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"ENEMY OF NONE BUT A COMMON FRIEND OF ALL"? AN INTERNATIONAL PERSPECTIVE ON THE LENDER-OF-LAST-RESORT FUNCTION

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On the international plane, it is not Depression, in the old sense, that is the danger. National governments, taught by Keynes, however indirectly, can see to that. What is liable to happen, if there is a failure of international credit, is that nations will turn upon themselves, becoming more autarkic or more protectionist, impoverishing themselves and each other by refusing to trade with each other. . . . The remedy would be an International Central Bank . . . , which would underpin the credit structure, but in order to underpin it must have some control over it. That was what Keynes, who understood this international aspect very clearly, wanted to get at Bretton Woods; but all he got was a Currency Board (for it is little more than a Currency Board, being so tied up with rules and regulations)—the IMF. That, we are finding . . . , is not enough. But how should the powers, which governments have been unwilling to entrust to their own Central Banks (once they have realized what is involved) be entrusted to an International Bank? That is the dilemma, the old dilemma, to which we have now come back, on an international plane.

—Sir John Hicks, "Monetary Theory and History"

Power for good is power for evil, even in the hands of Omnipotence.

—John Quincy Adams, on the Second Bank of the United States

“ENEMY OF NONE BUT A COMMON FRIEND OF ALL”?
AN INTERNATIONAL PERSPECTIVE ON
THE LENDER-OF-LAST-RESORT FUNCTION

1 Introduction

At the beginning of the twentieth century, the rapid development of fractional-reserve banking forced national authorities to seek ways to prevent and control the associated phenomenon of financial instability. By the end of the 1930s, a complex regulatory framework had emerged that was based on three pillars: (1) a body of legislation specifically addressed to banking problems, and especially to the handling of bank bankruptcies and liquidations, (2) a regulatory and supervisory structure aimed at limiting the risk exposure of banks, partly by restricting competition, and (3) a lender of last resort endowed with both the financial means and the authority to intervene as needed to stem a crisis. Deposit insurance was later added to the picture, following the example set by the United States.

Many doubted at the time that such a complex architecture could ever be extended to encompass international financial transactions. Indeed, the Bretton Woods system was explicitly designed to avoid adding an international dimension to the problem. Although the Bretton Woods architects recognized the need for a centralized mechanism, tied to the International Monetary Fund to facilitate adjustment in the face of current-account disequilibria, they tried to limit financial instability to the national sphere. They achieved this by making capital controls the rule rather than the exception in international relations and by forbidding the IMF to make its resources available to finance a sustained outflow of capital. Accordingly, no provision was made in the

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otherwise comprehensive Bretton Woods agreement for coordinating bank supervision across countries or for establishing last-resort-lending facilities for either international banks or countries.

The Mexican crisis of 1994–95 sent a shock wave throughout the world and a clear message that in an environment of freely mobile capital and largely deregulated domestic financial systems, this strategy was no longer safe. In the wake of the crisis, the international monetary framework came under close scrutiny. Jeffrey Sachs (1995), Barry Eichengreen and Richard Portes (1995), and the Group of Ten report on *The Resolution of Sovereign Liquidity Crises* (1996) explored the possibility of introducing features of national bankruptcy laws into international financial relations. In the same vein, Morris Goldstein (1997) proposed an international banking standard to ensure effective bank supervision worldwide. Meanwhile, the G–10 authorities (1997) began taking a number of concrete steps by issuing the Core Principles for Effective Bank Supervision and defining a set of general guidelines for enhancing financial stability in emerging-market economies.[1]

Comparatively little attention, however, was attracted by the issue of whether and under whose control lender-of-last-resort practices should become a permanent feature of the international setting. Lack of interest in this matter is probably attributable to the belief that the Mexican package would remain exceptional. Indeed, this assumption was the main premise of the 1996 G–10 report, and it was apparently shared by most of the scholars who contributed to the post-Mexico debate on the architecture of the international monetary system (Kenen, 1996).

As subsequent events have demonstrated, this supposition was completely wrong. In the span of just a few years, the world experienced a whole series of crises raging on three different continents, and a related series of jumbo rescue packages. In the process, the IMF—without any intervening change in its Articles of Agreement—refined its role as crisis manager, developing better information standards (the Special Data Dissemination Standard), an additional source of funding (the New Arrangements to Borrow), and a newly designed window (the Supplemental Reserve Facility).[2]

It is therefore not surprising that the lender-of-last-resort function should have finally gained prominence in the official agenda, as well as

[1] The Group of Ten includes Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, the United States, and also Switzerland.

[2] An analogous process is under way at the World Bank, which has also been heavily involved in recent international rescue packages. Although most of the analysis below applies also to World Bank operations, this essay discusses only the IMF.

in the public eye. This can be seen both in the work of the G–22 industrial and emerging-market countries on the international financial architecture and in the heated debate that is now taking place about what role, if any, should be assigned to the IMF in the new environment.

This essay takes a fresh look at the lender-of-last-resort issue and asks whether, how, and to what extent national practices should be adapted to the international environment. It begins, in section 2, by reviewing national practices, an approach that is appropriate for at least two reasons. First, although the theory of lending of last resort seems to be fairly simple—indeed, its main elements had already been established in the nineteenth century by such authors as Henry Thornton (1802) and Walter Bagehot (1873)—its implementation is far more nuanced. Second, if a specific international arrangement is to be successful, it must be internally consistent with existing national practices or these practices will have to give way. To mention only one example, it would make little sense to build international arrangements predicated on the restriction of competition among internationally active financial firms if the regime prevailing at the national level is one of unfettered competition in financial markets. In section 3, the essay analyzes, through both theory and evidence, the features that make the international environment "special." In section 4, it asks how the lender-of-last-resort function can be reshaped at the international level on the basis of the earlier considerations and recent trends in the activities and practices of the IMF. Section 5 concludes the discussion.

The essay's basic argument is that it is neither the distinction between illiquidity and insolvency nor penalty-rate financing that currently makes last-resort-lending effective at the national level, but rather constructive ambiguity—a complex notion that includes ample resource availability, technical discretion as to the conditions attached to rescue packages, *ex ante* supervision, and powers of enforcement. Replicating constructive ambiguity at the international level poses several problems. First, reconciling ample resource availability and technical discretion as to the use of resources is extremely difficult, because there is no certain way to overcome the problem such a mixture raises with respect to control. The larger the resource pool is, the greater the risk will be that the main contributors will want to deprive the crisis manager of the technical discretion needed to fine-tune liquidity-support packages and contain moral hazard. Second, when dealing with sovereign countries, the risk of policy reversals after last-resort lending has taken place is considerable, because enforcement powers are limited. As a result, liquidity support will tend to be rationed. Finally, although a national lender of last resort has, through *ex ante* supervision and *ex post* sanctioning powers, some control over other lenders, international creditors are largely beyond the reach of international organizations. Containing moral hazard with respect to creditors is thus no easy task.

Under such circumstances, ambitious reform plans should be regarded with suspicion. It is better to work at the margins of the existing setup, trying to improve risk assessment by private investors, increase incentives for timely regulatory action by debtor countries, and establish dependable work-out procedures. Private contingent-credit facilities supplemented with a limited amount of last-resort public financing and with IMF lending into arrears in the context of internationally approved, temporary moratoria on foreign debt featuring enhanced conditionality may offer two viable routes to reasonably effective (though limited in aims and resources) international liquidity support. To this end, it would be desirable to change the IMF's Articles of Agreement to legitimize a suspension of creditor rights when the debtor is making a good-will effort at adjustment and thereby to exclude the IMF and possibly other international organizations from extensive legal disputes.

2 Domestic Lending of Last Resort: The Theory and the Practice

In a domestic context, the theory of financial-crisis management is fairly simple and its main tenets relatively uncontroversial. The main dispute regards the definition of a crisis, not its proper handling. Monetarists tend to restrict the definition of "financial crisis" to situations in which the banking system gets into trouble (Schwartz, 1986). Keynesians, by contrast, tend to include a wider range of disturbances, such as a sharp decline in asset prices, the failure of a large financial intermediary, or a disruption in foreign-exchange markets (Kindleberger, 1978; Mishkin, 1994).

The practical relevance of the distinction is questionable, however, because the recent wave of instability shows an increasing association between currency, banking, and even, in some cases, stock-market crises. This spillover may perhaps explain why, while the issue of causality is attracting increasing attention, the old debate about what constitutes a "crisis" is rapidly losing interest. When it comes to how to handle a crisis, moreover, there is very little, if any, controversy, except perhaps for the advocates of free banking, such as Kevin Dowd (1989). This is probably because it is now widely recognized that financial markets are plagued by a coordination problem that has its origin in the very nature of financial assets. Because these are no more than claims on a future income stream, their value depends on, among other things, expectations concerning the amount of income that will accrue to the holder. This flow, however, is itself related to the assets' value. As a result, multiple equilibria are possible, depending on which set of possibly conflicting expectations ultimately prevails in the market. A given equilibrium with positive asset values will persist only so long as holders remain confident that their expectations will be fulfilled. A confidence crisis is simply a sudden revision of market sentiment, that is, a revision of the prevailing expectations about a given asset's ultimate value.[3]

The notion of lender of last resort has evolved from the perception that this coordination problem is serious enough to warrant public action. The concept is seldom defined, however, probably because its precise contours vary with the circumstances of time and place. It can nonetheless be argued that a central feature of the lender-of-last-resort function is a willingness to accept a risk unacceptable to all other lenders (Guttentag and Herring, 1983). Thus, any injection of funds that allows a bank to remain solvent, notwithstanding its being unable to raise finance in the market, should be seen as falling within the category. To this day, the received doctrine of what a lender of last resort should do is still well-captured by the maxim derived from Walter Bagehot's (1873) classic statement: *lend freely to temporarily illiquid but nonetheless solvent banks at a penalty rate and on good collateral*. A corollary of this maxim is that insolvent banks should be immediately closed.

Although the theory is simple, the practice is far more complex. Not only did it require considerable institutional adaptation before the theory could be turned into standard practice, but all of its constituent elements have undergone significant modifications in the process. Let us see in what way.

"Lend Freely"

Implicit in the call to lend freely is the assumption that the lender of last resort has access to resources that are in excess of the largest need that can materialize in a crisis. Because a run on a bank is, in theory, motivated by the individual depositor's fear that there will be no cash remaining when he or she arrives at the counter, the lender of last resort

[3] Diamond and Dybvig (1983) are the standard reference in this regard. However, another strand of the literature plays down the practical importance of self-fulfilling runs, arguing that what triggers a run is typically a noisy signal that nonetheless contains useful information about the intermediary's ultimate solvency; see, for example, Gorton (1985).

must be able to mobilize sufficient resources to meet all the liabilities of the troubled bank or group of banks and thereby restore confidence.

This assumption is usually taken to imply that only central banks can play the lender-of-last-resort role, because they alone have the power to create money without limits, but this view is simplistic. Resource availability has been a leading problem ever since the need for a lender of last resort was first recognized, for at least two reasons.

First, the lender of last resort may wish to protect itself from the consequences of its own mistakes, such as lending resources to a bank that in the end becomes insolvent and therefore unable to repay borrowed funds. This was a particularly serious concern when Bagehot was writing in the late nineteenth century, because the nascent central banks of the day were still usually private companies required to give precedence to the interests of their shareholders.

Second, even if the central bank is sensitive to the full range of social costs that might result from its inaction, lending freely might prove difficult to reconcile with the prevailing monetary regime. Emergency lending, insofar as it results in a net inflow of reserves, may impair the attainment of monetary-policy goals. A clear example of this tension can be found in the recurrent crises that plagued the London financial market early in the history of central banking in the mid-nineteenth century.[4] The tension became even more acute under the gold standard, the logic of which would dictate reducing discounts and selling bills—that is, absorbing liquidity—during a specie drain, whatever its origins.[5]

The result of all this was that Bagehot's doctrine had to be modified in at least two respects before it could be turned into standard practice. The first modification, called "concerted lending," consisted of rescue operations being carried out by a small group of banks (usually those with the largest market share and longest tradition) while the central bank, where it existed, acted only as a *primus inter pares* and crisis manager. The main attraction of concerted lending was that it made it possible, in principle, to deal with emergency situations by redistributing reserves, rather than by creating additional ones. The

[4] Under the Bank Charter Act of 1844, the Bank of England was prohibited from acting as a lender of last resort. During the crises of 1847, 1857, and 1866, the ban was circumvented through the so-called "Treasury letters," which encouraged the bank to lend freely while promising a *post factum* bill of indemnity should its behavior result in an infringement of the law (Giannini, 1995).

[5] Rudiger Dornbusch and Jacob Frenkel (1984) provide an excellent case study of the difficult policy dilemma the Bank of England had to face when the conflict between monetary policy and financial stability first presented itself clearly, in 1847.

practice originated in the late nineteenth century in the United States—which at the time had no central bank—in the form of the clearinghouse system (Timberlake, 1993). It quickly spread to Europe, where a score of bank rescues in France, Italy, and England in the late 1880s—the best known of which is probably the Bank of England's rescue of Baring Brothers—were all based on the notion of concerted lending.

The second modification was introduced at a much later stage. It took the form of a specific, if implicit, division of labor between the technical agent (usually the central bank) and the political principal (the government, the legislature, or both), whereby significant bank failures requiring massive injections of funds would be dealt with directly by the principal, with the agent playing an ancillary position at most. Like concerted lending, this division of responsibilities was a pragmatic response to the banking crises of the early 1930s, which were so big that, in many countries, special institutions were established and entrusted with the task of disposing, one way or another, of troubled banks (Allen et al., 1938).

The relative importance of these two arrangements has varied over time. Despite the widespread opinion portraying the central bank as generally acting on its own, concerted lending has remained until recently the typical way of handling crises. In their survey of 104 bank crises in the 1980s and early 1990s, Charles Goodhart and Dirk Schoenmaker (1995) find that only twice was the central bank willing and able to undertake a rescue on its own. In twenty-five of the eighty-one cases in which external funding was provided, a bank consortium was arranged. The practice of calling upon sound banks to help troubled institutions has become so entrenched in some countries that it receives formal recognition. In Germany, for example, short-term-liquidity assistance is provided, not by the Bundesbank, but by the Liquidity Consortium Bank (Liko-Bank), a specialized institution the capital of which is shared by the Bundesbank (30 percent) and commercial banks. In France, Article 52 of the banking law gives the central-bank governor the authority to organize rescues based on solidarity contributions from the rest of the banking system (Prati and Schinasi, 1998).

