
The Group of Ten and Financial Architecture: Changing the Rules of the Game

There is a “hole” in the debate about reforming the international financial architecture. For every bad borrower, and for every failed project, there is also a culpable lender or investor. G-10 institutions bear more responsibility for financial crises in emerging-market economies than the tone of criticism might suggest. Although the appetite for financial risk is currently more subdued than in the late 1990s, a renewed flow of capital—in line with our projections in chapter 1, but in the absence of fundamental reform—could set the stage for a future crisis. We question whether the adjustments driven both by the market and the G-10 regulators have been sufficient to correct forces on the supply side of international finance that contribute to crises.

Yet the main debate in the G-10 is whether private-sector players should bear more of the costs of managing crises when they do occur. This approach is too relaxed. As we argued in the previous chapter, the special role of banks in finance and the associated public safety net distort financial markets. Despite significant efforts by G-10 governments to reduce moral hazard through prudential supervision and greater reliance on market discipline, empirical evidence and theoretical debate persuade us that moral hazard is still a pernicious influence on cross-border capital flows.¹

Changing the rules of the game in the industrial countries is at least as important as strengthening the regulators and financial institutions in the emerging markets. The basic unresolved issue is the differing

1. Claessens and Klingebiel (1999) and Kaufman (1999), among others, are in accord with our diagnosis of endemic moral hazard.

emphasis reformers put on the dangers of moral hazard among the suppliers of capital, and the contribution that lending behavior makes to systemic liquidity crises. Liquidity crises impose severe economic, social, and political costs on borrowers. These costs, in turn, build pressure for international safety nets anchored by the IMF. Reformers who argue for stronger safety nets have not resolved the moral hazard consequences.

In this chapter, we begin with a discussion of moral hazard and the debt bias and then explore two routes to address moral hazard. One route is to change the incentives to influence the taste for and management of risk by banks and the financial institutions to which they lend. The three pillars of Basel II are a start in the right direction, but more attention on the mandates, resources, and incentives structures for supervisors is desirable. Other measures also make sense, such as tax changes to promote forward provisioning, trade policy changes, and improvements in public disclosure. The second route is to change the way liquidity crises are resolved by creating ex ante a clear framework for withdrawing the assurance of full and timely repayment when problems arise. These two approaches are not necessarily substitutes—they may even be complements—in their effects on incentive structures.

The Debt Bias

The dangers associated with debt denominated in foreign currency are well documented. Many of these dangers are associated with sovereign debt. But the first half of the 1990s was a period of booming international bank credit for private borrowers, particularly in Asia.² If the dangers associated with cross-border, cross-currency debt, especially short-term debt, are so well known, why does it persist?

Most studies that aim to answer this question have focused on the borrower's perspective. This analysis emphasizes that short-term foreign currency debt is "cheaper" to the borrower than the alternatives. After a period of bad economic management, for example, the only foreign capital flows on offer may be short-term bank loans. This may also be true for countries plagued by corruption and bad governance. Even when other alternatives are available, short-term debt will usually carry a lower interest rate than long-term debt, and short-term debt will not compel controlling shareholders to surrender their ownership privileges. In other words, debt maturity "solves" an incentives problem on the part of the borrower.

Governments with deteriorating credit ratings see short-term debt as less expensive and more accessible than long-term debt. Private corporations see short-term debt as less expensive than bonds and less

2. In Mexico (1994), Brazil (1999), and Russia (1998)—in contrast to Asia (1997/98)—the debt was sovereign.

intrusive than equity stakes. Another consideration is that countries and companies with poor disclosure records engender less trust, limiting their ability to borrow long term and forcing greater reliance on short-term debt (Diamond and Rajan 2000).

Not all the incentives are on the borrower's side. Banks engage in short-term international lending because the capital requirements are lower and the aura of liquidity is greater. Lending to governments and private-sector borrowers may be a "loss leader" that promotes the sale of other financial products that will generate fee income rather than interest payments. In the 1990s, banks exploited significant yield differentials across international borders through the "carry trade"—which involved borrowing at relatively lower home-market interest rates and investing at higher interest rates offered in emerging-market securities, such as treasury bills and bank deposits. Such transactions were especially popular in Thailand, where domestic securities, before the events of 1997, were regarded as relatively safe bets from the standpoint of both credit and exchange risk (Blustein 2001).

Although the analysis of private-sector lending and borrowing is complex, at least three features are evident to us. One is unintentional regulatory bias on the supply side. As chapter 2 indicated, Basel I unintentionally encouraged a short-term debt bias, most notably through the conduit of interbank lending. A second feature, also discussed in chapter 2, is the moral hazard associated with the customary national safety nets for banks and the more recent international safety nets created by the international financial institutions through their roles in crisis resolution. Most (but not all) analysts agree that moral hazard plays a role. They argue that it is difficult for the IMF (and for national governments) to stand aside when financial crises, contagion, and panic erupt. Indeed, anecdotes in Blustein (2001) describe the intense pressures for an official rescue package for Russia directed by private-sector players at IMF staff in 1998. In July 2000, G-7 finance ministers enunciated a key reform principle for the IMF: "IMF lending should not distort the assessment of risk and return in international investment" (Group of Seven 2000). The G-7 agreed to introduce a system of penalty interest rates to discourage countries from turning to the IMF for crisis lending.

By contrast, the Institute of International Finance maintains that moral hazard is overblown as a concern. The IIF (1999b) points to the wrenching adjustments that officials had to make in emerging-market economies and the large losses sustained by private creditors. They estimate that provisions made by European banks during the Asian crisis amounted to 10 percent of total claims of these banks on East Asian economies. Others argue that cross-border lending decisions were not influenced by the expectation of IMF "bailouts."³

3. See IMF (2000b) for an analysis of these views.

We agree that the expectation of future IMF intervention per se is not an explicit decision criterion in lending decisions. No bank would make a loan to an emerging economy if it thought the probabilities argued for a crisis during the life of the loan. All banks with loan exposure suffered in the crises. Nevertheless, we do see the IMF as an implicit factor, just like national safety nets. Safety nets of all kinds are an integral part of the decision-making framework in banks—in the sense that safety nets reduce the extent of loss in extreme adversity. In technical terms, a portion of the extreme “bad” tail of probability outcomes is sliced off by public safety nets, both national and international. Strong growth performance in the borrowing countries during the early 1990s, combined with a herding tendency among financial institutions, prompted many banks to believe they had to participate in the emerging markets. They assumed a safety net would be there if needed. Our own informal discussions with market participants, and Blustein’s extensive interviews, both support this view.

A third feature in the supply-side bias relates to the characteristics of lenders. Many international banks have admitted they underestimated the risks of lending to emerging markets. Informal inquiries have revealed that credit risk-assessment procedures were found wanting and that management sometimes pushed the risk envelope (Hawkins and Turner 2000). The amounts involved were small relative to the total assets of the “big players” profiled in the previous chapter. Indeed, for some institutions, the size of cross-border loans and security holdings were so small that it was not cost-effective to acquire detailed knowledge of country fundamentals. Such institutions became susceptible to country-specific rumors. Some call this behavior the “Calvo-Mendoza problem,” after the researchers who documented it (Calvo and Mendoza 1999).⁴ But the totality of mistakes and misjudgments, and the subsequent rebalancing of loan and investment portfolios, badly hurt the small emerging markets.

There were some exceptions to this picture. Those banks that had penetrated local markets and had specialized local knowledge of borrowers actually *increased* their lending in the crisis countries after the local banking systems encountered insolvency problems in 1997 (Diamond and Rajan 2000).

Theoretical analysis that emphasizes the benefits of short-term debt for government and private-sector borrowers rests on the assumption that short-term debt, long-term debt, and portfolio equity are not close substitutes (Jeanne 2000). This assumption may have been valid in the past and may have continuing validity in some markets. But the growing number of giant financial institutions, and the erosion of the so-called

4. Calvo and Mendoza (1999) demonstrated that contagion can be an outcome of optimal portfolio diversification as securities markets grow in size and complexity.

equity premium in several G-10 stock markets, suggests that there may be more room for substitution in the future.⁵ On this crucial question, we are “substitution optimists.” Even if substitution is limited, it must be recognized that, whereas the benefits of short-term loans are largely private, the costs of crises are both private and public. When creditors call their loans, depositors withdraw their funds from banks, or fund managers reallocate their investment portfolios, the ensuing liquidity crises can have high costs in output and employment.

In sum, we think the dangers of excessive short-term debt require more policy attention to reduce moral hazard and the systemic risks associated with liquidity crises. Markets, left to their own devices, will continue to experience market failures because of involvement by cross-border players. There is a role for the public sector to correct these market failures on the lender side.

Changing the Rules for Bank Risk

The first route to reducing moral hazard and the contribution that banks make to liquidity crises involves public supervision of banks’ risk taking. For several years, national regulators have discussed a three-pillar approach, which we call Basel II: refining the capital adequacy requirements, stronger supervision, and more use of market discipline. In this section, we recommend some refinements in the Basel II reforms. On the basis of the analysis in the previous chapter, we also suggest that the G-10 governments should tighten their public safety nets and reevaluate the incentive structures facing national regulators. Supervisors should move quickly and in a coordinated way to head off the buildup of concentrated lending and correlated risk taking. Allied measures, such as forward loss provisioning and changes to taxation and trade arrangements, are also suggested.

Bank Capital Reform at Basel

Basel II aims to raise the capital that banks must hold to cushion against credit losses resulting from such internal factors as bad lending decisions, and from such external factors as economic downturns and crisis contagion. Banks that engage in risky transactions will have to set aside more capital than those that do not. Under Basel I, the smaller risk weight on short-term loans relative to long-term claims might have seemed rational (short-term claims are less likely to get into trouble), but the bias encouraged short-term lending to non-OECD countries at the

5. See Claessens and Klingebiel (1999).

expense of longer-term lending. When all banks engage in such lending, the borrower becomes vulnerable to sudden changes in lender sentiment.

