of the factors underlying banking crises in developing countries.⁴² Although a bank's participation in an IBS would be voluntary, market participants' knowledge of who is or is not meeting the standard would establish market penalties for slow movers. Peer pressures should also operate in the desired direction. Other incentives for signing on to an IBS might be offered by the official sector

40. It is because of these two shortcomings that I remain skeptical that a proposal to require banks to hold a certain percentage of capital as subordinated debt (Calomiris 1996) could, at this stage, serve as the centerpiece of market discipline for banks in most developing countries.

41. Flannery and Sorescu (1996) have more success at finding a link between subordinated debt prices and banks' default risks. They note, however, that such a relationship was stronger in some periods (1989-91, when conjectural guarantees no longer covered many bank debentures) than during others (1983-90). In addition, Flannery and Sorescu (1996, 1374) conclude that "our results provide no indication that market discipline could (or could not) entirely replace government supervision of bank risk taking."

42. Early support for an IBS can be found in Goldstein (1996a, 1996b).

to reward crisis prevention measures.⁴³ For example, the terms at which countries gain access to international lender-of-last resort facilities (e.g., the IMF's New Agreement to Borrow or access limits under the IMF's general resources) could depend in part on IBS participation; similarly, the risk weights in the Basle capital standard might be made more favorable for IBS signatories.

A cue might be taken from recent efforts by the public and private sectors to strengthen other elements of the international supervisory and regulatory regime.⁴⁴

Perhaps the most significant recent official-sector initiative is the IMF's Special Data Dissemination Standard (SDDS), established in April 1996 following lapses in the publication of economic and financial data prior to the Mexican crisis. Countries subscribing to the SDDS agree to meet specific requirements with respect to coverage, periodicity, and timeliness of economic and financial data, public access to these data, and the integrity and quality of the data (see appendix B). Also, the IMF is to maintain an electronic bulletin board that will list the countries subscribing to the standard, along with relevant explanatory material about the data series. Countries on the list subscribe to, and intend to meet, certain tenets of good statistical citizenship; serious and persistent nonobservance is cause for removal. As of February 1997, 42 countries (including 18 developing countries) had subscribed to the SDDS (see appendix B, table B.1).

In a similar vein, a consensus developed in the late 1980s that existing standards and practices for clearance and settlement in the world's securities markets were deficient and uneven across countries, with adverse effects for international investment flows and management of systemic risk. It was agreed that global market infrastructure could be improved if countries had a set of international benchmarks/standards against which they could evaluate their own clearance and settlements systems, along with a target date for implementation. This time it was a private-sector organization, the Group of Thirty (G-30), that took the lead in laying out these best-practice guidelines; the guidelines were then updated in 1995 by the International Society of Securities Administrators (ISSA).⁴⁵ Appendix B summarizes the original G-30 recommendations on

43. The principle here is the same as that commonly applied to the purchase of insurance. If you are a smoker and very overweight, you can still get life insurance, but you will pay more for it than if you take measures to reduce your risk.

44. Ongoing efforts to agree on an investment code for OECD countries, harmonize payments systems within the European Union, and discourage corruption via an international agreement on tax deductibility provide examples of using international or regional standards to overcome national inertia in dealing with commonly perceived problems. The International Organization of Securities Commissions (IOSCO) also is currently at work on a set of guidelines for international securities markets.

45. See World Bank (1997) for a description of the ISSA revised guidelines for clearance and settlement.

clearance and settlement. According to a recent World Bank (1997) report, emerging markets had made major strides in meeting many of the G-30 standards (see appendix B, table B.3).

A similar exercise, again spearheaded by the G-30 (1993), took place in the early 1990s when rapid growth of derivative markets raised concerns that dealers and users of these products had not established appropriate risk-management systems.⁴⁶ Appendix B summarizes the G-30 recommendation in this area. Approximately a year after launch, a follow-up survey suggested that from 20 to 50 percent of market participants implemented the various recommendations (G-30 1994; IMF 1995).

Last but not least, the Basle Committee's 1988 Capital Adequacy Accord was a direct response to a need for both a better safety cushion for internationally active banks and a more level playing field. Warts and all, the 1988 accord has probably induced internationally active banks to be better capitalized and has focused greater attention on the riskiness of bank assets. By 1993, all industrial countries had adopted the accord's standard (after incorporating it in national legislation), and, by now, 80-90 other countries (most of them developing countries) have either adopted the standard outright or followed a Basle-type approach in setting their national capital standards (Padoa-Schioppa 1996).