In recent decades, however, financial liberalization and the related spurt in bank competition have eroded the foundations on which concerted lending lay and greatly diminished the ability of central banks to organize coordinated bank rescues voluntarily. In the United States, the practice had all but disappeared by the beginning of the 1990s (Corrigan, 1990). The $4 billion rescue of Long Term Capital Management (LTCM), in September 1998, is a significant exception in this regard, but it is not yet clear that it marks an inversion in the underlying tendency.[6] In Europe, which is a latecomer with respect to financial liberalization, isolated attempts at concerted lending may still succeed. Coordinated rescues have become less and less frequent, however, since heightened competition has reduced the effectiveness of moral suasion as a policy tool (Goodhart and Schoenmaker, 1995; Ripa di Meana and Sarcinelli, 1990).

For a long time after the 1930s, the direct role of governments in bank rescues remained rather limited. This was more a consequence of financial repression and low capital mobility, however—two features of the world economy when the Bretton Woods framework was put in place—than a conscious retreat. With the resurgence of bank instability that has accompanied the revival of domestic financial competition and cross-border capital mobility, the direct role of the government has greatly expanded once more. This is shown clearly in Table 1, which is based on the empirical study by Goodhart and Schoenmaker (1995). Although the funding of rescue packages was more or less equally shared between concerted operations and government or deposit-insurance packages until the 1980s, taxpayers' money has been used twice as often as other sources of funding more recently.

There are at least two reasons behind these trends. The first relates to the sheer size of the problems. Resolving banking problems, for example, is estimated to have cost about 8 percent of gross domestic product (GDP) in Finland, 4 percent in Sweden and Norway, and 3 percent in the United States (Lindgren, Garcia, and Saal, 1996). It would have been unthinkable for a technical, and therefore unelected, agency, no matter how competent, to decide the proper allocation of public funds on such a massive scale. The second reason is that, in the meantime, central banks have undergone one of their periodic mutations. By highlighting the weaknesses of the existing monetary framework, the inflationary outburst of the 1970s reinstated price stability as a top-priority goal (Cottarelli and Giannini, 1997). In countries such as

[6] The Russian moratorium, and the flight to quality that ensued, presented the creditors of LTCM with a truly exceptional situation. As of September 23, LTCM's liquidity position stood at just $600 million and was supporting balance-sheet positions in excess of $100 billion, implying a balance-sheet leverage of 167 times capital. A massive "fire sale" by LTCM would likely have disrupted many financial markets. As the IMF notes, the rescue of LTCM was facilitated by the fact that among its main creditors were many, if not all, of the financial institutions that would have suffered heavily from a disorderly deleveraging of LTCM's positions (IMF, 1998c). Note that here and throughout, "billion" equals one thousand million.

TABLE 1

USE OF TAXPAYERS' MONEY

Period	Funding: Central Bank and Commercial Banks	Funding: Deposit Insurance and Government	Total
1974–1978	5	3	8
1979–1983	11	11	22
1984–1988	21	20	41
1989–1993	15	34	49
Total	52	68	120

SOURCE: Goodhart and Schoenmaker (1995).

Australia, New Zealand, and the United Kingdom, the resurgence of the tension between monetary policy and bank-related functions (such as supervision and lender-of-last-resort) has led to a redefinition of the role and leeway of the central bank. It is not clear that this signals the emergence of a new "model." Even where no such change is contemplated, however, the widespread belief that price stability should be the overriding objective of the central bank is likely to exert some additional restraint on its willingness "to lend freely."

"To Temporarily Illiquid but Solvent Banks"

Even if not unlimited, the availability of last-resort finance is a powerful incentive to take on excessive risks. The first requirement for an effective lender of last resort is, therefore, that it be able to contain the moral hazard its very existence breeds. This danger was recognized right at the outset. Both Thornton and Bagehot made it clear that they thought it necessary to distinguish between illiquid and insolvent banks. Bagehot, in particular, repeatedly emphasized that during a generalized crisis, the lender of last resort should accommodate requests for liquidity coming only from those who could provide "good security." A corollary of this view was that, as long as the lender of last resort confined itself to discounting good security, there would be no need for bank supervision. Until the 1930s, in fact, central banks had no supervisory powers. Even the U.S. Federal Reserve System, which had supervisory powers right from the beginning, held that supervision was made somewhat redundant by strict adherence to the real-bills doctrine and accordingly refrained from inspecting member banks (White, 1983).

The banking crises of the early 1930s, however, taught the regulators two lessons. First, the distinction between illiquidity and insolvency is an exceedingly difficult one to make, especially because what appears to be good security in ordinary times may suddenly become poor security in a crisis. In reality, the distinction can be made, if at all, only *post factum*, after the crisis has subsided. Thus, the main challenge facing the lender of last resort is that it has to make quick decisions on the basis of only partial, and possibly faulty, information. Second, the demise of even clearly insolvent banks may be socially undesirable, either because it may adversely affect sound banks or simply because "banks usually are worth much more alive than dead even when their worth alive is negative" (Guttentag and Herring, 1983, p. 8). These lessons have been corroborated, if somewhat belatedly, by the body of literature that has developed over the last two decades from the application of the notion of asymmetric information to banking (Mishkin, 1991).

As a result of these lessons, individual banks have only seldom been allowed to fail since the 1930s. Although the evidence on actual crisis-management practices is scarce, the findings we do have support this conclusion. Over the last three decades, the failure of Bank Herstatt, in 1974, is probably the sole instance in the industrial world of a bank of conspicuous size being allowed to fail without any public intervention at all. On every other occasion, the banks were either rescued or, if eventually liquidated (an option contemplated only for sufficiently small banks, as Goodhart and Schoenmaker, 1995, show), were closed in an orderly fashion, so as not to send shock waves through the financial system (Table 2).

Because an orderly resolution process fully exploits the specific circumstances of time and place, it is hard to reduce the complexity of crisis procedures to a manageable synopsis. A pattern is nonetheless discernible. Authorities have generally, though not always successfully, tried to balance the need to preserve the knowledge capital of banks in distress with the need to inflict losses on their owners and managers, and they have graduated their intervention according to the specifics of each individual episode. Intervention strategies can be grouped into four main categories. The first strategy has the troubled bank continue on a stand-alone basis after benefiting from a rescue package comprising either emergency aid or the injection of fresh capital. This is the lender-of-last-resort method proper. A second strategy is for the bank to be taken over by one or more other banks, often after an injection

TABLE 2

METHODS OF DEALING WITH FAILING BANKS

Methods	One Method	Two Methods	Total
Rescue package	11	11	22
Takeover by bank(s)	33	16	49
Special administration	12	11	23
Liquidation	27	4	31
Subtotal	83	42	125
Total	83	21	104

SOURCE: Goodhart and Schoenmaker (1995).

of public funds. A third strategy puts the faltering bank or banks under a special regime or transfers bank loans to a special institution administered by the deposit-insurance agency or the government. In extraordinary circumstances, the government may decide to nationalize the failed bank or, when the crisis is systemic, even the entire banking system. Finally, if the bank is small enough and on further inspection appears to be on the verge of collapse, it may be liquidated and dismembered according to the special rules that national laws typically prescribe for dealing with banks.

Again, the factor that makes the various strategies differ is, above all, the degree of "punishment" they entail for the management and the shareholders—with outright lending of last resort being the least harsh strategy and liquidation being the most painful. Strategies involving some degree of punishment have been far more common than interventions that entail none. In the sample covered by Goodhart and Schoenmaker (1995), for example, there were penalties in three cases out of four.

Playing down the distinction between illiquidity and insolvency, however, means that the authorities are left with no clear-cut criterion for deciding how specific cases should be handled, and thus how great a penalty should be applied. That is, authorities need a practical way to determine whether the bank has gotten into trouble by sheer accident—for example, an exogenous shock or simply a rumor—or by avoidable misjudgments. This gap has been filled by the development of bank supervision and the related notion of prudent bank management. Being in a position to distinguish between well-managed and badly managed banks ahead of a crisis is now clearly of the utmost importance. It falls largely upon *ex ante* bank supervision to perform this function. On the one hand, supervision allows the central bank, or the regulatory authority in countries where the central bank has no supervisory responsibilities, to exert continuous pressure on banks to keep them on a prudent course. On the other, it provides a ready-made criterion—the supervisory track record—with which to discriminate quickly among troubled banks when, as a result of financial turbulence, the true state of each bank's balance sheet may no longer be determined with sufficient precision.[7]

"At Penalty Rates and on Good Collateral"

The last component of the Bagehot rule is the prescription that the lender of last resort lend "at penalty rates and on good collateral." Bagehot himself offered several reasons to explain why. First, allocative efficiency dictates that access to scarce liquidity be restricted to those who will put it to best use, just as a high price rations any scarce commodity in a free market. Second, the protection and security afforded by the lender of last resort should be paid for dearly, on distributive as well as prudential grounds. Third, the penalty rate will provide an incentive for banks to exhaust all their existing sources of liquidity (and even develop new ones) before turning to the lender of last resort. Finally, the penalty rate will ensure the quick retirement of emergency finance once the crisis is over. All these reasons could probably go under the rubric "containing moral hazard," because a penalty rate somewhat discourages the borrower from actions that increase the probability of a bank run and, if a run does occur, from a delay of firm action to restore soundness.

Bagehot's plea for penalty rates has long been heeded in the daily practice of monetary policy. In virtually all the countries of the Organisation for Economic Co-operation and Development, the panoply of monetary-policy instruments comprises a marginal facility for providing banks with liquidity at rates set above market, as well as other official, rates (Borio, 1997). Whether such facilities fall within the realm of lending of last resort, however, is questionable. They are perhaps better depicted as ordinary, or routine, credit facilities designed to regulate the end-of-day liquidity of the payment system. As has been

[7] Several well-known episodes in which an unsatisfactory supervisory record clearly tilted the authorities' action toward harsher resolution strategies are the Bank of Credit and Commerce International in the United Kingdom, Drexel Burnham Lambert in the United States, Banco Ambrosiano in Italy, and Crédit Lyonnais in France.

seen, the notion of lending of last resort is better reserved for situations in which the lender is willing to provide resources beyond any predetermined amount, accepting risks that are unacceptable to all other lenders in the market. When defined in this way, it turns out that last-resort finance is seldom, if ever, provided at penalty rates. Indeed, the fear that the central bank might be tempted to keep interest rates lower, not higher, than would otherwise be warranted to sustain a faltering banking system is perhaps the most often heard argument these days in favor of separating monetary policy and supervisory responsibilities (Heller, 1991).

Evidence about the actual importance of this conflict is scarce and inconclusive. Nonetheless, the very fact that the criticism is voiced testifies to the concern that central banks having supervisory or lender-of-last-resort responsibilities might, under stress, be too lenient, rather than too rigid, in setting terms for their financing. As a matter of fact, although macroeconomic evidence is scanty, the information we have on individual rescue packages is all too clear. Most central banks have been willing to extend last-resort assistance at market or even subsidized rates. In addition, rescue packages sometimes feature uncollateralized liquidity support (Garcia and Plautz, 1988; Corrigan, 1990; Goodhart and Schoenmaker, 1995; Crockett, 1997). In some countries, the notion that emergency support should be provided on subsidized terms has even found its way into the law. Most prominent in this respect is the 1997 Bank of Japan law, which allows the central bank to advance uncollateralized liquidity to banks that "unexpectedly experience a temporary shortage of funds for payment due to accidental causes" (Article 33). The Ministry of Finance, moreover, may request the central bank to provide liquidity under special conditions "when it is believed to be especially necessary for the maintenance of an orderly financial system" (Article 38).[8]

A number of reasons explain this striking discrepancy between theory and practice. Prominent among them is that the lender of last resort might make matters worse, rather than better, for the borrowing institution, by charging higher-than-market rates (Garcia and Plautz, 1988; Crockett, 1997). Moreover, banks themselves may fear that by applying for emergency liquidity at penalty rates, they will be sending

[8] The so-called *legge Sindona* in Italy may be regarded as being in the same class. It states that the Bank of Italy can be asked to advance special loans at subsidized rates to financial institutions acquiring the ownership of a troubled bank as part of a rescue package. The law has so far been invoked several times, the most prominent cases being the crisis of the Banco Ambrosiano in 1982 and the recent crisis of the Banco di Napoli.

the market the wrong signal, precipitating an otherwise avoidable run. The reluctance recently shown by Japanese banks to participate in the government's bank-rescue program, despite the apparent generosity of the government in terms of available funding may be explained by this fear (IMF, 1998a, 1998b). Even if depositors remain calm, penalty-rate financing may create an incentive for bank management to gamble for resurrection, selecting high-return, high-risk borrowers in the hope of bringing about a rapid turnaround in overall profitability. Even in more ordinary circumstances, charging a penalty rate will not necessarily induce banks to be more prudent in managing their liquidity position—unless the rate of interest charged is so high as to make it preferable for the borrowing bank to liquidate a part of its illiquid assets rather than rely on last-resort financing, which is typically what the lender of last resort wants to avoid (Guttentag and Herring, 1983). Finally, subsidized lending may be practically unavoidable when a bank is clearly insolvent and the central bank tries to orchestrate a rescue package involving a takeover by other institutions. In such circumstances, providing a loan at less-than-market rates may both signal the authorities' commitment to keep the troubled institution afloat as an ongoing concern and reassure the rescuing banks that they will not also have to bear the burden of last-resort lending.