Basel II reforms are designed to reduce this bias by introducing a more risk-sensitive framework that measures both credit and operational risk (Basel Committee on Banking Supervision 2001). Minimum capital requirements for credit risk may be addressed in two ways. The first is a standardized approach in which credit exposures are assigned risk weights on the basis of assessments by external credit institutions. The second, or “advanced,” approach allows banks to use their own internal risk models to assess the various credit risks. This change is closely linked to the inclusion of new risk weights for operational risk. The sophisticated banks, relying on internal ratings, will be able to reduce capital requirements associated with credit risk, thereby gaining a competitive advantage. But the capital requirements associated with operational risk will largely offset these savings unless a bank has very rigorous internal controls. The other two pillars—stronger supervisory review and more market discipline—will also be employed to increase discipline on banks. These pillars are discussed below.

In theory, higher capital requirements—imposed by regulators—can be expressed as a tax on capital. The reason is that capital requirements, when binding, limit the bank from exploiting to the full its own perceived ability to borrow cheap (from depositors) and lend dear (e.g., to corporations). The argument for *not* letting banks individually decide what level of capital is appropriate for their operations is that, on an individual basis, they will not properly “internalize” the marginal contribution they make to systemic liquidity risk.

There are reasons to ask whether the proposed Basel II capital-adequacy refinements will achieve their intended effects. First, if the cost of short-term debt for emerging-economy borrowers is indeed increased, will there be sufficiently close (and less risky) substitutes available to those borrowers? Second, will the reforms be circumvented, as have other reforms preceding them, by financial innovation?

Raising the cost of short-term debt will, to some extent, reduce global welfare by raising the cost, and reducing the quantity, of the product.⁶ The reduction in global welfare will be greater if long-term debt (loans or bonds) and portfolio equity are not available as substitutes.⁷ Empirical

6. Basel II will not unambiguously raise the cost of short-term lending. Although the overall effect of the revised risk buckets will be to reduce risky short-term credits, two features of the new rules suggest that lending to emerging markets will still be potentially profitable. One is that the reforms still allow a lower risk weight on interbank loans of less than 3 months, as long as they are local-currency loans. The other is that 100 percent risk weight on non-OECD corporate lending has been reduced, making this form of financing more attractive than in the past.

7. See Jeanne (2000) for a welfare analysis of such measures.

research suggests that banks will reduce their loan portfolios in response to higher capital requirements. A simulation of the impact of higher capital requirements on US bank balance sheets in the early 1990s estimates that a 1-percentage-point increase in the risk-based capital requirements on loans reduced their growth rate by 5 percent (Furfine 2000). Moreover, the same simulation model predicts that higher risk-based capital requirements on loans will prompt banks to sharply increase their holdings of risk-free securities (e.g., T-bills).

In chapter 1, we examined the literature on substitution among different sources of capital. We noted the Claessens, Dooley, and Warner (1995) study, which was based on analysis of quarterly data between the mid-1970s and 1992, and which concluded that the extent of substitution is very high between different types of capital flows to destination countries. Their method of analysis was to ask whether adding, as an independent variable, the contemporaneous *share* of total capital inflows accounted for by a particular type (FDI, portfolio equity, long- and short-term loans) improved the forecasting power of a simple time-series prediction model for total capital inflows. For a sample of five industrial countries and five emerging markets, adding the share variable barely improved the model's forecasting power. If particular types of capital flow were truly independent of one another, one would expect that country conditions (such as good governance or low tax rates) that—for example—attracted FDI would add to the total level of capital inflows otherwise predicted by the time-series model. This did not happen. Claessens and his colleagues draw the inference that, when conditions favor one type of capital inflow, it displaces other types.⁸

The Chilean experiment with unremunerated reserves between 1990 and 1996 also suggests a fairly high degree of substitution between short-term loans and longer-term flows (Edwards 2000b). Before the 30 percent unremunerated reserve requirement was imposed on short-term loans in 1990, long-term capital inflows were about 10 percent of total capital inflows. By 1995, long-term flows had risen to 90 percent. This was much higher than in other developing countries and, according to tests performed by Edwards, the larger role of long-term capital did not come at the expense of a reduction in total capital flows to Chile.

On the basis of this kind of evidence, we are, as noted above, “substitution optimists.” We think it is reasonable to dampen bank lending with an expectation that bond, equity finance, and FDI (outside the public safety net) will expand—if not one-for-one, then to a substantial degree. Broadly, this is the direction of Basel II.

8. To quote Claessens, Dooley, and Warner (1995, 171) on the rationale for their analysis: “We reasoned that if the total capital account is independent of a particular flow, then adding the contemporaneous share of the flow should not affect our forecasting ability. Conversely, if a flow helps determine the total capital account, then adding the contemporaneous share should help the forecast.”

Still, we have concerns with Basel II. One that persists from Basel I is that the Basel II capital proposals may likewise change the behavior of banks in undesirable ways. Banks distinguish between “regulatory capital,” the amount of capital mandated by the regulator (calculated by applying standardized weights to asset classes), and their own assessment of “economic capital.” Economic capital is the reserve against unexpected losses that the bank regards as adequate—given its expected loss experience—to achieve a target credit rating for interbank loans.

Large banks complain that regulatory rules often require them to hold too much regulatory capital relative to their own assessment of economic capital. Regulatory capital then becomes a constraint that banks circumvent, using financial innovations such as securitization or credit derivatives, rather than raise more capital in the equity market. The consequence is a counterintuitive outcome: To get around regulatory capital requirements, banks remove the strongest, rather than the weakest, assets from their balance sheets.

The new Basel risk-weighting system could, moreover, amplify the cyclical character of bank lending. Uniform requirements imposed on the largest market players may encourage them both to enlarge and reduce their exposures at the same time (as, e.g., the link—made by Persaud 2000—between VAR models and bank herding, referred to in chapter 2). The Basel Committee argues that the benefits of the more risk-sensitive capital framework should outweigh this concern by reducing the incentives for banks to make high-risk investments at the top of the cycle. But the committee leaves the door open to further reforms. One is forward provisioning, discussed below, where banks would be expected to reflect in their credit ratings assessments of how well borrowers withstand the stresses of the business cycle (Basel Committee on Banking Supervision 2001, paragraphs 40-45).

These unintended consequences of the current approach to ensuring that banks better match their capital and their risk profiles are cause for concern. They help to explain why so much effort and debate has gone into refining the application of the existing capital requirements. We support the direction of Basel II, but we think several modifications are desirable. We start with the question of risk weights on short-term borrowing:

- *Risk weights should raise the cost of short-term borrowing in those emerging-market economies with weak financial systems. Loans to those borrowers, whether corporate or sovereign, should carry higher risk weights.*⁹

9. A distinction should be made, however, between secured credits, such as trade finance, and unsecured credits, such as interbank lending. The former should be subjected to risk weighting on an ad hoc basis.

- *Risk weights should relate the cost of borrowing by hedge funds (highly leveraged institutions, or HLIs) to the extent of their underlying leverage.*¹⁰

Our next recommendation addresses the Basel II proposal for credit scoring. Basel II discussions began with the suggestion that independent rating agencies, such as Moody's, Standard & Poor's, and Fitch/IBCA, should be used to judge the credit characteristics of bank loans. Responding to criticism of this proposal, the Basel Committee decided to allow large banks to use their own risk weights, thereby determining their own capital-adequacy standards. The internal-ratings approach, as it is known, has its own dangers. Among large banks, the internal-ratings model is susceptible both to banks misunderstanding their risks and making mistakes in measuring them. It is also prone to moral hazard—banks, faced with the consequences of mistakes or misunderstandings, attempting to deal with the resulting balance-sheet weakness by intentionally underestimating their risks and capital requirements.

National supervisors must decide which banks will be allowed to use internal ratings. Under political pressure, national supervisors may push permission too far down into the system, thereby spreading the risks of errors or misunderstanding to medium-sized banks.

Supervisors also face a dilemma in dealing with mistakes or abuse. They could threaten to publish their own adverse bank ratings, but that would undermine a core regulatory role, which is to maintain the confidence of both financial institutions and the public. In principle, regulators should impose stiff financial penalties on misbehaving banks. In practice, Basel II addresses the issue by imposing capital requirements for operational risk. This requirement signals the importance of rigorous control systems in the large banks.

The move toward internal ratings makes sense for large international banks with sophisticated control systems, but only when it is supported by stepped-up supervision and market monitoring. The potential for moral hazard should be explicitly addressed:

- *When a bank is allowed to use this model, regulators should agree (again at the international level) on a schedule of severe fines that will be imposed when risks are underrated.*

As we have indicated, the Basel II approach to capital adequacy is flawed but worth supporting, for the inescapable reason that banks should be required to hold capital equal to the marginal contribution they make

10. The Financial Stability Forum Working Group on HLIs (FSF 2000b) considered such a measure but settled instead for improved supervision of HLI credit providers and increased HLI disclosure. This is similar to the recommendation of the Council on Foreign Relations (1999). We agree with the dissenters (Council on Foreign Relations 1999, 129).

to systemic liquidity risk. Basel II has two other pillars—stronger supervision and more market discipline—that have received less public attention, yet are essential adjuncts in reducing moral hazard.

Stronger Supervision: Aligning the Incentives of the Supervisors

Basel II's more risk-sensitive capital-requirements framework relies heavily on both market and regulatory discipline. Both have flaws. But they can act as complements. Banks can be monitored by market participants as well as by their supervisors. Supervisors can be monitored by their governments—and by markets. We see at least two dimensions of supervisory monitoring that governments should evaluate. One is the way they address the principal-agent problem: The interests of supervisors may diverge from the interests of taxpayers, leading to regulatory forbearance—slow or no action to head off problems. Governments need to ensure that supervisors are accountable for the costs of bank failures. This can be accomplished by mandating published reports on costs borne by the deposit insurance fund as a result of failures, which is now required in the United States under FDICIA (Kane 2000).