In each case, an international standard offered incentives for countries to make improvements that they might not have been able or willing to make unilaterally. Regulatory and supervisory reforms involve both costs and benefits, and coordination difficulties and asymmetric information can affect the incentives for undertaking such reforms. Increases in minimum capital adequacy standards are a good example of this incentive problem. Because equity holders are generally less protected from bank insolvencies than other creditors, they typically demand a higher rate of return than depositors or bond holders. As such, it is costly for banks to go to the market to increase their capital. Regulators' attempts to unilaterally increase minimum capital adequacy standards for national banks are likely to meet resistance because of charges that national banks will lose competitiveness to banks in other countries. But if authorities in the major financial centers agree to coordinate increases in bank capital requirements, then that opposition from national banks is apt to be much reduced (since the level playing field will be maintained).

It was apparently just such considerations that led to the 1988 Basle Capital Adequacy Accord.⁴⁷ In the aftermath of the developing-country

46. The original G-30 recommendations on derivatives have been followed by further guidelines, promulgated by both the official and private sectors; see IMF (1995, 1996a) for a summary of these initiatives.

47. W. White (1996, 19) offers the following observation on the 1988 Basle Capital Adequacy Accord: "Individual countries cannot regulate or supervise their domestic institutions and markets without recognizing the implications for international competitiveness. In the United

debt crisis, then-Federal Reserve Chairman Paul A. Volcker (along with other US banking regulators) was concerned that US money-center banks were undercapitalized. Also, US banks were losing business to internationally active Japanese banks—in part because the latter were subject to more lax capital requirements and lower funding costs. Volcker saw that a unilateral effort to increase capital requirements for US banks was encountering sharp domestic opposition (especially in the US Congress) because of considerations of international competitiveness. Meanwhile, the UK regulatory authorities were coming to the same diagnosis on capital, but were not happy with a bank capital proposal then being floated within the European Community.⁴⁸ The result was first (in 1987) a US-UK agreement on minimal bank capital requirements, followed soon after by a G-10 agreement (i.e., the Basle Accord). This is another example of the broader proposition that international coordination can sometimes achieve outcomes that are not available with uncoordinated policy measures (Frenkel, Goldstein, and Masson 1990).

Turning to the payoff from regulatory reforms, a country that can convince creditors that such reforms have improved banking safety and soundness may be rewarded by a lower risk premium on its obligations. However, it may be difficult for creditors to verify on their own that the borrower has really undertaken serious reform—particularly if the borrower operates primarily in unfamiliar overseas markets. “False” reformers will be tempted to claim they have reformed their banking systems so that they too can benefit from lower funding costs. If the “true” reformers cannot somehow differentiate themselves from the impostors, the former will not be able to obtain the appropriate market payoff from regulatory reform, and, hence, may be discouraged from undertaking these reforms in the first place.

One potential solution to this asymmetric information or “lemons” problem is for true reformers to join voluntarily a “club” with demanding entry conditions and international monitoring of reforms.⁴⁹ The club will then certify that its members are true reformers, enabling members to obtain the full market payoff. This rationale is often advanced to explain why borrowers might seek a credit rating from internationally recognized,

States, for example, efforts to force banks to hold more capital in the early 1980s (in light of the Mexican crisis) led to stiff industry resistance on competitive grounds and led directly to strengthened efforts within the Basle Committee on Banking Supervision to come up with an international agreement.” Kapstein (1991) tells a similar story in his account of the history of the Basle Accord.

48. See Kapstein (1991) for a detailed account of the factors in a US-UK agreement.

49. See Mishkin (1994, 1996) for a discussion of how asymmetric information influences institutional arrangements in national and international financial markets. The “lemons problem”—which centers on how asymmetric information can prevent market prices from reflecting true quality differences—was introduced by Akerlof (1970).

private credit-rating agencies. But the same reasoning would apply to the IMF's SDDS, the G-30's guidelines, or an IBS. After all, one way to interpret a voluntary IBS is as a club for countries undertaking reforms of their banking systems and their supervisory arrangements. An IBS lends further credibility to banking reform efforts—much in the same way that IMF support lends credibility to national stabilization programs. If the geographic coverage of private credit-rating agencies continues to expand and if those firms prove adept at evaluating banks' creditworthiness, it may eventually become possible for the private sector to take over this certification process—but in the interim the best solution may be an IBS.

An IBS, with a reasonable transition period for implementation, would give those developing countries that are still in the planning stages of banking reform some concrete benchmarks and a fixed timetable to follow. For countries that were in the process of reform, it would provide a way of gauging progress. Countries whose banking systems and supervisory regimes already met or exceeded the standards would not be constrained by them and would receive assurance that their counterparts had taken measures to improve their creditworthiness. Together, these groups ought to make up a powerful constituency for an IBS.