If one were to generalize on the basis of what we know (which is admittedly far from satisfactory), it therefore seems fair to say that penalty-rate lending, while clearly the dominant practice as far as *ordinary* last-resort operations are concerned, has never taken hold in the field of truly *extraordinary* operations. In such cases, many countries' central banks and other governmental agencies have not hesitated to brush aside both the penalty rate and (where the law permits) the availability of adequate collateral whenever a bank failure has appeared to pose a systemic threat.[9]

This being the case, how is moral hazard averted, or at least contained within acceptable limits? As it turns out, the task of curbing moral hazard appears to have been performed largely by constructive

[9] The leeway a central bank has in requesting collateral varies from country to country. The law typically mandates that the central bank lend only against good collateral, but it may fail to specify exactly what assets should be considered as eligible. The possibility of uncollateralized lending, by contrast, is seldom explicitly contemplated. An exception in this respect, as already mentioned, is the recent Bank of Japan Law. In recent years, uncollateralized lending has also been provided in a few exceptional cases by the Federal Reserve and the Bank of England. In Belgium, Finland, Greece, and Sweden, unsecured credit operations are used also for fine-tuning in the interbank market (see Enoch, Stella, and Khamis, 1997, and Prati and Schinasi, 1998).

ambiguity. "Ambiguity" here refers not so much to whether or not a rescue will take place—for we have seen that in the overwhelming majority of cases, authorities do intervene—but rather to the terms and conditions the rescue will carry with it (Corrigan, 1990). In addition to inducing risk-averse agents to be more cautious than they would be if they were certain of being bailed out at low cost, ambiguity has, from the authorities' standpoint, the desirable property of permitting greater flexibility of response in an environment of imperfect information. Long neglected, constructive ambiguity in now increasingly being recognized as the hinge on which the existing regulatory framework revolves (Enoch, Stella, and Khamis, 1997; Goodhart and Huang, 1998). This view has recently been endorsed by the G–10 (1997, p. 41), which has stated that

> any pre-commitment to a particular course of action in support of a financial institution should be avoided by the authorities, who should retain discretion as to whether, when and under what conditions support would be provided. In addition, when making such a decision, it is important to analyze rigorously whether there is a systemic threat and, if so, what options there may be for dealing with systemic contagion effects in ways that limit the adverse impact on market discipline.

The downside of constructive ambiguity is that it places a high degree of discretion in the hands of the agency responsible for crisis management. It therefore raises a serious problem of legitimacy. What principle should inform the crisis manager's daily actions? Who is going to control such actions *ex post*? Providing satisfactory answers to these two questions was the major hurdle in the transformation of the banks of issue of the late nineteenth century into the full-fledged central banks of the twentieth century. The first question was eventually addressed by removing the profit motive from the utility function of the central banker, while suppressing any line of business not strictly related to the central-banking function (Goodhart, 1988). The second question was answered by strengthening the accountability of the emerging central banks to political institutions. In many cases, this was achieved through nationalization; in others, it was accomplished by subjecting the central bank to the authority of the legislative or executive power (Giannini, 1994). But institutional fixes do not last forever. The recent wave of bank instability, which has affected nearly two-thirds of IMF member countries, has led many to question whether the relatively high degree of discretion enjoyed by the authorities in dealing with banking problems is still acceptable. The 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA) in the United States is perhaps the most comprehensive attempt to redesign the safety net to make it more transparent and predictable. It is too early to assess whether the U.S. example will take hold, let alone whether it will prove successful in a long run. As its proponents recognize, however, it seems unlikely that it can result in a complete suppression of discretionary power in the actual handling of bank crises (see Benston and Kaufman, 1998, for a preliminary assessment of the impact of FDICIA).

The outcome of the discussion so far is that when considering whether and how to add an international dimension to the lender-of-last-resort function, authorities should be aware that, at the national level, this function has been developing along lines that were scarcely foreseen by the early thinkers on the subject. The overall result of these developments is that the Bagehot rule, although still much quoted, is now little more than a *flatus voci*.

As the function has actually been discharged, the overriding concern has been the search for flexibility. A lender of last resort exists because clear-cut rules will not do. It is in this sense that, almost two hundred years after Thornton, the lender-of-last-resort function remains an art, not a science, to be applied on a case-by-case basis.

This genuine need for flexibility, however, has engendered two important problems. It has, on the one hand, made it necessary to devise means to avert moral hazard, or at least to contain it within acceptable limits. This challenge has been met by a combination of extensive supervision and constructive ambiguity that puts authorities in a position to devise rescue packages featuring the appropriate blend of relief and hard medicine. It has, on the other, raised an enormous problem of legitimacy, because the lender-of-last-resort function inherently involves redistributing resources. Up to a point, this may be done on a purely technical basis. Even within this limit, however, it has taken a number of important changes in the status, functions, and accountability of central banks before such a concentration of power can go unchallenged. Beyond that point, moreover, both the experience of the 1930s and the more recent banking crises show that there is a tendency for political institutions to become involved. There are also grounds for believing that this is desirable, at least up to a point, insofar as it helps protect the legitimacy and operational leeway of the agent within its technical realm.

3 Three Peculiarities of the International Domain

Constructive ambiguity is a complex construct, the building blocks of which are *access* by the lender of last resort to ample, although not necessarily unlimited, resources; *discretion* to decide, quickly and on a case-by-case basis, the form the intervention should take; *availability*, through supervision, of high-quality information prior to a crisis; and *authority* to impose penalties so as to contain moral hazard.

To what extent are these desirable characteristics likely to prevail at the international level? To answer this question, I describe the trade-off between discretion and resources that seems to have marred international institutions in many fields, hampering their effectiveness in emergency situations, and I discuss the reasons that may explain this regularity. I then analyze the consequences the notion of national sovereignty has for the authority of international institutions and, by implication, for their speed of response. Finally, I address a specific form that moral hazard takes at the international level, namely, moral hazard with respect to the creditor, rather than the debtor.

International Organizations and the Issue of Control

The most interesting issue raised by the existence of institutions is how they ever manage to be enforced. All institutions must have at their roots some means by which the rules and procedures of decisionmaking they embody can credibly constrain individual and collective behavior. National institutions have the advantage of being cumulative in this respect, in that they can rely on previous, successful, acts of institution-making, such as the establishment of a credible legal system, or of rules of political representation. An international institution in a world of independent, politically sovereign, entities, must, by contrast, be self-enforcing. For such an institution to be credible, member countries must clearly perceive that they have a long-run, broad-ranging interest to stick to it, rather than to defect to pursue short-run gains. This is but another way to say that any obligation arising from international conventions, customary laws, or treaties depends for its execution on the continuing consent of the obligor (De Bonis, Giustiniani, and Gomel, 1999).

Recent theoretical reflection on the political economy of cooperation has shown that, short of recourse to force or to the enforcement services of a hegemonic power, international collective action requires a notion of reciprocity, whereby each member can be sure that there will be a balanced distribution of whatever gain (or loss) derives from the cooperative effort.[10] The notion of "balanced distribution of gains

[10] See Milner (1992). As an alternative to reciprocity, international cooperation could be structured so as to produce side-payments of different kinds to the various parties involved. This option, however, which implies continuous renegotiation, seems to be more

and losses" is clearly ambiguous. A fairly unassuming interpretation, however, would take it as implying that there should be no systematic pattern of gains and losses among a given institution's membership. In highly structured contexts, the principle of reciprocity can work marvels, testifying to the general invalidity of the "extreme realist" argument that credible international institutions are not feasible. Crisis management, however, is different, for at least two reasons. First, by the very definition of "crisis," the payoff structure tends to vary from one crisis to another, making it difficult *ex ante* to estimate gains and losses with any accuracy. Second, dealing with a crisis entails shifting resources from one section of the membership to another, if only on a temporary basis. If certain members are more crisis prone than others, legitimizing the crisis manager may prove difficult, unless it is clearly understood—notwithstanding payoff uncertainty—that ending the crisis is in everyone's interest. This does not mean that effective crisis management is impossible. It only means that the issue of control is, if anything, magnified when shifting from the national to the international level. To contain the risk of abuse, countries will want to make sure they have all the relevant information before committing their own resources in each particular case. Alternatively, if they ever agree on a more structured response—for instance, by establishing a specialized crisis-management organization—they are likely to devise a control structure that circumscribes possible losses. This could be done, for instance, by reducing the amount of committed resources, or the technical discretion of the crisis manager, or both. A response of this kind, it needs to be understood, would be rational, given the circumstances under which the "game" is supposed to take place.[11] Its practical consequence, however, would be to reduce the effectiveness of international crisis management.

Postwar international monetary relations, with the structure of the institution placed at the center, namely the IMF, bear witness to the practical importance of these considerations.[12] The IMF was built on two foundation stones: one, financial; the other, operational. On the

relevant to *ad hoc* or relatively unstructured forms of cooperation than to the more institutionalized ones considered in this essay.

[11] See Calvert (1995) for a discussion of the role of information exchange in situations in which there is payoff uncertainty. That each party to a contract will want to limit the discretion of the other parties in worst-case scenarios when the contract is fundamentally incomplete is the basic insight of the property-rights literature; see Hart (1995).

[12] The evolution of international cooperation in the field of public health and the history of the United Nations are two other cases in point. See Cooper (1989) on the former and Nicholson (1998) on the latter.

financial side, it was agreed at Bretton Woods that the new institution would operate, not as a financial intermediary (let alone as a central bank), but as a *credit union*, "with relations among its members based on the principle of mutuality" (Kenen, 1986, p. 3). Accordingly, each member's access to balance-of-payments finance was to be based on the quota it contributed to the common pool and on a reciprocal commitment to grant credit to other members. On the operational side, it was mandated that the institution would base its actions on the principle of universality, according to which no discrimination should ever be made among member countries or groups thereof. More technically, the principle of universality was interpreted as implying uniformity of treatment of individual members (Guitián, 1992). Overall, one could hardly imagine a more wholehearted acceptance of the principle of reciprocity.

The concepts of reciprocity and lender of last resort are, nonetheless, basically at odds with one another. The lender of last resort must either be in a position to create its own resources—which would be incompatible with the credit-union concept—or to channel resources systematically from those who have them to those who do not—the kind of distributive task that eventually brought down the U.S. clearinghouse system in the early 1900s. The framers of the international monetary architecture seem to have been aware of this tension, because they took a number of steps to make sure that the IMF would *not* develop a lender-of-last-resort role, either by statute or by spontaneous endogenesis. The first step involved renouncing capital mobility, contrary to the original intentions of the White plan. The objective of exchange-rate stability, which was the ultimate goal of the endeavor, was pursued through a double-pronged strategy based on capital controls and individual countries' access to short-term current-account financing. Furthermore, to make clear that this adjustment-smoothing function should not be interpreted as envisaging a lender-of-last-resort role for the new institution, a passage in the IMF's Article VI explicitly forbade the provision of IMF resources to countries experiencing "a large or sustained outflow of capital."[13] A further step was the avoidance,

[13] It may also be worth recalling that the common pool of resources turned out to be far smaller than was originally envisaged. The British plan suggested that quotas "be fixed by reference to the sum of each country's exports and imports on the average of (say) the three pre-war years, and might be (say) 75 percent of this amount." Joan Robinson later calculated that this formula would have resulted in quotas totaling $36 billion. The actual amount of the quotas agreed to at Bretton Woods was $8.8 billion; see Dam (1982, p. 103).

throughout the Articles, of the language of credit, the main effect of which was to make the IMF charter almost unreadable.[14] Finally, the procedures, terms, and purposes to which the institution should adhere in the daily conduct of its business were all carefully spelled out in the Articles—in stark contrast to the vagueness, even recklessness, with which the mission and operational content of central banking were at the time laid out in comparable national documents.[15]

The overall impression is of a complex endeavor aimed at sustaining cooperation in the "real" sector by restricting purely financial considerations, and thus the lender-of-last-resort role, to the national arena. Indeed, as Robert Helleiner (1994) remarks, if one could speak of collective action at all insofar as the financial sphere is concerned, it is in connection with the all-too-transparent objective of ruling out the very possibility of unilateral financial liberalization.

This strategy could be expected to work only so long as capital controls operated effectively. Thus, the tension between reciprocity and effective lender-of-last-resort action was bound to resurface when, in the early 1960s, the effectiveness of capital controls began to diminish as a result of the restoration of current-account convertibility. The U.S. and U.K. authorities, in particular, soon began to look for an emergency mechanism that could rapidly be relied upon in times of crisis—but emphatically not in ordinary circumstances—to sustain the exchange value of reserve currencies in the presence of sudden capital reversals. They intended that "rapidly" should mean that resources would have to be provided on a quasi-automatic basis, without the borrowing country needing to subject itself to the close scrutiny of the multilateral organizations or to undertake extensive negotiations with ultimate lenders (James, 1996). The mechanism eventually took the form of the General Arrangements to Borrow (GAB). The main novelty of the GAB, which

[14] "Written in Cherokee," lamented Keynes; "an essay in Rabbinics," echoed Denis Robertson (Dam, 1982). On the linguistic asperities of the Articles, see Mikesell (1994).

[15] To Keynes, this was the best way to protect the "central management" of the new institution from political interference. "If rules prevail," he remarked, "the liability attaching to membership of the system is definite, whilst the responsibilities of central management are reduced to a minimum. On the other hand, liabilities which should require the surrender by legislation of too much of the discretion, normally inherent in a Government, will not be readily undertaken by ourselves or by the United States. If discretion prevails, how far can the ultimate decision be left to the individual members and how far to the central management? [I]f it is to the central management that the discretions are given, too heavy a weight of responsibility may rest on it, and it may be assuming the exercise of powers that it has not the strength to implement" (quoted by Horsefield, 1969, par. 15).

was also what made it acceptable to its various country contributors, was that the funds under GAB control were distinct from the pool of resources available to the general membership. Quotas would not be affected by it, and as a result, the IMF could not draw on the GAB to finance the balance-of-payments difficulties of members not participating in the arrangement. As Kenen (1986) has remarked, the GAB was a kind of credit union writ small, made possible by derogation from the principle of universality. Departure from universality, however, was not enough to make the arrangement as rapid and flexible as its proponents had hoped. In fact, the notion of quasi automaticity was eventually dropped, because a number of contributors demanded that activation require the consent of each participant in the scheme. Consequently, the GAB carried a "double lock," in that any drawing would have to be approved both by individual GAB members and by the IMF executive board. Harold James (1996, p. 164) describes this innovation as "a major dent in the Fund's claim to universality and to a capacity to judge by itself the conditions of assistance in dealing with balance of payments problems."[16]

Indeed, the subsequent record of the GAB was far from satisfactory. The high point of the arrangement came between 1977 and 1978, when the IMF resolved to borrow almost SDR 4 billion to finance drawings by Italy, the United Kingdom, and the United States. By contrast, the way the GAB had been conceived meant that it could play no role in the debt crisis of the early 1980s. In light of that experience, the system was modified in 1983 to give the IMF permission to use the GAB to finance transactions with nonparticipants. This departure from the credit-union principle, however, proved purely formal, because the double-lock principle prevented recourse to the arrangement in all the following crisis episodes, including the recent Mexican and Asian ones. The only subsequent activation of the GAB occurred in the context of the failed Russian rescue package, when it was made practically inevitable, as well as ineffective, by the exhaustion of all other possible sources of funds.

[16] Another problem raised by the GAB was its apparent incompatibility with Article VI, which, as already mentioned, prohibits the use of IMF resources "to meet a large or sustained outflow of capital." The problem was solved by interpreting the adjective "large" as referring not to the size of the borrowing country or of the outflow itself, but rather to the size of the emergency package. Accordingly, financing would be prohibited if it absorbed "an excessively large part of the Fund's resources." The task of deciding what this meant was left to the executive board (Polak, 1998).