- *Supervisors should be held publicly accountable for the costs of bank failures through mandated reports on costs imposed on the national deposit insurance fund.*

The second dimension of supervisors' incentives relates to the mandates they receive from their governments. Most national supervisors are expected to worry primarily about their own jurisdictions and whether the risk exposure of domestic financial institutions will damage the institutions, their investors, and their customers. As G-10 financial institutions and markets become more complex, regulators rely more and more on market discipline to guard against risk exposure. But market discipline is not always adequate. Mistakes by a few banks can disturb the financial system, especially if herding occurs.

If governments in emerging markets conclude that the benefits of financial openness are outweighed by the costs of financial vulnerability and fickle creditors, these governments are likely to seek their own solutions, such as capital controls or restricted foreign entry. Over time, these reactions will reduce efficiency and retard financial innovation. Thus, regulators in the G-10 countries have a common interest in fostering the international public good of financial stability.

G-10 governments could do more to promote their common interest in global stability if national regulators were also mandated to enhance the stability of the international financial system by greater information

exchange and preventive cooperation.¹¹ The most sophisticated financial institutions in the G-10 countries constantly look for correlated cross-border exposures as part of their risk-management operations. Similarly, if officials see short-term exposure building in a certain market among lenders in several countries (evidence of herding), they should move preemptively, and in a coordinated fashion, to tighten capital requirements on “strategic” grounds.¹²

- *National supervisors should take more responsibility for the systemic consequences of risk taking by the institutions they oversee, share information with their G-10 counterparts, and coordinate corrective action on a confidential basis.*

Market Discipline

Basel II relies on market discipline in two ways: through external ratings, and through better, more plentiful information disclosed to bank shareholders and other market participants. We believe Basel II should have gone further in bringing market discipline to bear on banks by encouraging the issuance of subordinated debt and allowing banks to include these securities in required capital. As we saw in chapter 2, subordinated debt proposals have been around a long time, and yet are still in limited use.

The subordinated debt proposal has several weaknesses. It would be onerous for small banks; market evaluations of the subordinated debt would require far better disclosure of bank portfolio risks than these institutions customarily provide; and bankers may create side inducements for other financial institutions, or even borrowers, to buy their debt, thus defeating the market test.¹³ But limited experience with subordinated debt suggests it is a useful complement to supervisory discipline. For example, reports on Argentina, which has experimented with subordinated debt issues, observe that this instrument helps in market monitoring of bank supervisors (Mishkin 2000). We recommend that:

- *Instruments that encourage market discipline—such as subordinated debt—should be introduced, and banks should be allowed to use them to meet part of their capital requirements. Accompanying regulation should ensure appropriate disclosure and prevent market rigging.*

11. Stiglitz (1999) made this suggestion.

12. See Persaud's (2000) arguments along these lines.

13. Another objection is less severe. The Basel approach to capital standards discriminates against subordinated debt by limiting the extent to which tier-two capital components (which would include the new subordinated debt) can satisfy total capital requirements. Presumably the Basel approach could be modified if the Calomiris model were adopted.

Recommendations for better disclosure and greater transparency are on all lists of proposals to improve international financial architecture. They aim to improve market conditions and strengthen the players rather than change the rules of the game. In theory, an efficient financial system has perfect information. The reality is different—with respect to both private-sector financial institutions and national balance sheets.

As financial systems in the G-10 countries have become more sophisticated and transactions grown more complex, even top managers have not known the risk profile of their institutions. Worse, other players can only guess at the real-time position of their counterparts. Dangerous structures can create the conditions for a crash—the financial equivalent of the ill-fated Texas A&M log pile. One avenue of prevention—many would argue the best one—is better disclosure or “increased transparency,”¹⁴ to use the popular jargon. By alerting policymakers to problems at an earlier stage, the frequency and severity of financial crises can be reduced.

Not all agree. Persaud’s (2000) analysis of herding argues that transparency, prudential standards, and risk management are necessary and desirable in the long term, but are counterproductive in the short term *because markets are not yet able to distinguish sustainable from unsustainable positions*. They herd in order to exploit available information and because risk-reward systems penalize them from straying from the pack—especially if they are wrong.¹⁵ The chances of herding are also exacerbated (as noted above) if all banks use the same risk-management models, as Persaud argues they do. Indeed, Basel II is moving away from discretionary judgment on risk (what many call “horse sense”) and toward quantitative models.

The implications of such changes are important: Greater transparency in the marketplace carries risks. “The more herding investors and bankers know about what each other are up to, the [more] unstable markets may become” (Persaud 2000). Persaud points out the paradox that with all banks using the same (static quantitative) approach, and with portfolio managers acting strategically—that is, keeping an eye on what other managers are doing—banks follow each other into and out of markets, contributing to systemic risk. As he observes, there is a role for financial institutions—ones that would look very much like hedge funds—in offsetting volatility by buying in market downturns when everyone else is selling assets.

Persaud may be right that more transparency will augment volatility in bank lending to emerging markets. This does not seem to be the experience in US stock and bond markets, however, where more timely disclosure of material information is associated with lesser volatility.

14. See King (1999).

15. Persaud (2000) defines “herding” to mean that banks and investors buy what others are buying, sell what others are selling, and own what others own.

After all, if bad news (or good news) is disclosed in small lumps, then markets can adjust step by step, instead of in one big leap. Moreover, financial analysts are highly paid to distinguish significant from insignificant information.

Even if there can be such a thing as too much transparency to other market players, as Persaud argues, confidential disclosure to regulators is quite another matter. More is good. Financial supervisors barely know what is happening in the off-balance-sheet, cross-border transactions of the institutions for which they are responsible. One reason is that, with the emergence of “universal” financial institutions, the big players cross the jurisdictional boundaries of both nations and old-line supervisory institutions. Another reason is innovative financial instruments.

For example, the US Securities and Exchange Commission (SEC) has authority over securities firms, but not over their holding companies or offshore activities. Yet Merrill Lynch in London is under the supervision of the new UK Financial Services Agency, which—unless it visits the US authorities and Merrill Lynch corporate headquarters—has no knowledge of what Merrill Lynch does in the United States. When Merrill does derivative transactions through its separately capitalized AAA derivatives subsidiary, does anyone supervise it? No. Because derivatives are not legally securities, so they are not within the regulatory reach of the SEC. The recognized derivatives regulator, the Commodity Futures Trading Commission, exempts over-the-counter financial derivatives from supervision.¹⁶

One response to the Merrill Lynch saga might be, “Why worry?” After all, GE or Itochu might well engage in the same range of off-balance-sheet transactions as Merrill Lynch, and although adverse results will upset shareholders, they are of no concern to regulators. There are two differences. First, although Merrill Lynch is not a bank, if it collapses there will be enormous pressure on both the Federal Reserve and the Bank of England to orchestrate a bailout. Second, it is far more likely that Merrill Lynch, rather than GE or Itochu, will execute rapid changes in its exposure profile as it affects banks.

Evidence of information imperfections such as that presented by Persaud suggests that initiatives, such as Basel II, to encourage more public disclosure by banks of their asset positions and risk-management systems should proceed, but with caution. National authorities need to follow through in two ways: by insisting on more disclosure, particularly of the international activities of LCBOs to regulators on a confidential basis, and by improving corporate governance incentives to increase the responsibilities of bank directors and managers for disclosure and risk management.¹⁷

16. See Mayer (1999).

17. Stiglitz (1999) makes an argument for incentive schemes for managers.

- *Incentives—such as personal liability obligations for officers and directors—would improve the governance, management, and regulatory compliance of all financial conglomerates.*
- *The largest banks and financial institutions should be required to publicly disclose both their balance-sheet and off-balance-sheet activities in emerging markets in a standard reporting format, in a moderately timely fashion—for example, at the end of each quarter but with a one-quarter lag.*
- *Securities regulators need to get advance information on large portfolio investments in emerging markets. In particular, they need to consider imposing the same sort of disclosure requirements that routinely apply to insider trading by companies listed on stock exchanges, and to tender offers in mergers and acquisitions.*

Persaud’s caution about transparency is based on the short-term behavior of financial institutions. His prescription, however, reinforces our arguments. Because market discipline by itself has flaws, supervision and rules on bank capital are its necessary complements. He suggests that, if regulators notice herding, they also should impose additional “strategic” capital requirements on banks. Alternatively, supervisors could require banks to purchase “liquidity options” from central banks.¹⁸

Offsetting the Subsidy in the Public Safety Net

A significant influence on short-term debt is the subsidy that banks throughout the G-10 countries receive from the national safety net—that is, from deposit insurance systems, bank access to central bank liquidity, and bank access to payments and clearing systems. An empirical analysis by Kwast and Passmore (2000) indicates that US bank holding companies operate on much smaller equity-asset ratios than a large range of other financial institutions (investment banks, life insurance companies, property-casualty companies, “personal credit” companies, captive finance companies, etc.) Typically, the bank equity-asset ratios are about half the levels in other institutions. Moreover, Kwast and Passmore detected a tendency for holding companies to move activities that could be performed either by a bank or a nonbank subsidiary into their bank subsidiaries. In a critique of this paper, Kaufman (2000) argues that low capital-asset ratios in banks reflect the rapid processes that exist to resolve bank failures (both before and after FDICIA) rather than an actual subsidy.

As noted in chapter 2, the rationale for the public safety net is to protect small depositors against the threat of bank insolvency. Small depositors,

18. The liquidity option would entitle a bank to borrow a certain amount from the central bank within a specified time period at a specified interest rate, against acceptable collateral.

unlike large investors or other financial institutions, are unable to effectively monitor what is done with their deposits; hence the quid pro quo for the subsidy is regulation by the public sector (or, in some cases, by their peers). Studies of the size of the gross subsidy in the United States and measures to offset it indicate that regulators had some success in the late 1990s. But World Bank studies, as was pointed out, find a negative relationship between bank stability and deposit insurance. These studies imply that moral hazard is still a problem in many countries.