It would be perfectly possible to argue that the GAB's story is but one episode in the learning process that has been occurring worldwide ever since financial liberalization began. According to this argument, it would only be a matter of time before the dismal experience of recent crisis management led authorities to start devising a more effective way of discharging the lender-of-last-resort function at the international level. There seems to be ample ground for skepticism, however, in view of the responses the recent crises have so far elicited with respect to funding and operations at the IMF.

On the funding side, the response can be described as "more of the old medicine," rather than a new prescription. At Halifax, in June 1995, the G–7 leaders called for the opening of negotiations "with the objective of doubling as soon as possible the amount currently available under the GAB to respond to financial emergencies." The arrangement that has emerged from such negotiations, the New Agreements to Borrow (NAB), reproduces the GAB structure in all important respects, including the double-lock principle. Thus, the NAB can be activated to cope with financial crises of systemic importance even when these originate in a country that is not a member of the IMF. The main advantage of the NAB over the GAB, which will be kept in place, consists in the number of contributors, which has been significantly expanded. The coexistence of the two mechanisms, however, has made the activation procedure even more cumbersome, because rules have had to be devised to ensure that the same country will not be called upon to contribute twice for the same operation, as a member of both the GAB and the NAB. Such rules also make it difficult to estimate the exact amount of resources that can be drawn in any particular instance. Thus, even though the NAB, like the GAB in its post-1983 version, goes beyond the principle of reciprocity, it does so in a way that raises doubts about its effectiveness as a pool of resources for lender-of-last-resort functions. This concern is strengthened by the fact that at no time during the negotiations that led to the NAB was the next most obvious alternative, IMF borrowing directly from the market, seriously contemplated.[17]

[17] This possibility is not ruled out by the IMF Articles, but it has never been put into practice. The closest the IMF has come to doing so was in 1980, when the Interim Committee stated that "the Fund should make, as soon as possible, the necessary arrangements to enable [it] to borrow from various potential sources of financing, not excluding a possible recourse to the private markets if this were indispensable" (press communiqué). The idea was eventually dropped. It has been revived by Dam (1982) and Padoa-Schioppa and Saccomanni (1994), but, to date, it has not found its way into policy discussions.

On the operational front, Article VI's prohibition of capital-account financing still stands. Indeed, even though the IMF staff has called for its repeal on several occasions (see, for example, Quirk et al., 1995), the amendment envisaged to give the IMF authority over capital-account liberalization does not contemplate such a bold step. To be sure, the present language of Article VI did not prevent either the Mexican or the Asian package, because in both cases, there happened to be a current-account imbalance. The fact that the nature of those crises had little to do with the current account was and is clear to everybody, however, so much so that the IMF has felt the need to set up a special window, the Supplemental Reserve Facility (SRF), to deal explicitly with capital-account problems. Created in December 1997, the SRF has since been utilized for the Brazilian, Korean, and Russian packages. Inevitably, however, this has meant a direct confrontation with Article VI. This time, the justification for the facility could not be found in the adjective "large," as had been the case in the early 1960s, because the recent packages were large by any standard. The activation of both the GAB and the NAB, moreover, which are obvious sources of funding for such a facility, depends on there being a systemic threat to the international monetary system, which would be unlikely if the capital outflows were "small." The only way out of the impasse was to work on the adjective "sustained," interpreting it as referring to the future, rather than the past. Accordingly, the SRF has been described as aiming not so much at financing a given outflow, no matter how big or sustained up to that moment, but rather at halting the outflow by rebuilding the country's reserves.

It would be difficult not to view this as a form of rule-bending based on "fancy legal footwork" (Polak, 1998, p. 49). Rule-bending is a common practice in many real-world institutions and can even be viewed as healthy to the extent that it is a response to new challenges that could not be foreseen by an institution's founders. Today's common wisdom is often yesterday's crime, and the history of central banks is replete with evidence of this truth. Rule-bending has at least one significant drawback, however: if it is protracted or applied to core, rather than to marginal, functions, it risks putting the legitimacy of the rule-bending institution at great peril. If its legitimacy is called into question, the institution will have little choice but to seek the support of its most powerful members, by putting their interest first. One way or the other, any pretense of universality and reciprocity would become illusory.

The lender of last resort is clearly not a marginal function of an international monetary system. Moreover, it is not a function that can be easily squared with the principles of universality and reciprocity. The lender of last resort has to act swiftly, decisively, but also selectively, inflicting losses (varying according to circumstances) on at least some of the affected parties. In other words, the lender of last resort can never be expected to be "the enemy of none but the common friend of all."[18] The issue of who controls the lender of last resort's actions, as a result, is inescapable. The Bretton Woods architects were well aware of the problem, and they conceived capital controls and the rule-based framework within which the IMF would operate precisely as a way to limit conflicts of interest in this regard. Any attempt now to add an international dimension to lending of last resort is unlikely to succeed unless the control problem is faced squarely and an alternative solution is found. Both past experience and the difficulties inherent in international decisionmaking suggest that this is unlikely to happen soon.

The Implications of National Sovereignty

International financial crises need not be sovereign crises. However, the lessons of the last twenty years suggest that major private-sector crises tend rapidly to become sovereign crises as domestic public opinion forces the government to bail out the banking system or an important segment of the corporate sector. Indeed, as the recent East Asian crises show, international rescue packages may make this transmutation inevitable. Thus, a distinction between private-sector and sovereign crises may be very difficult to draw.

Sovereignty is a political, not an economic, concept and is thus not easily squared with the economist's standard toolbox. A way around the problem consists of treating sovereign entities as if they were utility-

[18] Nicholas Biddle, chairman of the Second Bank of the United States, had claimed it should be just that during the 1832 congressional hearings that led to President Andrew Jackson's veto of the bank's rechartering. Under Biddle, the Second Bank had come to assume—far ahead of the Bank of England—the role of lender of last resort with respect to commercial banks. Biddle spoke of central banking in surprisingly modern terms, but his assertion that the lender of last resort worked under all possible circumstances in everybody's interest made him politically suspect. On purely economic grounds, nobody was able to show that the bank's actions had been socially harmful. Nonetheless, the bank was eventually brought down on the accusation that its management had gone beyond its mandate, trespassing on the turf of the Congress. The scar left by the battle over the Second Bank of the United States is still visible in the legislation that established the Federal Reserve System nearly eighty years later, legislation that contains absolutely no reference to a central bank. On the history of the Second Bank of the United States, the *locus classicus* is Hammond (1957); for a recent review of the entire episode, see De Cecco (1986).

maximizing individuals with well-defined preferences and endowments. After all, methodological individualism treats the individual as "sovereign," in the sense that he or she is free to choose (rationally) on the basis of his or her endowments and preferences. There is an important distinction between the sovereignty of an individual and the sovereignty of a state, however. The sovereignty of an individual ceases the moment a choice has been made, because once a contract is entered into, the parties can rely on external institutional arrangements to see that it is enforced. A state, by contrast, is legally sovereign in that it recognizes no authority as superior to itself.[19]

An important implication of the notion of sovereignty is that countries lack a foolproof way to commit themselves to a given course of action. This does not mean that the authorities will be unable to commit themselves credibly under all possible circumstances. Rather, it means that, because there is no independent—that is, third-party-enforced—commitment technology, the credibility of policy announcements is not to be taken for granted, for it will depend on the characteristics of the overall institutional environment, as well as on the specific payoffs from reneging on the commitment. Failure to come to grips with this problem goes a long way toward explaining why the Bretton Woods arrangements did not operate as their architects had expected. The excessive rigidity of exchange rates, which is often singled out as the most important factor behind the system's eventual collapse, was largely the outcome of the national authorities' attempt to limit their own freedom of action so as to ensure the "credibility" of their policies (Eichengreen, 1996). That is, exchange-rate rigidity was brought about by the search for a dependable commitment technology, contrary to the belief—widespread in the postwar period—that constraints on "enlightened" domestic-policy management should be avoided to the greatest possible extent (Dam, 1982). With the demise of the system of fixed exchange rates, the role of enforcer of policy announcements has come to be performed predominantly by the capital markets. Authorities have gradually come to realize that by liberalizing capital markets, both domestically and internationally, they would not only foster a better allocation of resources in the long run, but would also acquire credibility. At bottom, the various monetary-reform strategies that have been tried over the last fifteen years or so in the industrial world—from central-bank independence, to inflation

[19] Another distinguishing feature of states is that they perform a distributional function, alongside allocative and stabilization roles. As a consequence, they are better assimilated to financial intermediaries than to ordinary economic agents.

targeting, to investing in anti-inflationary reputations—are all predicated on the assumption that there is a market watching what the authorities are doing (Cottarelli and Giannini, 1997). In this sense, one can say that today's international monetary system is market led (Padoa-Schioppa and Saccomanni, 1994). The recently much discussed proposal to add the goal of capital-account convertibility to the IMF charter is no more than a way to formalize what is already a fact for an increasing number of countries.

The lack of an "objective" commitment technology for sovereign countries is often taken to mean that a strong market penalty, in the form of denial of access to foreign finance for an indefinite time after default, is the only deterrent against policy misdeeds.[20] But this risks being a gross oversimplification, hard to reconcile with historical evidence, at least insofar as our century is concerned. In the aftermath of the debt defaults of the 1930s, for instance, the loss of capital-market access was hardly discernible (Eichengreen, 1991). Countries that continued to service their debts throughout the 1930s did not subsequently enjoy superior access to credit markets. Argentina, for example, did not enjoy better capital-market access as a faithful repayer than did the less faithful Brazil (see Cardoso and Dornbusch, 1989), and Eichengreen (1989) finds no evidence for the period from 1945 to 1955 that the volume of external capital a sovereign borrower could obtain was negatively affected by its prior default. Indeed, going back to the 1930s, gross national product and industrial production appear to have recovered more quickly in countries that defaulted than in countries that continued to honor their debts (see Eichengreen and Portes, 1989).

This absence of penalty probably has much to do with a second, difficult to capture, implication of the notion of sovereignty: unlike individuals, countries can undergo pervasive regime changes. Institutional reform or a change in the ruling coalition can, by signaling a systematic change in policy, offset the reputational effects of prior actions, including default (Fishlow, 1989). In the nineteenth century, for example, returning to the gold standard was perhaps the clearest way to signal a change of regime. Today, one can argue that this function has been taken over by the act of establishing independent technical authorities and by IMF conditionality. So, although market monitoring is needed *ex ante* to discipline the government's behavior, a long punishment by markets in the face of default may not be the socially optimal response. The correct answer is, rather, that it depends.

[20] This is the typical result one gets by factoring the notion of sovereignty into an otherwise standard model of debt optimization; see Eaton and Fernandez (1995).

Regime changes are more likely to occur in the aftermath of a major crisis, because such an event tends to heighten awareness of the costs implicit in the existing policy and institutional framework (see Olson, 1982). Indeed, foreign-exchange crises, whether or not they end in outright default, tend to be very costly. Eichengreen and Portes (1989) show, for the 1930s, that the supply of money, imports, and GDP growth all contracted more sharply in the countries that defaulted than in those that did not. In more recent times, the $50 billion rescue package that allowed the Mexican authorities to continue to service their debt did not avert a 6 percent decline in real output in 1995—Mexico's deepest recession in fifty years. In the cases of Indonesia, Korea, and Thailand, the IMF *World Economic Outlook* forecast as late as May 1997 that real output would grow in 1998 by 7.5, 6.3, and 7.0 percent, respectively. The latest figures published by the IMF (1999), show a contraction, instead, of about 14, 6, and 8 percent, respectively. The psychological and economic impact of a foreign-exchange crisis, moreover, ensures that, despite the lack of international bankruptcy procedures, the "management" of a country hardly ever remains in office to see the crisis through.

Credible regime changes cannot happen overnight, however, because the probability of a set of reforms being carried through ultimately depends on the continuing support of the country's population. The extent and persistence of such support will itself depend on the population's judgment that the program will succeed and that the outcome will be in the individual self-interest of the average citizen (Johnson, 1997). Achieving and maintaining the necessary consensus is therefore likely to entail a continuous exchange of signals between the government and its constituency. A credible regime change is, thus, better portrayed as a process, an intrinsically fragile process, than as a single action.

The need for a regime change to take place in real time is the source of a number of complications for an international lender of last resort. Suppose the lender of last resort wants to gauge the probability that the regime change will be credible. Where will it look? Considering the country's fundamentals, although useful, will not be enough, because the existence of a political constraint might imply that the country stops being willing to pay far sooner than it reaches its technical ability to pay. It can then look at the country's past record in terms of policies, political stability, or compliance with surveillance exercises. But here again, the very definition of a regime change is that what has occurred until the very moment such a change takes place matters only up to a point. The only possibility remaining is to look at the extent of the reforms the authorities are willing to commit themselves to and at the determination with which they are introduced and defended. The very determination with which the new government pursues its policies, however, may undermine the consensus around the new policy course. If this is the case, it may be advisable to relax the new policy somewhat at the margins, rather than to insist on adhering to its original stance. The international lender of last resort is not in a position, however, to evaluate with the necessary precision whether such a modification of the agreed upon course of action is warranted. There is a fundamental asymmetry between international organizations and domestic authorities, in that domestic authorities are to a large extent the producers and guarantors of the information on which the assessment is to be based. A further complication of the existence of a political constraint is that foreign creditors of sovereign debtors will, in deciding their strategies, typically lack a well-specified outside option (namely, the liquidation value) to determine their own bargaining power (Eichengreen and Portes, 1995). Another important lesson borne out by recent crises is that the effectiveness of multilateral surveillance in a world where most information is produced locally depends crucially on the collaboration and provision of timely and transparent information by the authorities concerned. The result of all this is that although a domestic lender of last resort can count on prior information (the supervisory track record) and can expect its decisions to be carried through whatever their content, an international lender of last resort is bound to act under a far more extensive veil of ignorance. It must remain exposed to the risk of a policy reversal until the implementation process has been pushed to the point at which the cost of going back precludes a return.

The combination of all these features, which are nonexistent or of limited importance at the national level, appears to put international crisis management in a class of its own. The possibility of a regime change makes sovereign crises more manageable in principle, if a way can be found to sustain the credibility of such a change. At the same time, the inevitable complexities of political decisionmaking create the possibility of a self-fulfilling debt run, while the fundamental information asymmetry between national authorities, on the one hand, and multilateral organizations and private creditors, on the other, works against the creation of a climate of trust once a crisis emerges, and might even stand in the way of mobilizing public support for the government's program. A nonconflictual relationship between a sovereign debtor and its creditors (and, of course, international organizations) may be further hindered by the lack of an objective benchmark (the liquidation value) against which to establish the bargaining power of the two sides. Thus, although *timely action* is crucial to effectively carrying out the lender-of-last-resort function in a national context, *gaining time* before any irreversible action is taken, so as to permit a more thorough and less emotional assessment of the respective parties' options and payoffs, is likely to be a more important aim at the international level.

Protecting Creditors or Debtors?

All national safety nets are biased in favor of creditors. As Richard Herring and Robert Litan (1995) remark, the governments or central banks of all industrial countries (and of many others) have consistently shown a propensity to stand behind all bank deposits, differences in the degree of formal protection notwithstanding. The coverage of deposit insurance—be it explicit or implicit—has been gradually extended in this century as original concerns about systemic risk (the need to avert bank panics) were supplemented by considerations of consumer protection. The moral hazard implicit in such a structure has been controlled—more or less successfully, depending on the circumstances—through a blend of regulation, supervision, and outright threats to close the affected bank or change its management.

This feature of domestic safety nets has been shared by recent international rescue packages. To be effective in restoring confidence in troubled financial markets, a rescue package must relieve investors of the risks they are trying to avoid. The main difference between the domestic and international contexts is that, because international markets fall largely outside the sphere of influence of any national authority, it may be difficult to make investors internalize the costs associated with the availability of this implicit form of insurance. Moral hazard consequently tends to be a more serious problem at the international level.

Just how much more serious is the problem? Estimating moral hazard is a complex task because of the difficulty of specifying the counterfactual, that is, the costs that would have materialized had a rescue not been mounted. Moreover, it might well be that, even if some moral hazard were created, the overall effect of having a lender of last resort ready to intervene could still turn out to be positive, because the total costs of a crisis cannot be taken as given. After all, this is the argument usually invoked to justify domestic lending of last resort. Even allowing for these caveats, however, the emerging consensus is that moral hazard has, in fact, played an important role in the upsurge of capital flows in the 1990s (Goldstein, 1998; IMF, 1998;

Krugman, 1998). It is not the size *per se* of such flows that bears this out; after all, a rapid increase in capital mobility is only to be expected in the aftermath of a shift from a financially repressive to a more liberal regime. This is exactly what happened in a large number of countries in the 1980s. There are, indeed, grounds for believing that external capital flows have not yet matched the levels reached before 1914 (Eichengreen et al., 1998). The decline in world interest rates in the early 1990s, moreover, clearly contributed to redirecting international finance toward high-yield assets in emerging markets (Calvo, Leiderman, and Reinhart, 1996). Rather than size, it is the combination of the dynamics, pricing, and composition of the flows that suggests that the moral-hazard concern cannot be lightly dismissed.

A few facts are worth recalling in this respect. First, as a result of the Asian crisis, 1997 was the first year since 1900 to show a marked reduction in the net capital inflow to emerging economies (Figure 1). Up to then, the annual inflow had been very large by historical standards and sustained, occurring in the context of a decline in the spreads on emerging-market debt that was larger than the decline on other comparably rated instruments (Figure 2). It is worth noting, moreover, that the Mexican crisis led to only a modest reduction of such flows in 1994 and had no impact at all on spreads outside of Latin America, for international investors quickly reallocated their portfolios away from this region and toward Asia and Eastern Europe. The total flow to emerging markets rebounded as early as 1995, when it increased by 20 percent. Even the shift away from Latin America proved short-lived, for all the main countries in the region rapidly regained access to international capital markets, and yield spreads returned to their precrisis levels, and in some cases, even below those levels. Such a pattern is unprecedented. Although there had been lending booms of comparable size on previous occasions, major international crises had typically been followed by a generalized halt in capital flows for years to come—so much so, in fact, that scholars are left wondering why the market was unable to discriminate better between various classes of borrowers (Eichengreen, 1991). Nothing like this occurred after the Mexican crisis.

The behavior of spreads during 1997 is also striking. After an early rise caused by the increase in the U.S. federal funds rate, yield spreads on emerging-market debt rapidly resumed the downward trend they had been following since the Mexican crisis. Not even the floating of the Thai baht, in July 1997, had a perceptible impact. Although this decline was partly attributable to the domination of the overall index by Latin

American sovereign debt, developments in Asia did not deviate significantly from the general picture. In May 1997, with the baht under severe speculative pressure, spreads on Thai sovereign debt inched up by a mere 13 basis points, followed by only 3 additional points for the entire month of June. Spreads on Indonesian and Korean sovereign and quasi-sovereign debt remained essentially unchanged for the same period and widened by just 6 basis points for Philippine debt (Figure 3).

Finally, there is the composition puzzle. Figure 4, which contrasts the pattern of capital flows into Latin America and Asia in the 1990s, neatly shows how international finance underwent a veritable mutation while being redirected to Asia. Interbank flows, which had been negligible in 1993 and negative in 1994, surged to account for about 25 percent of total inflows into the region in both 1995 and 1996. The flow of interbank funds to Asia served to feed the now notorious "carry trade." In a typical carry trade, banks borrowed in the international interbank market in dollars or yen, converted the proceeds into the local currency, and then on-lent in the local currency short-term interbank markets, until the funds finally reached the local final users.[21] The carry trade had become popular in 1992 and continued to be highly profitable right through to the third quarter of 1997, when the crisis occurred.[22] The subsequent retrenchment of interbank lending helps explain the intensity of the East Asian crisis. This composition shift may have been accidental, but it may have reflected a greater perception of uncertainty surrounding emerging markets as a result of the Mexican crisis, and therefore a desire by investors to be able to get out of the market quickly if necessary. The concomitance between the upsurge in interbank lending and the appearance of the G–10 (1996) report on *The Resolution of Sovereign Liquidity Crises*—which was widely read as suggesting that certain classes of foreign claims could be granted a privileged status in future crises—is striking, to say the least.[23] Moreover, the Basle Capital Accords may have had the unintended effect of encouraging interbank lending, because they mandate only a 20 percent

[21] There were also other techniques, all involving some degree of maturity mismatching. For a description, see IMF (1998b).

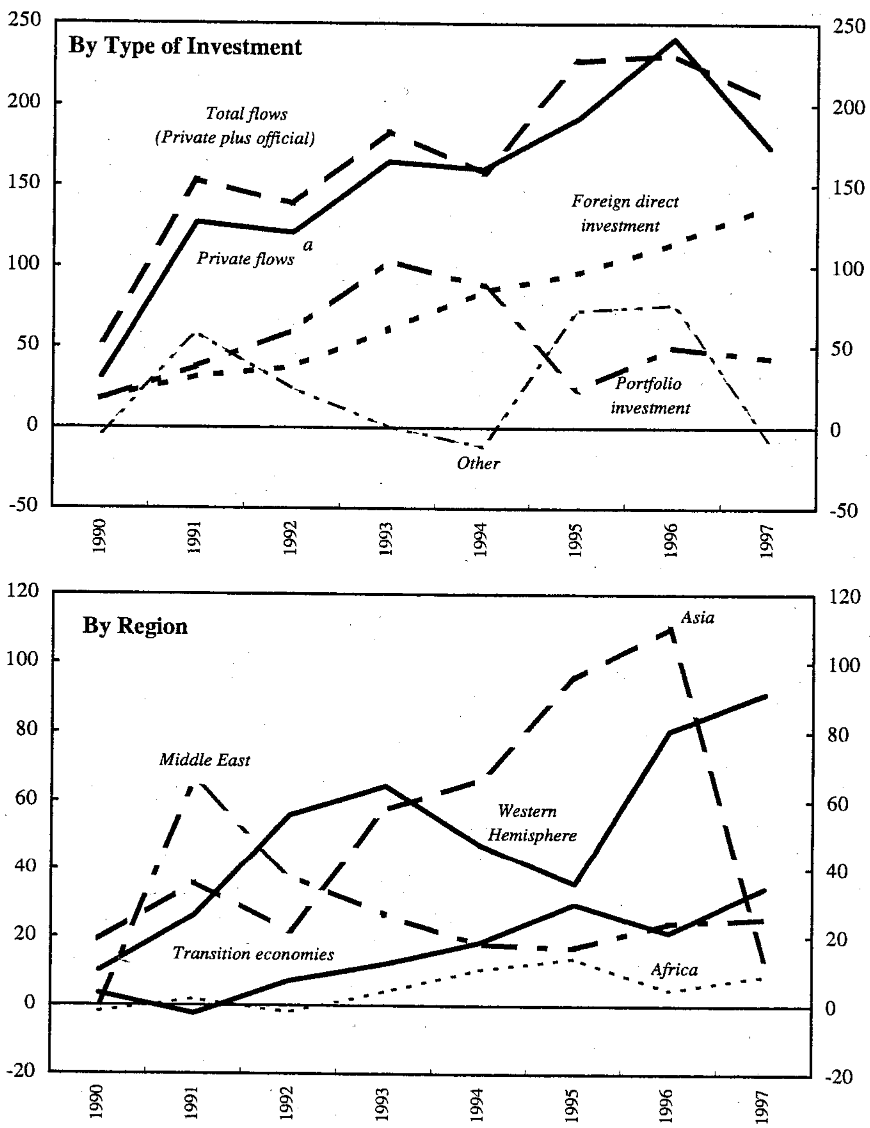
[22] Using data on Thai banks, the IMF estimates that the carry trade generated a higher spread than investing in mature markets produced in eighteen of the twenty quarters up to mid-1997 (IMF, 1998). The returns even increased in the second quarter of 1997, at the time of the speculative attack, because yields increased, whereas the exchange rate of the baht was not allowed to depreciate. With the collapse of the baht, returns to both carry trades turned sharply negative.

[23] The report was very explicit in ruling out large-scale rescue operations of sovereign debtors in the future, but a few passages suggested that such a stance might not be

FIGURE 1

NET PRIVATE CAPITAL FLOWS TO EMERGING MARKETS, 1990–1997

(In billions of U.S. dollars)

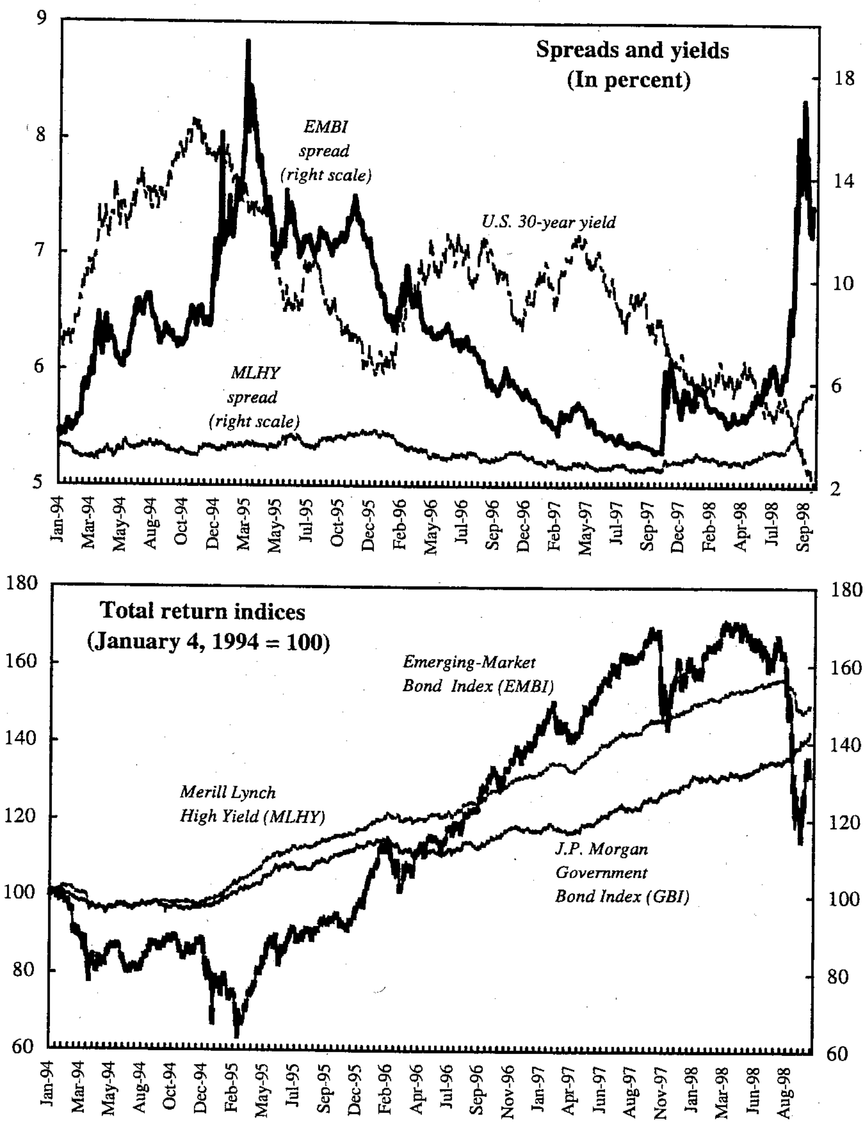


SOURCES: IMF, *World Economic Outlook*, and staff estimates.

[a] Total net private capital flows equal net foreign direct investment plus net portfolio investment plus net other investment.