The compelling implication of these studies is that more needs to be done to instill market discipline and bring regulatory rigor to bank supervision and the resolution of bank failures. US studies arguing that a subsidy still exists imply that offsets should be increased—by increasing the direct costs of deposit insurance premiums, raising interest rates on bonds issued by the Financing Corporation, raising reserve requirements, and stronger supervision. The results of the World Bank studies also suggest that the generosity of deposit insurance schemes should be limited, and that private-sector monitoring should be enhanced.

Unfortunately, once most deposit insurance schemes are in place, they tend to be reevaluated only in the wake of a crisis. Tables 2.9 and 2.10 indicate the variation in G-10 arrangements. The European Union in 1994 established the outlines of compulsory deposit insurance schemes among its members to be adopted by 1995 (coverage of at least 20,000 euros and coinsurance of up to 10 percent). Design features were left to national regulators to work out, and their designs show wide variation (Barth, Nolle, and Rice 2000; Beck 2000).

Compare Germany's program with those in the United States or Japan. All private banks (many are public, owned by counties, cities, or *Länder*) that are members of the German Banking Association are also members of a deposit insurance fund that is financed and run by its members. Premiums are risk-adjusted. There is no public funding for the scheme, and the institutional environment—bank supervision, contract enforcement, and the rule of law—is robust. Weak incentives for depositors to monitor banks are offset by strong peer monitoring: The banks monitor each other, in part because it is they who must bear the costs of distressed members (Beck 2000).

In contrast, Japan still offers depositors a blanket guarantee but has prospectively changed its policy on limiting depositor insurance several times, most recently in January 2001.¹⁹ Design options are thus a matter of debate, even in the G-10. These options include stricter definitions of retail banking, more reliance on coinsurance (thereby requiring depositors to bear part of the losses themselves), and risk-rated deposit

19. Upon his appointment to head the newly formed Financial Services Agency, Hakuo Yanagisawa stated his intention to eliminate blanket protection (see FRC's Demise Leaves Much to Be Done, *Nikkei Weekly*, 8 January 2001, 13).

insurance that ties the premium for the insurance to the rate a bank pays for subordinated debt (thereby relying on a market evaluation of risk).²⁰

In summary, the latest cross-national studies imply that more can be done to offset the erosion of banking standards as a consequence of deposit insurance, not only in emerging-market economies, but also in the G-10. Surely it is possible for the G-10 economies to fully offset the impact of the public safety net. It is certainly desirable. We recommend:

- *In all G-10 economies, more emphasis should be placed on incentives to encourage private-sector monitoring of banks—wherever it is not an already established practice.*
- *Banks can be encouraged to adopt incentive systems such as the German peer-review model, in which banks bear some financial responsibility for the failure of one of their peer group.*

Forward Loss Provisioning

Another innovation that would encourage evaluation and monitoring of risk is forward loss provisioning. Banks are often reluctant to make adequate provision for their loan losses, and bank regulators are often hesitant about pushing banks to recognize losses before it becomes plain that borrowers are in trouble. No bank loan officer wants to admit she made a mistake, and few supervisors want to cry “fire” when there is only smoke. As a consequence, published loan-loss provisions usually lag the eruption of a financial crisis (Gavin and Hausmann 1998). Hence, when crisis strikes, banks typically have inadequate cushions of equity plus reserves to absorb the loss.²¹

Many large G-10 banks recognize this problem and are exploring approaches to loan-loss provisioning that rely on modeling techniques

20. The Financial Stability Forum convened a study group on deposit insurance that reported in mid-2000 (FSF 2000a). This group’s work has been aimed mainly at emerging-market economies that are considering the adoption of limited safety nets in the wake of the 1997-98 crises (when they provided blanket guarantees to all depositors). The study group agreed on the common features of an effective system: an explicit, well-publicized framework; mandatory participation; limited coverage; ability of the insurer to access necessary resources; and robust information exchange among all participants in the safety net. More recently, in June 2000, the World Bank hosted a conference on deposit insurance—Deposit Insurance: Design and Implementation. The papers presented at the conference find many common, highly robust, features in effective systems, as well as relationships within and between various components of existing schemes and financial development. See the conference papers at http://www.worldbank.org/research/interest/confs/upcoming/deposit_insurance/home.htm.

21. See Claessens and Klingebiel (1999) for a table of loss provisioning rules in selected G-10 countries and emerging markets.

similar to those used in credit risk management and pricing models. The models attempt to measure exposure to credit risk for a long-term horizon, and make allowances for bad outcomes earlier than has been normal practice.

We believe banks should be encouraged to provision proactively. In some countries, this will require a change in tax laws so that loan-loss deductions can be taken in excess of historical experience. Current practice tends to permit deductions only for recognized problem loans. In this regard, we recommend that

- *Tax authorities should automatically accept loan-loss provisions endorsed by bank regulators.*
- *Regulators should link their endorsement of higher loan-loss provisions to the bank's own implementation of higher capital requirements.*

Implementation of these recommendations would have to be carefully coordinated across countries to avoid disadvantaging banks in one country relative to their international competitors.

WTO Liberalization of Foreign Entry

The research of Diamond and Rajan (2000) implies that local affiliates and subsidiaries of international banks can help ameliorate crises in emerging markets. Their actions can reduce the problem of asymmetric information faced by cross-border lenders and, more significantly, restore stability by maintaining or increasing credit access for local borrowers in times of stress. This suggests that G-10 governments should renew their efforts at the World Trade Organization (WTO) and in regional trade agreements to enhance entry opportunities in emerging markets for foreign financial institutions.

Few of the crisis countries allow much foreign bank activity, despite their potential to help with restructuring and recapitalization. By December 1999, for example, banks in South Korea with 40 percent foreign ownership accounted for only 16 percent of total bank assets; in Malaysia, 12 percent; and in Thailand, a mere 6 percent (IMF 2000b). The presence of foreign banks stimulates competition and greater efficiency, transfers technology and know-how, provides workforce training, and diversifies the sources of finance available to the local market.²²

The IMF (2000b) cautions against very high concentrations of foreign bank ownership, such as is now the case in Argentina and Poland. The IMF cites potential problems with cross-border supervision and regulation, the “too big to fail” dilemma, and an additional channel of shock

22. See Dobson and Jacquet (1998) and Levine (1997).

transmission (from parent to subsidiaries or branches). Name-brand foreign banks can also skim off the low-risk business in an emerging market and raise the portfolio risks of their domestic bank competitors.²³ These considerations lead us to recommend that

- *The goal of the World Trade Organization and regional trade arrangements should be to create the opportunity for sufficient foreign presence to promote, rather than inhibit, local competition and efficiency, and to enhance financial-system stability in domestic markets.*

In summary, the preceding discussion accepts the value of capital-adequacy rules but highlights the central value of more intense monitoring by G-10 supervisors, more emphasis on international coordination among the supervisors, and greater recognition of the complementarity between supervisory and market discipline.

In the next section, we address the second route to reduce moral hazard: Change the way liquidity crises are resolved. We advocate clear ex ante arrangements that would suspend payments ex post if borrowers' balance of payments profiles become unsustainable in exceptional circumstances. In other words, we want to change the payoffs in a liquidity crisis.²⁴

Crisis Management: Changing the Payoffs

Proposals for managing liquidity crises that reduce the need for an international safety net in the form of a lender of last resort usually base their arguments on the assumption that making a loan to such a lender would involve a significant, undesirable degree of moral hazard. Proponents of these reforms, known as private-sector involvement (or "bailing in" private banks and investors, rather than bailing them out), search for ways to change the payoffs from crisis resolution in order to influence the strategies of the players ex ante. Many private-sector participants find the official debate about their involvement in crisis resolution worrisome. This contributes to uncertainty, which is then priced into new transactions, increasing their cost.

Before turning to the issues, it is worth noting an important conceptual debate explored by Roubini (2000). Is there a stable "middle ground" between two "corner solutions": the full bail-out practiced in Mexico in 1995 (when official lenders were the only ones to provide liquidity) and the full bail-in advocated by the Meltzer Commission majority (let private banks and investors take their lumps)? Those who claim there is no middle

23. Pointed out in a personal communication from Barry Eichengreen.

24. We resist the temptation to debate the fine points of standstill design.

ground argue that a partial bail-in, or a partial bail-out, will trigger a rush to the exit among asset holders that are either not yet fenced in by official controls, or not yet financed out by official support.

Corner solutions work to prevent creditor runs under certain conditions. Bail-outs work if a country is systemically important and illiquid (Mexico in 1995 is an example of a success), but one of the significant consequences is an increase in moral hazard. Bail-ins work because all those involved know standstills or capital controls will be imposed if there is trouble, so the incentive to rush for the exits disappears. But bail-ins are a fragile solution if a country's problem is bad policy or bad fundamentals rather than bad luck. In these cases, uncertainty can precipitate the rush to the front of the line and cause real costs and financial losses.

Although the logic of the corner-solution argument is clear, in practice middle-ground packages have often worked when the external financing gap was too large for official money to fill: Brazil and South Korea are the latest major examples. We concur with Roubini (2000): Middle-ground solutions, by combining official support with coerced private forbearance, are both the most likely and most desirable approach to future crises.

Standstills

A standstill is a temporary halt in external debt servicing when the cause of the financial crisis is a panic among foreign lenders and bondholders. Other capital account outflows may be caught up in the same freeze. When a liquidity crisis is brewing, foreign short-term creditors may rush to get paid with available foreign exchange. Other foreign investors may try to sell their local assets before prices plummet and the exchange rate crashes. Most likely of all, influential local investors will get wind of trouble early, and convert some of their local assets into foreign bank accounts.

The standstill concept was first addressed officially by the G-10 finance and central bank deputies in 1996 as they searched for alternatives to larger and larger official financial assistance packages and ad hoc crisis measures. Further work was done by the Group of Twenty-Two (G-22) working groups in 1998. Both groups suggested that, in exceptional cases where debt profiles become unsustainable, countries should be able to halt payments temporarily while they restructure their obligations. The G-22 working group also emphasized the desirability of cooperative rather than unilateral action. Cooperative restructuring might head off damage to a country's reputation and might forestall anticipatory runs against similar countries.

A number of arguments have been put forward against the standstill concept. One concern is that a potentially coercive rule would come to supersede the current regime of discretion and voluntary creditor action

(IIF 1999a). Fearing that standstills are in the offing, domestic and foreign investors will run for the exits at the first whiff of trouble. Instead of adding stability, standstills in the toolkit would add fragility. Moral hazard on the part of debtor countries is also high on the list of arguments against standstills. By officially recognizing standstills, it is argued, the international community implicitly mandates “potential default.” Thus, borrowers could come to view standstills as normal practice rather than as truly exceptional. The result would be a higher debt and equity premium paid by all emerging-market countries, whether standstill candidates or not.

Concerns about both issues, it is argued, will cause capital markets to respond negatively, drying up private capital flows or making them more expensive, and slowing growth in developing countries (Council on Foreign Relations 1999). Some cite the Mexican crisis of 1982, when a debt moratorium triggered severe contagion in the rest of Latin America and closed access to capital markets for several years (De Gregorio et al. 1999).

Another objection is that widely held debt obligations are so messy to restructure that herding and contagion cannot be prevented. As former US Treasury Secretary Robert Rubin put it: “You used to be able to organize a relatively small number of banks in order to develop some kind of temporary relief so the banking system could work through its problems. [But with hundreds of institutional portfolio investors,] there’s no way to organize a standstill that might prevent things from cratering.”²⁵

Implications

Involving the private sector in crisis resolution is a necessary innovation in a world dominated by private-capital flows. Ad hoc solutions do not hold adequate promise of changing the rules of the game. The Southeast Asian experience, particularly that of Indonesia, illustrates how difficult and socially costly ad hoc solutions can be. Voluntary crisis resolution worked in South Korea (1998) and Brazil (1999),²⁶ but we think these cases will not prove to be the future model.

The game is changing. Private creditors have been compelled, more by IMF and G-10 suasion than by voluntary action, to contribute to debt restructuring in Ukraine (1999), Pakistan (2000), and Ecuador (2000). Informal discussions with market participants in late 2000 indicated an implicit acceptance of joint public-private efforts to resolve crises. What is missing is a clear framework—but one flexible enough to respond to the differing characteristics of successive crises.

25. *Wall Street Journal*, 1 February 1999, A6.

26. Brazil’s crisis involved official debt, whereas South Korea’s was centered on private debt. Korea provided public guarantees for the private debt and adopted very stringent macroeconomic policies to restore market confidence.

The press reports US, European Union, and Canadian convergence toward an agreement, under IMF auspices, on a few key points.²⁷ The private sector would be required to participate in crisis resolution involving large emerging markets when circumstances indicate that the borrowing country's financial problems will not be quickly resolved and the financial disturbance is deemed to be temporary. However, the private sector would not be required to participate in resolutions involving smaller emerging markets. Still being debated is whether standstills should somehow be "cooperative" or imposed on reluctant creditors, especially on bondholders who have no connection with each other.

Measures along these lines are required to change incentive structures and improve ex ante risk assessment and monitoring. They should be "on the shelf" for application if needed. One way to ensure that such measures will stay on the shelf is to promote mechanisms for better information sharing between public and private sectors. Committees of lenders and representatives of borrowers, working through the auspices of private institutions such as the Institute of International Finance, could provide a forum for interaction between private financial institutions and the public sector.

A critical unsolved issue is whether better information and agreed-on principles of joint crisis resolution will accelerate or retard the rush for the exits. The prospect of a standstill creates its own hazards. Creditors may rush early when trouble strikes, rather than take a patient stance. When a standstill is imposed on one country, creditors may get nervous about its neighbors and withdraw funds.

But, in our view, the growth of IMF resources during the next three decades will simply not permit it to cope with crises in the traditional way. Table 3.1 sketches two alternative growth paths for IMF resources. Path A maintains the historical relation between emerging-market imports and IMF resources. Path B maintains the historical relation between IMF resources and GDP growth of the G-10 countries. We think path B is far more likely than path A. This implies a declining IMF capacity to cope with growing private flows to emerging markets.²⁸ The full bail-out solution, exemplified by Mexico in 1995, will no longer be an option for large emerging markets. Perforce, other mechanisms must be found to supplement the IMF's traditional role of supplying hard currency in a crisis.

It is far from perfect, but the strongest idea to emerge from the debate so far is the comprehensive payments standstill—to be imposed rarely—by debtor countries with an IMF endorsement, in times of severe

27. *Wall Street Journal*, 28 September 2000, A2.

28. IMF Managing Director Horst Kohler harbors similar reservations: "It seems to me that we have to think about limits to the scale of crisis-lending that the IMF can be expected to undertake" (*IMF Morning Press*, 30 May 2000; <http://www.mpress.com>).

Table 3.1 IMF resources relative to financial magnitudes in emerging markets

	1970	1980	1990	1999	2010	2020	2030
	(billions of dollars at current prices)				(billions of dollars at 2000 prices)		
IMF quotas							
Path A (emerging-market import growth path)	28	76	130	289	600 ^a	1,300 ^a	2,800 ^a
Path B (G-10 GDP growth path)	28	76	130	289	400 ^b	520 ^b	660 ^b
Fund credit extended ^c	3	14	33	79			
Net IMF resources ^d	25	62	96	210			
Aggregate imports of emerging markets	82	606	918	1,728	4,000 ^e	8700 ^e	18,800 ^e
Total reserves of emerging markets	21	179	350	1,044	3,000 ^f	6000 ^f	11,000 ^f
GDP of emerging markets	797	2,927	4,747	6,521	10,000 ^g	15,000 ^g	22,000 ^g
GDP of G-10	1,999	7,093	14,997	20,187	26,000 ^h	35,000 ^h	44,000 ^h
Long- and medium-term debt and FDI stock in emerging markets	116	563	1,559	3,202	6,300 ⁱ	11,900 ⁱ	21,900 ⁱ
	(percent)						
IMF quotas under path A as percent of:							
Aggregate imports of emerging markets	34.7	12.5	14.1	16.7	15.0 ^a	15.0 ^a	15.0 ^a
Total reserves of emerging markets	137.7	42.5	37.0	27.6	20.0	21.7	25.5
GDP of emerging markets	3.6	2.6	2.7	4.9	6.0	8.7	12.7
GDP of G-10	1.4	1.1	0.9	1.4	2.3	3.7	6.4
Long- and medium-term debt and FDI stock in emerging markets	24.5	13.5	8.3	9.0	9.5	10.9	12.8

	(percent)						
IMF quotas under path B as percent of:							
Aggregate imports of emerging markets	34.7	12.5	14.1	16.7	10.0	6.0	3.5
Total reserves of emerging markets	137.7	42.5	37.0	27.6	13.3	8.7	6.0
GDP of emerging markets	3.6	2.6	2.7	4.9	4.0	3.5	3.0
GDP of G-10	1.4	1.1	0.9	1.4	1.5 ^b	1.5 ^b	1.5 ^b
Long- and medium-term debt and FDI stock in emerging markets	24.5	13.5	8.3	9.0	6.3	4.4	3.0

FDI = foreign direct investment

G-10 = Group of Ten countries; see note to table 1.1.

- a. On path A, the IMF quotas are assumed to expand so that they bear a constant relation of 15 percent of the aggregate imports of emerging markets through 2030 (see note d).
- b. On path B, the IMF quotas are assumed to expand so that they bear a constant relation of 1.5 percent of the GDP of the G-10.
- c. Total fund credit and loans outstanding (calculated as outstanding purchases of local currencies plus outstanding loans).
- d. Available resources of the IMF (calculated as IMF quotas less IMF credit extended).
- e. The annual growth rate in the 1990s (about 8 percent in real terms) was applied to calculate the figures.
- f. Total reserves are assumed to increase from about 20 percent of real GDP in 2000 to 30 percent in 2010, 40 percent in 2020, and 50 percent in 2030.
- g. GDP in emerging markets is projected to grow at 4.0 percent per year in real terms.
- h. GDP in the G-10 countries is projected to grow at 2.5 percent per year in real terms.
- i. The sum of long- and medium-term debt and FDI stock is from table 1.4.

Note: Emerging markets represent the rest of the world other than the 23 industrial countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

Sources: IMF, *International Financial Statistics, Yearbook*, 1998; IMF, *International Financial Statistics*, February 2000; IMF, *World Economic Outlook*, October 2000; *World Bank, Global Development Finance*, 1998, 1999; United Nations, *World Investment Report*, 1995, 1997.

distress in large emerging markets.²⁹ When a standstill is invoked, domestic investors in the emerging market should not be allowed to reach the exit door before foreign creditors. Even with these qualifications, we do not list standstills among our frontline recommendations.

Will They Work?

Part of the logic of standstills is that they change the incentive structure for market participants *ex ante*. But there are significant problems in making them workable. To work, standstills probably have to be universal: They have to apply to all classes of investors. Partial standstills would invite investors to alter the legal form of their holdings so as to avoid emergency controls on repatriation of capital. Short-term loans might be “dressed up,” for example, as hybrid equity, if standstill controls did not apply to portfolio equity investors.

But universal standstills have their own problems. They would have to restrict capital flight by residents (which is of considerable magnitude, as pointed out in chapter 1). Stopping residents from acquiring external assets could be very unpopular. Moreover, the list of potential creditors is very long, including various private nonresidents, official lenders, and domestic holders of wealth. Getting these diverse groups to agree on a fair distribution of delayed payment, and even losses, is a logistical nightmare.

Other problems with the standstill concept come to rest at the IMF’s door. The Fund is the logical institution to declare a standstill. It would have to quickly identify the cause of a crisis and declare a standstill if warranted. Some debtor countries would be tempted to request a standstill, even if they did not need one. If the IMF denied a “confidential” request, that might produce its own mini-crisis.