FIGURE 2

BOND MARKETS: SELECTED RETURNS, YIELDS, AND SPREADS

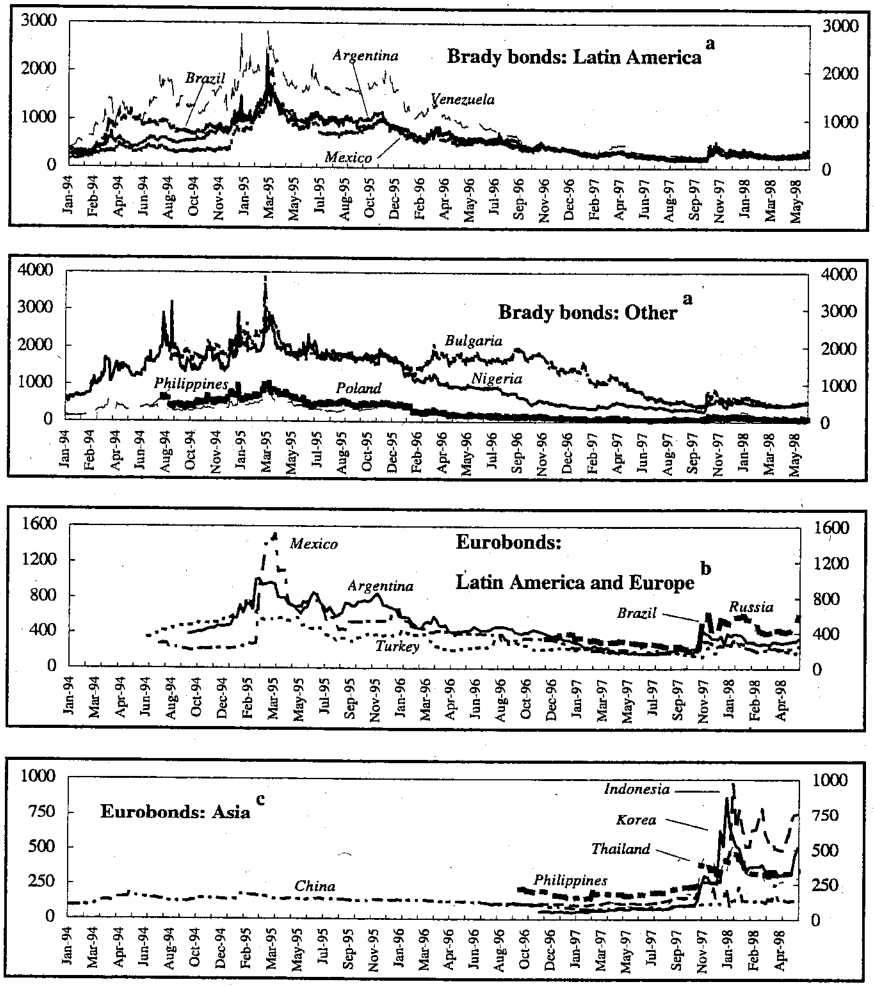


SOURCE: Bloomberg.

FIGURE 3

YIELD SPREADS FOR SELECTED BRADY BONDS AND EUROBONDS DENOMINATED IN U.S. DOLLARS

(In basis points)



SOURCES: Bloomberg Financial Markets L.P.; Salomon Smith Barney; IMF staff estimates.

[a] Yield spreads on Brady bonds are "stripped" yields.

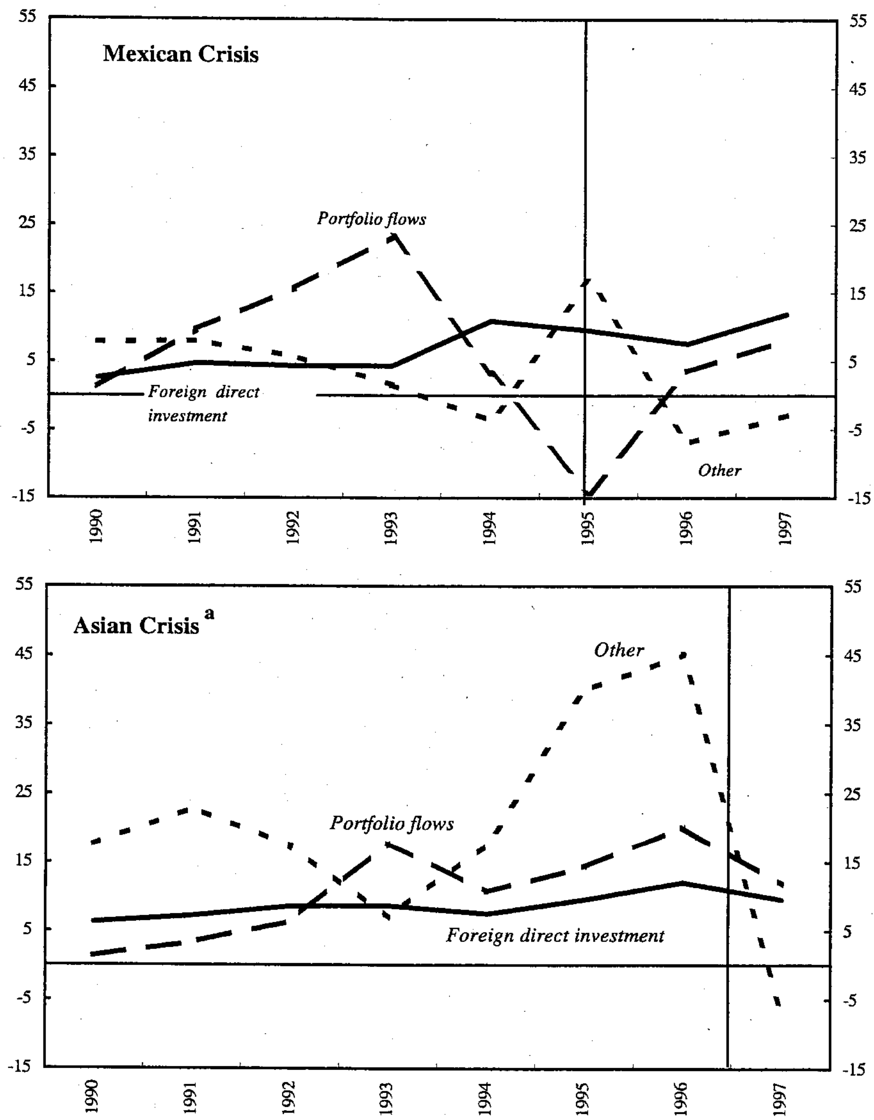
[b] Latin America and Europe: Republic of Argentina bond due 12/03; Republic of Brazil bond due 11/01; United Mexican States bond due 9/02; Ministry of Finance of Russia bond due 11/01; Republic of Turkey bond due 6/99.

[c] Asia: People's Republic of China bond due 11/03; Republic of Indonesia bond due 8/06; Korea Development Bank bond due 11/03; Republic of Philippines bond due 10/16; Kingdom of Thailand bond due 4/07.

FIGURE 4

COMPOSITION OF PRIVATE CAPITAL FLOWS

(In billions of U.S. dollars)



SOURCE: IMF, *World Economic Outlook*.

[a] Aggregate flows to Indonesia, Korea, Malaysia, the Philippines, and Thailand.

risk weighting for short-term interbank exposures to non-OECD countries, whereas exposures of over one year must be weighted at 100 percent. The lower weight, it should be noted, does not apply to short-term corporate loans or bonds. A further distortion in risk assessment is likely to have descended from the practice of using OECD membership as a criterion for setting required bank-capital ratios, as exemplified by Mexico's experience in the months immediately before the 1994–1995 crisis.

There is nothing wrong with capital flows taking the form of interbank lending, rather than portfolio investment. However, interbank transactions tend to be highly informal, often not going beyond the stage of verbal agreements. As events in Asia clearly demonstrate, therefore, assessing overall risk exposures may prove difficult when such transactions account for the bulk of cross-border lending. Moreover, short-term interbank claims are, by their very nature, highly liquid and easily reversible, and these features tend to encourage herding behavior on the part of lenders. Indeed, the size and rapidity of the turnaround that took place in net interbank flows in the final months of 1997 were unprecedented, with total interbank lending in the crisis-stricken countries shifting from an inflow of $40 billion to a net outflow of $30 billion (IMF, 1998b).

Overall, there appears to be solid ground for believing that moral hazard should be given a prominent place in any account of what went wrong in the international financial markets in the 1990s. At the same time, though, it is not clear that moral hazard can be blamed entirely on the "excessive" guarantees implicitly provided by local authorities, as Paul Krugman (1998) suggests. There may well have been, in recent years, an "overborrowing syndrome" in emerging economies (McKinnon and Pill, 1997). All arguments emphasizing local guarantees, however, run up against the difficulty of explaining how sophisticated international investors could be made to believe in such guarantees when they knew that the respective country's external liabilities were denominated mostly in foreign, rather than domestic, currency. To some extent, moral hazard must have been created abroad, not locally. Eduardo Levy Yeyati (1998) has shown that limited liability and generous deposit insurance in industrial economies may be sufficient to push international banks into investing an excessive portion of

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foolproof. The report remarks at the outset (p. 6) that "trade credits and interbank lines are essential for retaining commercial and economic links with the world economy, and they have so far been excluded from most sovereign workout arrangements"; further on (p. 21), it adds a normative twist, stating that "it may no longer be possible to exempt bonds and other claims because of their increased importance. Each case will have to be considered on its merits, taking account of the fact that trade credits and interbank credit lines are crucial for maintaining links with the world economy."

their funds in high-yield, high-risk projects (which are generally more plentiful in emerging markets) in the rational attempt to maximize the value of the option implicit in the deposit contract. If Krugman's hypothesis seems to explain too little, however, Levy Yeyati's explains too much, because limited liability and deposit insurance are long-standing features of the industrial countries' domestic regulatory setting. In all probability, a combination of these two apparently rival hypotheses—one that emphasizes both the inadequate preparation of financial liberalization in recipient countries and the inability of lender countries to provide their internationally active institutions with appropriate incentives—will be needed to make sense of the unprecedented pattern of capital movements in the 1990s.

To argue that moral hazard is likely to have been an important factor behind the upsurge of capital flows directed to emerging markets in the 1990s does not amount to saying that private investors have been left unscathed by recent crisis episodes. Indeed, some investor categories appear to have suffered heavy losses. The Institute of International Finance ([IIF] 1999), for example, sets at $235 billion the overall equity- and bond-market losses stemming from the East Asian crisis. Bank losses, by contrast, even if measured by the banks' own balance-sheet provisions, appear to have been quite modest, especially for Japanese and U.S. banks. Given the prominent role international interbank lending has played since the Mexican crisis, it is therefore not surprising that recent discussions have given center stage to the issue of involving the private sector—by which is meant mainly the big international banks—in the handling of foreign-exchange crises (Eichengreen, 1998; Goldstein, 1998; G–22, 1998). The issue is often broached as one of achieving a "more equitable burden-sharing" between international creditors—which are not generally innocent bystanders, but institutions specialized in processing information—and debtor countries, which already bear the burden of IMF conditionality. This may well prove misleading, however. When resources have been misallocated, the question of who was responsible in the first place is of little economic relevance. What matters is that the misallocation be dealt with in the least costly way and with the least recourse to the money of third parties, ultimately the taxpayers.[24] The issue of moral hazard is logically distinct from that of ensuring equitable burden sharing, although there may be a connection. Moral hazard reflects the interaction of the behavior of both borrowers and lenders. To reduce it, one need not necessarily punish both borrowers and lenders with the cost of crisis resolution or punish all lenders equally. The real issue is whether by

[24] More specifically, moral hazard reflects the interaction of the behavior of both borrowers and lenders. To reduce it, therefore, it is not logically necessary that both

involving the private sector, the overall costs associated with foreign-exchange crises can be reduced, either by smoothing out the crisis-resolution process, or by reshaping the incentives under which private institutions operate.

The way the Korean crisis was handled is a case in point. One can argue that the participation of foreign banks in the rollover operation sponsored by the G–10 authorities in December 1997—which effectively brought the Korean crisis to a halt—offers a model of the way in which burden-sharing should work. There are grounds, however, for a less benign interpretation. The delay with which the rollover strategy was assembled made it possible for banks holding short-term interbank claims to exit the market unscathed or to reduce their exposure significantly. In fact, given the size of the overall turnaround in interbank lending—about $70 billion in net terms—it would be hard to argue that only "marginal" lenders were allowed to leave the market. Moreover, the rollover strategy was accepted by the banks only after the Korean won had already lost 50 percent of its value and the G–10 authorities had announced that they would speed up the disbursement of $10 billion of the overall rescue package. By then, the risk international banks would take by rolling over their claims had been greatly reduced. Individual banks could even gain from switching to a cooperative strategy, for they would not be required to put up new money while acquiring a "claim" on the crisis-resolution process. All that was needed, once that stage had been reached, was some arm twisting by the authorities to overcome what had become a pure coordination problem.

It is still too early to know whether this is a correct description of what happened during the Korean crisis, even though the figures on bank-loss provisions reported by the IIF (1999) provide indirect confirmation of its validity. As one commentator put it, expecting the private sector to contribute substantially to crisis resolution is like "asking the icebergs to save the Titanic."[25] The very configuration of world financial markets—with its expanding set of highly competitive and unregulated intermediaries—invites skepticism about the possibility of establishing spontaneous arrangements that presuppose much cohesion and goodwill on the part of lenders. Indeed, in view of the declining importance of concerted lending in industrial countries (see section 2), one cannot help wondering why something that is increasingly difficult to achieve domestically should be

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lenders and borrowers bear the cost of crisis resolution, or that all lenders suffer equally. Indeed, history suggests that the burden tends to be borne mainly by debtors, irrespective of the international financial regime; see Eichengreen (1991).

[25] Stephen Fidler, "Ward for Contagious Diseases," *Financial Times*, October 6, 1998, p. 23.

feasible internationally. Containing moral hazard at the international level is therefore likely to remain the key challenge for the years ahead.

4 International Lending of Last Resort: Looking for a Middle Course

The main message of the previous section is that the extension of lender-of-last-resort practices to the international domain encounters severe problems. Limited resource availability does not seem to be a significant hindrance overall. The frequently heard claim that the lender of last resort needs to be able to create liquidity for its actions to be effective has been disproved by national experience. Moreover, the latest IMF quota increase, the GAB-NAB, and the possibility of activating bilateral contributions of the type mentioned in the G–7 declaration of October 30, 1998, have, taken together, significantly increased the resources the IMF can mobilize in case of need.[26] The real problem seems to be more fundamental. First of all, given the imperfect control structure of international organizations—itself the consequence of the lack of third-party enforcement powers—a crisis manager endowed with ample resources is likely to see its technical discretion to act selectively seriously curtailed, in practice if not in principle. This is all the more likely to happen because the organization's main political principals will find it difficult *ex ante* to assess with sufficient accuracy the probability of success—and the associated pay-off for themselves—of a rescue package requiring wide-ranging policy changes, a lot of political determination, and, inevitably, a rather long gestation to come to fruition. The ultimate effect of this state of affairs would be either a politicization of the decisions of the lender of last resort or a significant loss of flexibility, and ultimately effectiveness, in the conduct of the organization's business. The issue of containing moral hazard, moreover, is far from settled. It is true that the development of surveillance and conditionality has decreased moral hazard with respect to debtors over the past few decades, but individual countries must perceive that they have an interest in cooperating with the international enforcer if those tools are to be effective. There is an important difference between the international domain and the domestic context, where the lender of last resort can rely on a complex regulatory structure that gives force to the threat of "punishment." Moreover, the problem of moral hazard with respect to the creditor lies largely beyond the reach of the lender of last resort, because it is related to the degree of protection creditors receive

[26] This appears to be the view of the IMF itself; see Fischer (1999).

in their home country. To protect its resources, the international lender of last resort thus has to rely on the actions of other actors, namely the industrial-country authorities, over which it has very little leverage. This is a very uncomfortable situation, which domestic lenders of last resort have consistently tried to avoid.