In addition, the IMF is an important creditor in its own right. There will not be much political support for the standstill concept if the Fund tries to ensure preferential repayment for itself. Eichengreen (2000) concludes that if standstills are to be officially triggered by the IMF, its Article VIII.2(b) would first have to be changed, and creditor countries would have to recognize in their contract law the IMF’s authority to trigger such standstills. Amendment of the IMF Articles is a major step. This or any other mechanism for invoking standstills will be unworkable as long as the United States opposes the concept.

29. The case for a payments standstill has been advanced by Miller and Zhang (1999), among others. Differing scholars, such as Eichengreen and Ruehl (2000), have argued for collective-action clauses in loan agreements. Cline (cited in Harwood, Litan, and Pomerleano 1999, chap. 1) thinks such clauses are a bad idea and would diminish bond issues by developing countries. Cline’s objections were pointedly underscored by Mexico, which initially refused to insert a collective-action clause in its sovereign bond issues, arguing that such a clause would taint its standing in the capital markets.

Collective-Action Clauses

An alternative mechanism with the same motivating logic, to change the incentives *ex ante*, is the collective-action clause (CAC). The CAC concept mainly applies to bond contracts and syndicated bank loans; the idea is to facilitate the orderly restructuring of problem debts.³⁰ CACs are usually activated when the economic fundamentals in an economy or a sector deteriorate. Sweeping panic and a rush for the exits are not the problem. Bond and loan contracts that include a CAC allow the majority of creditors to negotiate settlements collectively without being obstructed by a minority of creditors who may be pushing for more radical measures, such as legal action to seize assets. UK bonds often include such clauses, and these bonds are traded in London. US bonds typically do not have CAC features.

A comparison of the borrowing costs of UK and US-style bonds indicates that CAC provisions reduce the cost of borrowing for the more creditworthy issuers, but less creditworthy ones face higher spreads.³¹ This means that lenders penalize borrowers considered most likely to default, leading to pricing for risk. Eichengreen (2000) points out that more than half of sovereign bonds and two-thirds of all emerging-market bond issues do not yet include CACs. Nor are CACs yet used in syndicated loan contracts. On the basis of recent bond restructuring agreements in Pakistan and Ukraine, where CACs were in place, Roubini (2000) concludes that “CACs have had a very marginal role.” But the incentive structure is gradually changing to encourage the wider use of CACs, while recognizing that they are no silver bullets. For example, qualification criteria for the IMF’s Contingent Credit Line now include the use of CACs.

Collective-action clauses may gradually gain acceptance. But even if they become a customary part of syndicated loan and bond contracts, CACs cannot deal with the problem of panic. In a panic, many creditors besides holders of bonds and syndicated loans will rush for the exit.

When a panic threatens, and the problem is temporary liquidity in a country that intends to honor its commitments, in a truly voluntary fashion *all* the large G-10 financial institutions should organize an orderly rescheduling that allows for continued access to international capital markets. Voluntary debt rollovers will reduce the pressure on the IMF to

30. Buiter and Sibert (1999) suggest a different kind of clause for debt contracts. They suggest that all foreign currency lending be required to include a universal debt rollover option with a penalty. Such a clause would put a great deal of power in the hands of the borrower, who could choose to lengthen the maturity of debt and pay a predetermined penalty to do so. Such a mechanism could be triggered quickly, but like the CAC, it would have to be recognized by all lenders and their governments to become operational.

31. See Eichengreen and Mody (2000).

act as unlimited lender of last resort. Instead, they will distribute the pressure across public- and private-sector participants to restore sustainable debt profiles. In turn, this pressure will ex ante increase the market discipline facing G-10 financial institutions when they extend credit. The outcome should be more realistic pricing of risk.

Over the long haul, the prospects of universal standstills, CACs, and voluntary debt rollovers should change the structure of capital flows to emerging markets. These measures should both lengthen debt-maturity terms and promote the substitution of portfolio equity and FDI as alternative forms of capital flow. Why? Because the various techniques of delaying payment in a crisis have far less impact on the anticipated cash-flow profile for longer-term investment than for short-term debt.

Even so, it is not at all clear that private-sector measures alone provide an adequate answer to financial crises. Hence the case for the middle ground that blends private and official support in handling liquidity crises. For the foreseeable future, we expect to see ad hoc solutions, combining official support, such as IMF lending into arrears, with coerced and voluntary private-sector involvement in restoring payments structures to sustainable profiles.

Disclosure and Transparency

Before drawing our conclusions, there is an additional transparency issue that merits consideration. If international financial-market participants are expected to improve their evaluation of risk, more timely public information on borrowers is required, such as information on national balance sheets and on the strength of domestic financial sectors. Widespread concerns about disclosure and oversight, first identified in 1998 by G-22 working groups, have led the IMF to create standards for information dissemination, and the BIS and the Financial Stability Forum to create guidelines for strengthening financial systems (boxes 3.1 and 3.2). Setting standards is one thing. Implementation and monitoring are also necessary. The IMF and World Bank have taken on these tasks in the joint Bank-Fund Financial Sector Assessment Program (FSAP), and they are making this information public through *Reports on Observance of Standards and Codes* (ROSCs) and Financial Sector Stability Assessments (FSSAs).

The purpose of ROSCs is to monitor the implementation by national authorities of internationally recognized standards. The IMF is incorporating ROSCs into its Article IV surveillance missions, which draw upon the expertise of selected national supervisors who join the missions for this purpose. ROSC coverage is extensive (table 3.2). It includes assessments of “core” standards (for data, fiscal and monetary policy, and the banking sector) and “noncore” standards (for securities and insurance, payment systems, audit, accounting, and deposit insurance).

Box 3.1 The Status of IMF Reforms

Crisis Prevention

Macroeconomic Surveillance, Early Warning, and Prequalification

The International Monetary Fund's traditional macroeconomic surveillance exercises—in the form of once-secret Article IV consultations—are now carried out in a more open manner. Public Information Notices (PINs), summarizing the outcome, are released for about 80 percent of Article IV consultations (the remaining 20 percent probably concern the most questionable countries). By March 2000, 58 IMF members had volunteered to participate in an 18-month pilot program for the release of Article IV staff reports.

A further step is that, upon a member's Use of Fund Resources (UFR), the chairman's statement following the Executive Board discussion, as well as the Letter of Intent (LOI), will be publicly released. By March 2000, 54 sets of program documents had been issued. In addition, an external evaluation of IMF surveillance methods was published in July 1999 and subsequently reviewed by the Executive Board, <http://www.imf.org/external/pubs/ft/extev/surv/index.htm>. In April 2000, the IMF Executive Board decided to establish an independent evaluation office within the Fund. Specifics on the new office were thrashed out in the Annual Meetings in September 2000.

The IMF recognizes the case for creating an early-warning system to help predict balance of payments crises, and prototype models are being tried within the IMF. However, cautious voices are still raised against excessive reliance on models and any publication of results.

In March 2000, the Executive Board endorsed the proposal that an important principle of the strengthened two-stage safeguards framework (an assessment process, followed by an on-site review) should become a standard requirement for Fund financial support.

Surveillance of Financial Supervisory Systems in Emerging-Market Economies

More attention has been given to the analysis of each IMF member's financial-sector soundness, its capital account position, and its vulnerability to financial crises. A joint IMF-World Bank Financial Sector Assessment Program has been established, operating on a 1-year pilot basis since 1999, to help countries reduce their financial vulnerability and to enhance their long-term financial development. On the basis of FSAP reports on 12 countries, the IMF prepared Financial Sector Stability Assessments in 1999. The Fund is still working out the balance between confidentiality and candor in publishing the results.

Promote Disclosure and Transparency

The Special Data Dissemination Standard (SDDS), in place since 1996, seeks to report more timely data on reserves, foreign currency liquidity positions, and external debt. By July 2000, 29 of the 47 subscribers met SDDS data

(Box 3.1 continues next page)

Box 3.1 The Status of IMF Reforms (continued)

specifications, <http://dsbb.imf.org/country.htm>. By the end of 1999, most potential members in the General Data Dissemination Standard (GDDS) system had participated in seminars. Broad economic aggregates have been prepared for fourteen countries.

The SDDS guides countries that have, or that might seek, access to international capital market, <http://dsbb.imf.org/sddsindex.htm>. The GDDS, conversely, was established in 1997 for countries not in a position to subscribe to the SDDS, but seeking to improve their statistical systems, <http://dsbb.imf.org/gddsindex.htm>. In addition to providing more timely economic and financial data, the GDDS and the SDDS serve as templates for measuring key economic variables across countries (See box 3.2).

Crisis Management

Declaring a Crisis and Triggering a Standstill

The scope of private-sector burdens in resolving financial crises has been at the center of the debate. Many proposals have been suggested, but no consensus has emerged. The proposals range from collective-action clauses on bond covenants to market-based standstill arrangements. In practice, flexible case-by-case approaches have prevailed. The IMF has gradually shifted its role from dominant provider of assistance to one of several providers, and coordinator of most creditors.

Crisis Lending

IMF facilities are under close scrutiny. As of January 1999, a 45 percent quota increase was agreed on, bringing total quotas to about \$300 billion (table 3.1). In September 1999, the Interim Committee, the highest decision-making body of the Fund, was transformed into the International Monetary and Financial Committee (IMFC), reflecting renewed focus on the *financial* nature of the Fund's operations. The first meeting of the IMFC took place in April 2000. Several principles for managing Fund lending in times of crisis emerged: streamlining and consolidating existing facilities; shortening the maturity of loans; and charging progressively higher rates of interest, in the event either of weak implementation of IMF conditions or repeated use of IMF resources.

Until recently, the Fund operated six assistance facilities (Williamson 2000): (1) traditional standbys; (2) the high-interest Supplementary Reserve Facility (SRF) introduced in 1998; (3) the Contingency Credit Line (CCL) announced in 1998, but so far unutilized; (4) the Extended Fund Facility (EFF), introduced in 1975 for longer-term loans to developing countries; (5) the Poverty Reduction and Growth Facility (PRGF); and (6) the Compensatory and Contingency Financing Facility (CCFF), which makes low-interest loans to countries experiencing exogenous shocks. Four facilities—the contingency element of the CCFF, the Currency Stabilization Fund, the Buffer Stock Financing Facility, and support for commercial bank debt reduction (i.e., the Brady Plan)—were eliminated at the April 2000 meetings of the IMFC, and the design of CCL is being reconsidered.

Box 3.2 Standard-setting Bodies

A clear outcome of the financial architecture debate is more transparency, which in turn means benchmarking more features of national economies against recognized standards. As a result, various standard-setting bodies have gained prominence in each pillar of the international economy.

The IMF remains at the center of the picture, because the work of other bodies comes together in the context of IMF surveillance. Together with the World Bank, the IMF summarizes the results in its *Reports on the Observance of Standards and Codes*. Three rounds of experimental case studies are scheduled to be reported to the 2000 Annual Meetings of the IMF and the World Bank, <http://www.imf.org/external/np/rosc/2000/stand.htm>. Here is a rundown of activity by various standard-setting bodies:

- *International Monetary Fund*. In the April 2000 meeting of the International Monetary and Financial Committee, governors of the IMF (24 ministers and central bank governors representing the 182 members of the IMF) encouraged the development of standards in areas of direct concern to the IMF—data dissemination; transparency of fiscal, monetary, and financial policies; and banking supervision. The IMF has spearheaded the *Code of Good Practices on Fiscal Transparency*, the *Code of Good Practices on Transparency in Monetary and Financial Policies*, the *Special Data Dissemination Standard*, and the *General Data Dissemination Standard*. Together, the IMF and the Basel Committee on Banking Supervision created the *Basel Core Principles*.
- *Basel Committee on Banking Supervision (BCBS)*. The BCBS, established in 1974 by the G-10 central banks, formulates broad supervisory standards and guidelines, and recommends statements of best practices in banking. In addition to the G-10 countries, nine central banks in Asia, Latin America, the Middle East, and Europe were admitted to membership in 1996-97, <http://www.bis.org/publ/index.htm>.
- *International Organization of Securities Commissions*. IOSCO develops and promotes standards of securities regulation. It draws on more than 90 international members to establish standards for effective surveillance, <http://www.iosco.org>.
- *The World Bank*. The Bank cooperates with other international bodies in developing and promoting standards and best practices in corporate governance, insolvency regimes, and social policies.
- *Committee on Payment and Settlement Systems (CPSS)*. The CPSS is established by the G-10 central banks to provide a forum for issues related to payment and settlement systems. It sets out core principles for the design and operation of systemically important payment systems. <http://www.bis.org/publ/index.htm>.
- *International Association of Insurance Supervisors (IAIS)*. The IAIS, which was founded in 1994, establishes internationally endorsed principles and standards that are essential for effective insurance supervision. Its members includes insurance supervisors from more than 100 countries, <http://www.iaisweb.org>.
- *International Accounting Standards Committee (IASC)*. The IASC, a private body formed in 1973, aims to harmonize accounting principles around the world. It has 153 member bodies from 122 countries, <http://www.iasc.org.uk>.

(Box 3.2 continues next page)

Box 3.2 Standard-setting Bodies (*continued*)

- *International Federation of Accountants (IFAC)*. Through its International Auditing Practices Committee (IPAC), IFAC, a private organization, has formulated the International Standards on Auditing (ISA) and Audit Practice Statements. It has 153 member bodies from 113 countries, representing 2 million accountants, <http://www.ifac.org>.
- *Organization for Economic Cooperation and Development (OECD)*. The OECD's Financial Action Task Force on Money Laundering (FATF) was established by the G-7 summit in Paris in 1989. It has set out a program of 40 recommendations to combat money laundering. With 26 members, FATF monitors progress against money laundering through a two-fold process of annual self-assessment and a more detailed mutual evaluation. Recently, the OECD published a document "naming names" of countries that facilitate tax evasion or are operating as harmful tax havens, <http://www.oecd.org/fatf>.
- *Financial Stability Forum*. The FSF was established in April 1999 following the proposal by Hans Tietmeyer, former president of the German Bundesbank. It has 40 members. It brings together 25 national regulatory authorities from 11 countries and 15 members from the above-mentioned international organizations. The FSF seeks to coordinate the efforts of these various countries and bodies to promote international financial stability, and reduce systemic risk. In its *Compendium of Standards*, the FSF provides a common reference for accepted economic and financial standards. The *Compendium* highlights 12 key standards for sound financial systems and lists another 54. The FSF has set up working groups on highly leveraged institutions, offshore financial centers, and capital flows. The activities of the working groups and their recommendations were reported onto the IMFC in April 2000, <http://www.fsforum.org/standards/>.

Since early 1999, ROSCs have been published on an experimental basis for 15 economies that agreed to participate.³² The noncore reports are adapted from joint Bank-Fund FSAPs; wherever possible, national authorities are encouraged to do self-assessments, the rationale being that implementation is more likely to improve where countries feel they "own" the process. Technical assistance is available, and external assessment is used as a source of discipline. After review by the IMF Executive Board, the Fund makes the reports public.

Our summary of these assessments, in table 3.3, provides a rough checklist. It indicates which macroeconomic and financial systems are sufficiently complete and transparent to be rated. Our ratings indicate what one would expect: Immature financial systems, and countries with problematic macroeconomic fundamentals, need the most improvement.

32. These include Albania, Argentina, Australia, Bulgaria, Cameroon, Canada, Czech Republic, Estonia, Greece, Hong Kong Special Administrative Region, Tunisia, Turkey, Uganda, Ukraine, and the United Kingdom.

Table 3.2 IMF Reports on Observation of Standards and Codes

Results published	Coverage ^a							Style of report ^b
	Core standards				Noncore standards			
	Data	Fiscal	MFP	Banking	Other ^c	Descriptive	Substantive	
First round (3)								
Argentina	x	x	x	x	SM, IM, AC	x		Staff assessment
Australia	x	x	x	x				Self-assessment
United Kingdom	x	x	x	x	SM, IM, AC, AP	x		Staff assessment
Second round (8)								
Bulgaria (reissued in March 2000)	x	x	x	x	SM, IM, DI		x	Staff assessment
Cameroon (reissued in May 2000)		x	o	o	IM, PS		o	Staff assessment (along with FSSA)
Czech Republic (reissued in June 2000)	x	x	x	x	SM		x	Staff assessment
Greece		x						Staff assessment
Hong Kong SAR	x	x	x	x	SM, IM, AC, AP	x		Staff assessment
Tunisia	x	x	x	x	SM		x	Staff assessment
Uganda	x	x	x	x	SM, IM	x		Staff assessment
Ukraine		x						Staff assessment

(table continues next page)

Table 3.2 IMF Reports on Observation of Standards and Codes (continued)

Results published	Coverage ^a							Style of report ^b
	Core standards				Noncore standards			
	Data	Fiscal	MFP	Banking	Other ^c	Descriptive	Substantive	
Third round (4)								
Albania	x							Staff assessment
Canada			o	o	SM, IM, PS		o	FSSA
Estonia			o	o	SM, IM, PS		o	FSSA
Turkey		x						Staff assessment

MFP = Monetary and Financial Policies.

FSSA = Financial Sector Stability Assessment.

SAR = Special Administrative Region.

x = IMF assessment, based on questionnaires answered by national authorities.

o = FSAP (Financial Sector Assessment Program) assessment.

a. Core standards cover data, fiscal code, monetary and financial code, and Basel core principle on banking. Noncore standards cover securities market regulation (SM); insurance market regulation (IM), payment system (PS), deposit insurance system (DI), accounting (AC), auditing (AD), etc.

b. Staff assessment: IMF assessment, based on questionnaires answered by national authorities. Self-assessment: prepared by national officials from the treasury. IMF played a role in assisting at review panel stage. However, the IMF does not, in its own words, share responsibility for the content of the report. This format has been used only in the case of Australia to date.

c. SM (securities market regulation), IM (insurance market regulation), PS (payment system), and DI (deposit insurance system).

Sources: IMF, *Experimental Reports on Observance of Standards and Codes*, September 2000, <http://www.imf.org/external/np/roscl/>; *Reports on Observance of Standards and Codes: An Update*, 20 March 2000; *International Standards and Fund Surveillance: Progress and Issues*, 16 August 1999; *Progress Report: Developing International Standards*, March 1999; Country Practices; IMF, *Progress Report on the World Bank-IMF Financial Sector Liaison Committee*, December 1999, <http://www.imf.org/external/np/mae/fslc/121599.htm>.

Our summary also indicates several problems with the assessments. First, one of the most obvious problems is that none of the major crisis countries has volunteered for inclusion in these early rounds (Argentina and Turkey volunteered before they became a crisis country in late 2000). A second problem—one of the most serious—is the impact of the assessments on IMF resources—at staff, management, and board levels. Missions expanded into the noncore areas because they found their understanding of core areas to be limited without added information. Thus the missions became thinly spread. The IMF has commented (IMF 1999f):

Even if reports were phased in across the membership over a period of 3-4 years, for example, staff would still need to prepare around 50 reports per year. . . . If reports were confined only to the four previously identified core areas, Statistics Department and Fiscal Affairs Department would need to prepare around 50 modules annually, Monetary and Exchange Affairs Department . . . 100 modules, while area departments . . . 200 modules annually. The resource implications of this work program for departments would be enormous and would require substantial increases in staffing levels. Even more resources would be required if staff assessments were to cover non-core standards as well.

A third problem is determining the quality of the disclosed data. Most of the staff appraisals depend on questionnaires completed by national authorities; few are yet prepared by joint World Bank-IMF assessments. And a fourth problem is implementing best practices. When persistent weaknesses in national financial systems are disclosed through this monitoring process, how will countries be encouraged to correct these weaknesses? The best source of potential pressure is market discipline; and this could be triggered by full, timely disclosure of IMF reports. The worst offenders will, however, resist disclosure.