These considerations help make sense of the less-than-satisfactory performance of international rescue packages in the last few years. They also help to explain why a number of countries, such as Chile and Malaysia, have preferred to protect themselves from financial instability through unilateral recourse to capital controls. In the long run, however, such a response appears self-defeating. The move away from capital controls did not occur by chance, or just through sheer technological progress. It was primarily a response to two deeply felt needs that the Bretton Woods framework met imperfectly, if at all: the need for a better allocation of resources worldwide and the need for a mechanism to strengthen the credibility of domestic policymaking. Even if the clock could be set back, reinstating reliance on controls as the rule rather than the exception, it remains unclear how this reliance could be reconciled with reasonably fast growth and sound domestic policymaking. Thus, there appears to be ample scope for exploring middle-course solutions—working on the assumption that the leave-it-to-the-market option simply does not exist. This is the task to which I now turn.

Is Regional Crisis Management an Option?

With a universal lender of last resort unlikely to be forthcoming, and concerted lending impractical in most circumstances, a natural alternative would seem to be some form of regional lending of last resort. One can envisage a world in which this function would be discharged either by a recognized hegemon within a given area or by an areawide, cooperative institution explicitly endowed with lender-of-last-resort faculties. An obvious structure would be one in which each of the three main trading blocs—Asia, the Western Hemisphere, and Europe—would separately oversee financial stability in its own region, each in its own way, tailoring its oversight to local traditions and existing practices and institutions.

A regional lender of last resort would, in principle, have three advantages over a universal lender of last resort. First, mustering sufficient resources is likely to prove less troublesome, because geographical proximity, insofar as it can be taken as an indicator of economic integration, tends to strengthen perceptions of the social cost of inaction in the face of a crisis. Second, winning consensus about the need for concerted action and the form it should take might be easier, because the number of countries involved in each region would be relatively small; devising country-specific forms of compensation for joining in the collective lender-of-last-resort effort might also prove simpler, given that relations among the states in a region will normally go beyond purely financial matters.[27] Finally, relatively deep-rooted cultural ties—again, a natural outcome of proximity—may provide a favorable terrain for the establishment of an "epistemic community," namely, a "professional group that believes in the same cause-and-effect relationships, truth tests to accept them, and shares common values, so that its members show a common understanding of a problem and its solution" (Haas, 1990, p. 55). Epistemic communities have been shown to be important factors behind many recent success stories in the field of international cooperation (Milner, 1992). Indeed, the swap network developed by G–10 central banks in the early 1960s around the Bank for International Settlements can be seen as an early example of an areawide, though by no means regional, lender-of-last-resort structure (Helleiner, 1994).

Geographical proximity is by far the greatest advantage. For all the talk of globalization, much of today's trade remains regional, rather than truly global. In fact, the growth of intraregional trade flows is probably the distinguishing feature of the remarkable increase in overall world trade in the last two decades. The flourishing of areawide trade initiatives, such as the Single Market, Asia-Pacific Economic Co-operation, and the North American Free Trade Agreement (NAFTA), can itself be viewed as reflecting this underlying trend. Indeed, the pressure of economic integration can be so strong as to push beyond a regional lender of last resort, toward full-fledged monetary union. Eichengreen (1996, p. 186), for one, has forcefully argued that monetary union in Europe can be viewed as a response to the "ineluctable rise in international capital mobility," which risked undermining, by the attendant increase in exchange-rate volatility, intra-European trade flows and the very possibility of pursuing domestic objectives. The economic rationale of monetary union, in short, is that "relatively large, relatively closed economies are able to pursue domestic objectives without suffering intolerable pain from currency swings" (Eichengreen, 1996, p. 192).

Regional lending of last resort should thus be seen as an option both for countries in the process of transition to monetary union and for others that, while recognizing their common interest in exchange-rate stability, even to the point of being ready to peg the external value of their currency

[27] Such compensations would act, in Olson's (1982) terminology, as a "selective incentive," encouraging countries to stick to the cooperative equilibrium. On the importance of selective incentives, see also Milner (1992).

unilaterally, are not yet in a position to contemplate a total surrender of monetary sovereignty.

Defined in this way, however, regional lending of last resort has two shortcomings. No matter how strong the trade links are, and how well-developed cooperative initiatives in the trade field are, designing a credible structure for lender-of-last-resort purposes is likely to be complex. If countries are unwilling to contemplate surrendering monetary sovereignty altogether, either as an immediate option or over a more distant horizon, it must be because they want to retain some autonomy for their domestic economic policies. Assembling a rescue package is likely to entail, at least in the short-run, some deviation from the pattern of domestic policies otherwise deemed desirable in some of the countries in the area. The outcome of such an effort is therefore bound to remain highly uncertain. A credible commitment from the borrowing country to adjust can be made only as part of a broader web of interlocking agreements. This can be seen as no more than a variation on the control issue evoked in the previous section. The importance of the concern is underscored by two recent pieces of evidence. The first, and probably foremost, is the ERM crisis of 1992–93. Lack of economic convergence certainly played a leading role in straining the European multilateral peg, just as it had strained the Bretton Woods exchange-rate system back in the early 1970s, but there is now a broad consensus that the scale and persistence of the ERM crisis can be explained only by invoking an element of self-fulfilling behavior on the part of market investors. This behavior could have been addressed had core countries been willing to provide more extensive lender-of-last-resort services for the area as a whole (Eichengreen, 1996). What makes the European experience all the more remarkable is that the failure to organize an effective areawide defense against speculative flows took place in the context of an otherwise highly advanced process of institutional, and even political, integration.

A further example is provided by the failed U.S. attempt, in early 1995, to assemble an all-American rescue package to deal with Mexico's difficulties. The problem with the initiative was that it could not be funded sufficiently through the Exchange Stabilization Fund (ESF), which was at the immediate disposal of the U.S. Treasury. It therefore required congressional approval, which intense behind-the-scenes consultations in Washington made clear could not be taken for granted. Announcing a rescue package without the certainty that Congress would make the necessary appropriation involved political risks that the U.S. authorities were understandably unwilling to take. Thus, the all-American plan was dropped in favor of an orchestrated IMF package, in which the United

States had a stake roughly equivalent to the sums available in the ESF (Fraga, 1996). Again, it is noteworthy that the episode did not take place in an institutional vacuum, but in the context of a deep political commitment to NAFTA, both in Mexico and in the United States.

There is a second shortcoming to regional lending of last resort. Geographical proximity may increase awareness of the social cost of inaction to the point of making regional authorities overemphasize financing to the detriment of adjustment. In the absence of conditionality, moral hazard might loom large for such debtor countries. Even though the region might form a relatively closed economic bloc, the risk of worldwide contagion through purely financial channels can hardly be exaggerated in the present reality of global capital. As recent experience shows, especially after Russia's unilateral suspension of debt service, there is nothing to guard against global spillovers of regional regulatory and policy failures. This was perhaps the main objection to the attempt made in the early months of the Asian crisis by some countries in the area to organize a $100 billion regional emergency fund, to be known as the Asian Monetary Fund. The initiative was announced by the Japanese finance minister during the joint IMF-World Bank meetings in Hong Kong. Nothing was said at the time about how the Asian Monetary Fund would operate or about the conditions that would be attached to individual rescue packages. After the other G–7 countries had made it clear that they would go along with the initiative only if the IMF were involved, the plan was dropped—which suggests that it had more to do with avoiding conditionality than with fundraising.

The moral of all this is that, for the foreseeable future, a regional lender of last resort is unlikely to solve the problem of sustaining international financial stability. At most, elaborating on the Japanese idea for an Asian Monetary Fund, one might envisage a number of regional pools of resources that could be activated exclusively for countries belonging to the region. To be viable, however, such a structure would need to be coherently designed and managed, according to a unique code of conduct. In the trade field, there are those who argue that the trend toward regionalism is made more acceptable by its occurring in the context of an ever stronger global institutional arrangement, represented by the World Trade Organization and the conflict-solving procedures over which it presides. In such a context, regionalism can be interpreted as but one layer within a multilayered, but internally coherent, institutional framework (Lawrence, Bressand, and Ito, 1996). Coordination in trade is desirable, but not strictly necessary, because each region can benefit from liberalization even if all the other regions maintain their trade restrictions. Coordination in finance, however, appears to be vital, for the potential for contagion across regions is significant. Leaving each region to decide the rules according to which lender-of-last-resort services should be provided may well result in a system of destructive, rather than constructive, ambiguity.

Voluntary versus Nonvoluntary Arrangements

Lending of last resort is a form of implicit insurance against the risk of illiquidity. If *implicit* insurance can be expected to work only imperfectly in an international context, why not try *explicit* insurance? The latter could take the form, for example, of an option-like contract giving the borrowing country the right to access extraordinary sources of financing should pressure develop in its own foreign-exchange market. Because such an agreement would be voluntary, the premium could compensate the insurers for the risk they run.

Argentina and Mexico are experimenting with schemes of this sort. In 1996, Argentina reached an agreement with thirteen foreign commercial banks, according to which the Argentine central bank may swap peso-denominated government securities for U.S. dollars up to about $7 billion. The average commitment fee is 33 basis points, and the rate charged in case of drawing is 200 basis points above the London interbank offer rate (LIBOR). The most interesting feature of the facility is the absence of a no-adverse-material-change clause permitting banks to recede from the agreement in the event of a crisis. Drawings are subject to margin calls if the price of the collateral falls by more than 5 percent, and if the fall exceeds 20 percent, the additional margin must be paid in U.S. dollars. Moreover, creditor banks may suspend the facility in case of a sovereign default. The Mexican contingent scheme is, by contrast, a simple overdraft facility, granted jointly by thirty-one foreign banks for an overall amount of about $3 billion.

The structure of such contractual arrangements raises a number of questions. Can the market be expected to provide enough insurance, given the nature of the event that is being insured against? Moreover, suppose the market is reacting correctly to an imbalance in the country's fundamentals: will the facility still be beneficial to the country itself and to the international community at large?

Neither the Argentine nor the Mexican arrangement is "large" in comparison with the latest rescue packages, so it seems unrealistic to expect that such arrangements might act as a perfect substitute for public money. But the main problems seem to lie elsewhere. First, the existence of margin calls implies that, in case of large price swings, which clearly cannot be ruled out given the type of event these countries are trying to insure against, the arrangement could very well unwind. Perhaps more important, the banks participating in the arrangement might wish to hedge their exposure. They might start selling government securities short, for example, when called to provide "additional" finance under the arrangement. If they choose to do so, the overall amount of foreign finance available to the borrowing country will remain unchanged. Furthermore, the very automaticity of the arrangement, that is, its unconditional nature, might prove to be an undesirable feature. Once the existence of the facility becomes publicly known, authorities might come under pressure to draw on it rather than take potentially unpopular measures to stem an incipient crisis. A careful drafting of the conditions for a drawdown might reduce this risk, but the overall record of the market with regard to surveillance suggests that the facility might be used to delay needed policy adjustments.[28]

Mexico's decision, in September 1998, to draw $2.66 billion down from its contingent facility—the first such drawing ever—aroused much controversy among the thirty-three banks participating in the arrangement. The banks complained that the interest rate at which the drawing occurred (1 percent above LIBOR) had been negotiated eighteen months earlier and had, in the meantime, fallen considerably below market. This could hardly be blamed on Mexico, though, and in fact it did not prevent a drawing under the original agreement. The creditors' discontent, however, shows that the risk inherent in such facilities might have been originally underestimated; as a consequence, one can expect that future drawings will be made either more costly for the borrower or less "automatic" (see IIF, 1999, regarding this episode).

The natural alternative to a voluntary liquidity-enhancing facility would be a contingent arrangement that worked out of coercion. Litan and Herring (1998) have suggested, for example, that borrowing countries should pass legislation contemplating a mandatory reduction ("hair-cut") of the principal of foreign-currency loans that are not rolled over in the event of a crisis. Creditors would not be prevented from leaving the country but would be penalized for doing so. The mere announcement that a country was considering such a move, however, would likely trigger a rush for the exits, so it is unlikely that any country would be willing to take the chance. At the very least, no country will want to be the first to pass such legislation for fear of sending the "wrong" signal to the market. Thus, the suggested "hair-cut" makes sense only as an emergency measure to be

[28] This is consistent with the view that the existence of international organizations is justified by their comparative advantage with respect to the market as monitors, not as lenders (Guitián, 1992; Rodrik, 1995).

applied once the crisis has already started. At that stage, however, partial solutions may not be sufficient and may even aggravate the panic.

A more extreme coercive measure—which does not suffer from this weakness, however—would be a moratorium on foreign payments. This possibility was envisaged after the Mexican crisis by the G–10 in its report on *The Resolution of Sovereign Liquidity Crises* (1996, p. i), which acknowledged that "a temporary suspension of debt payments by the debtor may be unavoidable as part of the process of crisis resolution and as a way of gaining time to put in place a credible adjustment program." This view has now been revived and developed by the G–22 Working Group in its report on *International Financial Crises* (1998, p. x):

> In some circumstances, a purely voluntary approach may be impractical. In particular, it might consume so much time that it would lead to an erosion of confidence that would be contrary to the collective interest of creditors and debtors in a cooperative and equitable workout. . . . In those extreme cases where a temporary suspension of payments cannot be avoided, experience indicates that a disorderly workout is against the interests of debtors, creditors and the international community.

With a view to facilitating the handling of such situations, both reports strongly recommend the introduction of contract clauses that would make it possible to coordinate the actions of bondholders, in particular through collective representation, majority voting, and sharing procedures. Both also call on the IMF to extend and perfect a practice initiated in the late 1980s, which consists in providing (limited) amounts of finance to countries that have been accumulating arrears toward their private creditors, ahead of an agreement with those creditors (the practice known as "lending into arrears").