These are serious issues, but the clear benefit of the assessments is that they create a process and a system for gathering key information on a comparable cross-national basis where there was none, and they provide a new sources of information for markets.

Conclusion

Our analysis has focused on two approaches to change the rules of the game. We have identified a number of reforms that the governments of the G-10, and also Spain, should adopt. We have also examined related IMF reforms to create a framework for private-sector involvement in the resolution of liquidity crises. As we have indicated, undertaking both sets of reforms—beefing up G-10 financial-sector supervision and market discipline and amending the IMF Articles of Agreement—will require huge efforts, probably more effort and resources than these governments are willing to expend.

We conclude, therefore, that political and economic resources would be spent most productively carrying forward the Basel II framework,

Table 3.3 Assessment of the IMF Reports on Observation of Standards and Codes

Results published	Coverage ^a					
	Core standards					Substantive (total) ^h
	Laudatory ^c	Corrective, general ^d	Corrective, specific ^e	Critical ^f	Other ^g	
First round (3)						
Argentina	6	4	2	0	3	2 (15)
Australia	0	0	0	0	0	0 (0)
United Kingdom	3	2	3	2	0	5 (10)
Subtotal	9	6	5	2	3	7 (25)
Second round (8)						
Bulgaria (reissued in March 2000)	4	19	19	2	0	21 (44)
Cameroon (reissued in May 2000)	7	19	5	6	5	11 (42)
Czech Republic (reissued in June 2000)	7	8	9	9	1	18 (34)
Greece	1	6	3	0	0	3 (10)
Hong Kong SAR	8	2	3	1	1	4 (15)
Tunisia	4	7	15	0	0	15 (26)
Uganda	1	11	11	2	0	13 (25)
Ukraine	0	4	7	2	0	9 (13)
Subtotal	32	76	72	22	7	94 (209)
Third round (4)						
Albania	1	1	0	1	0	1 (3)
Canada	1	1	2	1	7	3 (12)
Estonia	0	9	8	4	4	12 (25)
Turkey	0	2	17	3	1	20 (23)
Subtotal	2	13	27	9	12	36 (63)

FSSA = Financial Sector Stability Assessment.

SAR = Special Administrative Region.

a. Core standards cover data, fiscal code, monetary and financial code, and Basel core principle on banking. Noncore standards cover securities market regulation (SM); insurance market regulation (IM); payment system (PS); deposit insurance system (DI); accounting (AC); auditing (AD); bankruptcy code (BC), etc.

b. Noncore areas covered in ROSCs to date are as follows: Argentina: SM, IM, AC; Australia: none; United Kingdom: SM, IM, AC, AD; Bulgaria: SM, IM, DI; Cameroon: IM, PS; Czech Republic: SM; Greece: none; Hong Kong SAR: SM, IM, AC, AD; Tunisia: SM; Uganda: SM, IM; Ukraine: none; Albania: none; Canada: SM, IM, PS; Estonia: SM, IM, PS; Turkey: none. Special attention should be given to what "0" stands for in noncore areas. In many cases, descriptions of current practices were given in these areas; this was especially true before FSSA reports were incorporated into ROSCs. For example, the UK report covers noncore areas such as securities market, insurance market, accounting, and auditing practices, as noted above. However, these are descriptive information based on questionnaires answered by the UK authorities without the IMF assessment. This kind of coverage items were treated as "0," as those without any coverage.

c. Praising the past development and potential for the future.

d. Mostly "anodyne," i.e., the direction is shown, but is not specific enough and does not say "how."

Coverage ^a						
Noncore standards ^b						
Laudatory	Corrective, general	Corrective, specific	Critical	Other	Substantive (total) ^h	Style of report ⁱ
0	0	0	0	0	0 (0)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
0	0	0	0	0	0 (0)	
3	7	8	2	0	10 (20)	Staff assessment
2	2	0	9	0	9 (13)	Staff assessment (along with FSSA)
0	2	1	2	0	3 (5)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
0	1	1	2	0	3 (4)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
0	0	0	0	0	0 (0)	Staff assessment
5	12	10	15	0	25 (42)	
0	0	0	0	0	0 (0)	Staff assessment
2	3	2	3	3	5 (13)	FSSA
0	4	1	3	7	4 (15)	FSSA
0	0	0	0	0	0 (0)	Staff assessment
2	7	3	6	10	9 (28)	

e. Pinpointing the objects for reform, showing “how” to reform “what.”

f. Pointing out an inconsistency or incompatibility of existing practices, or those that fall short of internationally recognized standards.

g. Scheduled planning ahead for implementation, areas of potential conflict, etc.

h. Substantive assessments here refer to the sum of the numbers for corrective, specific and critical.

i. Staff assessment: IMF assessment, based on questionnaires answered by national authorities. Self-assessment: prepared by national officials from the treasury. IMF played a role in assisting at review panel stage. However, the IMF does not, in its own words, share responsibility for the content of the report. This format has been used only in the case of Australia to date.

Sources: IMF, *Experimental Reports on Observance of Standards and Codes*, September 2000, <http://www.imf.org/external/np/rosc/>; *Reports on Observance of Standards and Codes: An Update*, 20 March 2000; *International Standards and Fund Surveillance: Progress and Issues*, 16 August 1999; *Progress Report: Developing International Standards*, March 1999; Country Practices; IMF, *Progress Report on the World Bank-IMF Financial Sector Liaison Committee*, December 1999, <http://www.imf.org/external/np/mae/fslc/121599.htm>.

but further than regulators themselves can be expected to do. By contrast, the consensus agenda concentrates on two features of the financial architecture: demand-side reforms in the emerging markets and bailing-in the private sector through coerced standstills. These features entail fundamental and contentious reforms, both in emerging markets and the IMF. Overcoming the necessary political hurdles (reflecting strong entrenched interests) will take enormous effort. If this effort is expended at the cost of neglecting the G-10 reforms we have suggested, we are skeptical that the fundamental moral hazard problem will soon be overcome, or that the volatility of financial flows to emerging markets will be reduced in the near term.

Instead, we would like to see a larger slice of the available political energy expended on G-10 supervisory reforms and middle-ground measures to involve the private sector, such as voluntary debt rollovers and CACs. These goals are likely to be achieved much more quickly than demand-side reform in the emerging markets (a long, step-by-step, country-by-country process), and they are likely to have a more continuous and beneficial influence than draconian universal standstills that either are seldom implemented, or are implemented much too often.

The rationale for more effort on G-10 reforms and middle-ground measures is to ensure that appropriate evaluation and pricing of risk soon become a permanent feature of world capital markets. We have argued that several measures are necessary:

- *Introduce, through the new Basel Capital Accord, incentives to ensure better calibration of capital requirements for the range of risks banks take.*
- *Reexamine the incentive structures for national supervisors. They should put more weight on systemic risks; they should coordinate more closely—beyond current initiatives—to include proactive information sharing and joint corrective action where they see concentrated, correlated risks in the cross-border positions of their financial institutions. Supervisors should also become publicly accountable for spotting and resolving problems.*
- *Encourage the use of instruments, such as subordinated debt, to increase market monitoring, and require greater disclosure by LCBOs of their risks and risk management systems.*
- *Tighten the G-10 frameworks governing deposit insurance systems, including incentive systems for the supervisors themselves, to offset the public subsidy and encourage greater market discipline. The US framework was carefully examined in the debate over the Financial Services Modernization Act of 1999. Has a similar careful assessment of public safety net subsidies been undertaken in the other G-10 countries? What about the large European state-owned financial institutions? What about Japan's blanket guarantee?*

- *Start a forward-looking review of the demand side of large portfolio investors. The goal is to design disclosure rules and other incentives that would forestall large portfolio swings from becoming a future financial problem.*
- *Create ex ante a clear framework for private-sector involvement in managing future crises through voluntary debt rollovers and collective-action clauses.*

These recommendations will require stepped up international cooperation among supervisors. But the changes are likely to have a lasting effect on incentive structures. How much change is needed? Informal evidence indicates that market-driven adjustment in the G-10 institutions has occurred since the latest crises. Some of the largest firms have completely overhauled their risk-monitoring and -management systems since 1997. Too much intervention by the public sector could amount to overkill, creating new distortions and inefficiencies in international capital markets.

One illustration of how this can happen comes from informal evidence that the appetite of hedge funds, not only for aggressive risk taking but also for more sedate arbitrage, has declined since the 1997-98 crises.³³ Another illustration is the IMF (2000c) report that market players predict that disfavor toward short-term debt instruments will encourage *even shorter* maturity terms, in the form of overnight interbank loans.

Two central questions arise from these conclusions. First, what would be the effect of implementing *all* the measures discussed here—stronger (not heavier) supervisory oversight and international coordination; better incentive structures for supervisors; higher risk weights on short-term loans to high-risk lenders; and tighter, more accountable deposit insurance arrangements? Second, what would be the sensitivity of cross-border capital flows to different combinations of these measures? Would some flows dry up entirely—for example, debt flows to high-risk borrowers? Would debt maturities lengthen? Would the measures create more serious distortions than the hedge fund example? Or would this combination encourage better pricing for risk by lenders—an objective well worth achieving?

These are crucial questions. Our answers are far from definitive, because experience with the policy measures we propose is limited. The limited evidence in related contexts suggests that, to some extent, various forms of capital are substitutes for one another. We are optimists, but the evidence is not conclusive.

33. Hedge funds now face more severe disclosure requirements by their bank creditors, as well as substantial official scrutiny. Like other financial institutions, they are avoiding exposure to the erstwhile crisis countries, fearing that the possible disclosure of such transactions will “spook” their investors.

With due regard for these uncertainties, we believe the rules of the game should be changed so that the incentive structures and the strategies of the players are altered. Because the effects of each reform are difficult to measure, they should be introduced gradually and in experimental ways, and financial institutions and regulators must be willing to learn as they go. But the arsenal should be prepared.