When the idea was first put forward in 1996, it was not well received. Market participants quickly prepared a counterreport, published in September that year, which called the G–10 recommendations on moratoria and lending into arrears "misguided," on the ground that they would face enormous implementation problems and, if implemented, would fuel moral hazard with respect to debtors (IIF, 1996). Neither did the report appear to convince the IMF. The invitation to reflect on the matter went unheeded until January 1998, well after another string of crises had brought the issue forward. Even this late review ended on a rather skeptical note, on two grounds. First, the practice of lending into arrears had been attempted in situations in which the bulk of the creditors consisted of commercial banks. If bond contracts predominated, as was the case in Mexico in 1994, the IMF staff feared that the practice could engender disorderly reactions on the part of creditors. Here, there is an important distinction to be drawn between domestic and international bonds. A moratorium on domestic bonds need not give rise to significant litigation, because it would amount to interrupting the legal validity of outstanding claims—be they sovereign, nonsovereign, or both, depending on circumstances. International bonds, by contrast, are subject to the jurisdiction of the courts in the country where they are issued and normally contain comprehensive waivers of sovereign immunity, so that, in principle, the risk of litigation is not negligible. A further concern was that the international organizations' endorsement of a moratorium, whether implicit or explicit, would constitute such a significant departure from consolidated practice that it would risk triggering a chain reaction. Recently, the IMF has shown a more benign attitude toward moratoria.[29] However, the concern that an uncoordinated recourse to moratoria could lead to chaos has, if anything, been strengthened by the turmoil that followed the Russian resort to this option in August 1998.

Before discussing in greater detail whether moratoria can be made more orderly, or even avoided altogether, it is worth clearing up a misunderstanding that arose after the Mexican crisis and that seems to have lingered ever since. Moratoria neither are, nor are intended to be, an embryonic international bankruptcy system. Rather, they are a pragmatic option predicated precisely on the assumption that an international bankruptcy system is not feasible and perhaps not even desirable. As Eichengreen and Portes (1995, p. xvi) have aptly remarked:

> An international court or tribunal with powers analogous to those enjoyed by bankruptcy courts in the United States is a non-starter, given the very great legal obstacles to implementation. If such obstacles were to be surmounted, the desirability of such a procedure remains unclear. Even operating under a treaty, such an international court would be unlikely to possess the powers of a national court to enforce seizure of collateral, given sovereign immunity. It would not be able to replace the government of a country the way bankruptcy courts replace the management of firms. The danger of moral hazard would be great.

The heavy reliance on the terminology of bankruptcy in the G–10 report (1996)—which the drafters possibly borrowed from Jeffrey Sachs' (1995) earlier suggestion to create an international bankruptcy court—may have

[29] See, in particular, IMF (1998a), as well as the Managing Director's report to the October 1998 meeting of the Interim Committee. A cautious experiment with managed moratoria is now under way in Ukraine, where the IMF has implicitly made the suspension of payments to foreign bondholders a precondition for continuation of the program. See Charles Clover, "IMF Places Kiev in Default Dilemma," *Financial Times*, October 5, 1998, p. 2.

been an important factor behind the coldness with which the report's main recommendations were received. A better analogy to the report's proposal would arguably have been the practice—common in many countries before the advent of central banks—of suspending the convertibility of bank deposits in the presence of a run. The country in which this measure was adopted most frequently is the United States, where convertibility was suspended eight times before the establishment of the Federal Reserve System (Sprague, 1910). The suspension of convertibility was clearly a breach of contract to which banks resorted in order to stem depositors' uncoordinated runs to currency. Yet, although understandably causing public uproar, such action rarely caused much legal reaction.

With full information, suspension of convertibility would clearly be hard to justify. But information asymmetries are arguably a constituent feature of the financial environment, and there is every reason to believe that this problem becomes even more serious when countries are concerned. The risk of a run, moreover, is magnified in this case by the lack of a clear "liquidation" value for the individual country's assets. When these conditions prevail, it may be rational for investors to panic, acting on the basis of some noisy, but nonetheless meaningful, indicator. At the same time, the suspension of convertibility may be the rational course of action for the debtor, because the debtor, who by definition enjoys superior information, is thus afforded the time to signal to creditors that the continuation of the relationship may be mutually beneficial (Gorton, 1985).

There are a number of difficulties to be overcome, however, before the analogy can be considered an appropriate guide for action. First, in the case of banks, suspension allows creditors to discriminate better between "good" and "bad" banks; the presumption is that the latter will never resume convertibility and will be closed down. The decision of the sovereign, by contrast, is typically unilateral and may hide the intention not to address the structural problems that are likely to have triggered the run. If this is indeed the case, the risk of contagion will loom large. Second, after suspending convertibility, a bank can go about the rest of its business for a while without much external pressure, because as a financial intermediary, it does not need interim liquidity. This is clearly not the case with countries, which are typically brought to suspend external payments in situations where they still need foreign money to finance a budget or current-account deficit. Recourse to suspension therefore makes sense only if a source of interim finance can be found to keep the country afloat until full convertibility is restored. Third, it is not obvious to what extent the analogy can be extended to situations in which it is not a sovereign debtor that comes under pressure, but, rather, domestic corporations or banks.

Finally, the absence of extensive litigation in the nineteenth century when banks suspended convertibility is at least partly related to the attitude of the courts, which generally exercised a great amount of forbearance, thereby discouraging angry depositors from suing the banks. Such a smooth process can hardly be expected to prevail under current conditions. Resorting to sovereign suspension thus presupposes finding instruments to facilitate the resolution process. Each of these questions is examined below.

The IMF as a Confidence-Enhancing Mechanism

Before delving deep into the issue of moratoria, it is useful to recall some changes that have already taken place in the nature of the IMF's business. The institution was entrusted at Bretton Woods with a conceptually simple task: to protect the fixed-exchange-rate system through the provision of adjustment-smoothing finance. Article I(v) states that one of the fundamental purposes of the organization is "to give confidence to members by making the general resources . . . temporarily available . . . under adequate safeguards." Two points are worth emphasizing in this passage. "Confidence" is to be given to countries, not to their lenders, because capital mobility is expected to be restricted. And access to adjustment-smoothing finance will not come "cheap," because it will be made conditional on the existence of "adequate safeguards"—the origin of the notion of conditionality that was derived later.

This is basically the framework within which the IMF operated until the breakdown of the exchange-rate mechanism (ERM) in the early 1970s. With the switch to flexible exchange rates, the IMF's mission was somehow left hanging in the air. This inevitably entailed a certain loss of legitimacy, and "an accompanying perception of increased IMF obtrusiveness" (Guitián, 1992, p. 25). A legal fix was eventually found with the Jamaica amendment of the Articles of Agreement, which gave the IMF a new mission—that of administering the "code of conduct" laid out in the newly drafted Article IV, which stated the aim of "assuring orderly exchange arrangements and promoting a stable system of exchange rates."

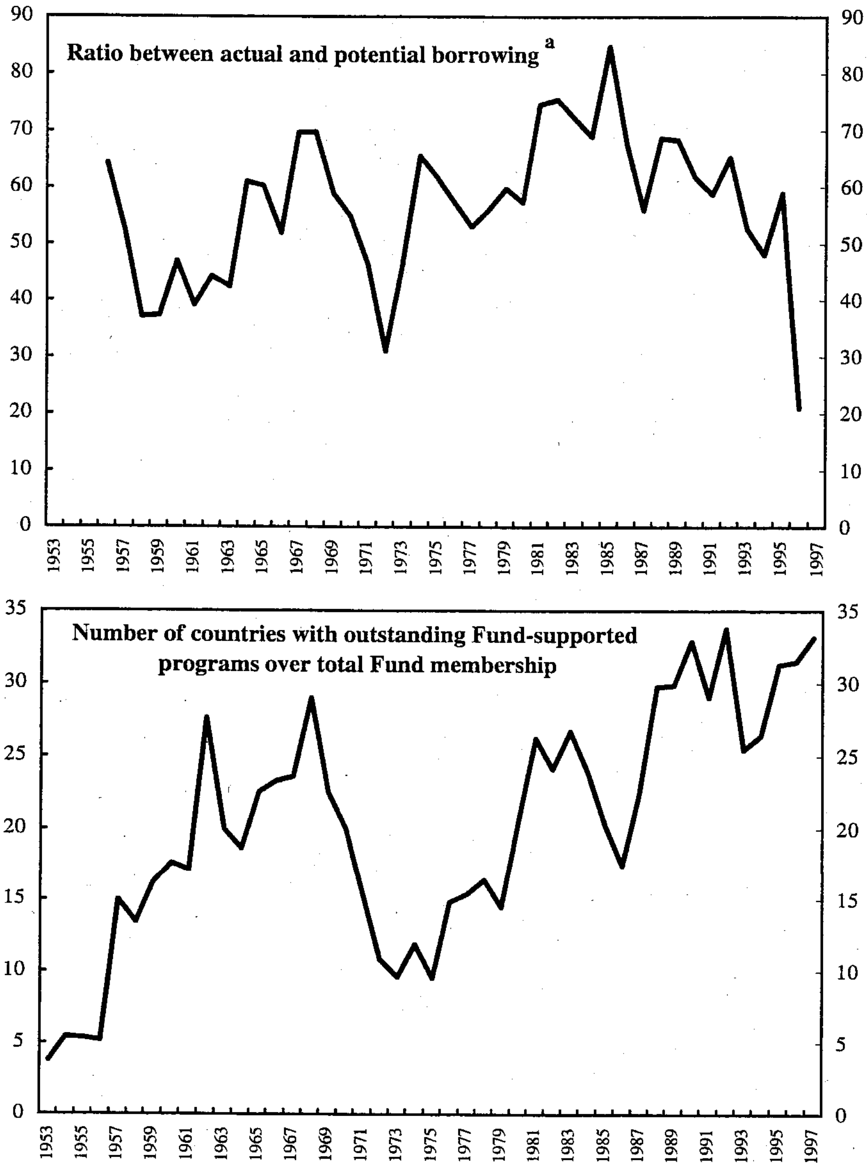
At first, this legal change meant little in terms of the way in which the IMF was perceived, especially in developing countries. In fact, the outbreak of the debt crisis in the early 1980s probably marked the lowest point of IMF popularity (James, 1996). Starting in the late 1980s, however, something changed. An increasing number of countries began to realize that in a world of increasing capital mobility, the IMF could play a useful role as provider of credibility, beside and even above the more traditional role of lender of resources. This change of attitude in the countries tapping the IMF is supported by three pieces of evidence. First, the share of net IMF credit relative to total net external financing to developing countries dropped from 4.5 percent during the 1980s to less than 1 percent in the period from 1990 to 1996. Second, there has been a rapid increase in recent years in the number of so-called precautionary programs, that is of programs undertaken without the immediate intention of drawing upon them. As of end-1996, about one-third of IMF programs under Standby and Extended Fund Facility arrangements fell into this category. Finally, although the ratio between actual and potential borrowing in all outstanding IMF arrangements—excluding off-track arrangements—has declined since the early 1980s and reached a historical low, the number of countries with an IMF program has risen to all-time peaks (Figure 5). The message of all this is fairly simple: the IMF stamp of approval has been used by an increasing number of countries to enhance the credibility of country authorities in association with adjustment programs predicated on the availability of private international finance. The IMF has gradually shifted, for a large part of its membership, from providing confidence to governments to providing confidence to the markets that are supplying the finance needed by the governments to make their policies succeed.[30]

As a result, the IMF has already developed the means, and to a large extent the skills, to sustain the credibility of member countries in adverse circumstances. This does not mean that it has played the role of credibility provider, or of confidence-enhancing mechanism, in the best possible way in all possible circumstances, and recent crises have certainly taught a number of lessons in this respect.[31] Nonetheless, that there is a growing demand for the credibility services of the IMF among its membership appears undeniable. The issue is whether and to what extent this demand

[30] There are striking similarities between these developments and those that marked the advent of the notion of central-bank independence. This idea, too, was "invented," in the 1920s, by creditors eager to protect their resources (mainly the restoration loans arranged by the League of Nations). This is why the independent central banks that were established at the instigation of the League of Nations came to be heavily resented in the borrowing countries, eventually proving, without exception, to be short-lived. Acceptance of the notion had to await the dismal inflationary experience of the 1970s, which effectively showed that an independent monetary authority could be in the country's—not the foreign creditors'—best interest. See Giannini (1995) for an account of the development of the notion of central-bank independence. On the relevance of the League of Nations' experience (and failures) for the subsequent design of the statute and practices of the IMF, see Pauly (1996).

[31] Another area in which there seems to be room for improvement is that of programs aimed at disinflation, for which the notion of a balance-of-payments need, traditionally the *raison d'être* of IMF programs, is inappropriate; see Cottarelli and Giannini (1998).

FIGURE 5
TRANSACTIONS OF THE INTERNATIONAL MONETARY FUND, 1955–1997
(In percent)



SOURCES: IMF, *Annual Reports*, 1955–1997, and transactions of the Fund, 1997.

[a] The outstanding amount borrowed from the Fund at the end of the program over the maximum that could have been borrowed, for all programs started in the reference year and concluded by December 31, 1997. The drop shown in 1996 may overstate the actual decline, because it reflects the more limited number of programs begun in 1996 and completed by 1997.

can be met to make the management of foreign-exchange crises a smoother process than it is at present.

A first line of attack to the problem could be to make access to IMF resources conditional on the compliance by borrowing countries with a set of regulatory requirements, as originally suggested by Charles Calomiris (1998) and subsequently elaborated by Stanley Fischer (1999). Compliance with these requirements would automatically make members eligible for unconditional liquidity support. According to this approach, the IMF would explicitly assume the role of lender of last resort, accommodating requests coming from qualifying member countries, on the basis of adequate collateral (presumably foreign reserves) and free of any policy conditionality. The underlying idea is that a country that meets sufficiently pervasive regulatory requirements and that can provide adequate collateral can be treated as being merely "illiquid." Policy conditionality would therefore be inappropriate.

This approach is clearly reminiscent of Bagehot's doctrine that a lender of last resort should lend freely only to illiquid debtors, at penalty rates, and on good collateral. As I have tried to show, however, Bagehot's view, perhaps appropriate when first expressed, is now misleading both in principle and in practice—essentially because the distinction between illiquidity and insolvency is a poor guide for action for banks, let alone when countries are concerned. The experience of industrial countries over the last two decades shows that compliance with rather general requirements (as the envisaged requirements must of necessity be) is no guarantee against the risk of either regulatory or macroeconomic failures. Moreover, past compliance will be no guarantee of future compliance, that is, after liquidity assistance has been provided, once the possibility of policy regime switches is conceded. Conversely, when the crisis erupts, it could prove socially desirable to provide liquidity assistance even to countries that have failed to meet the prescribed requirements *ex ante*.

But suppose the set of requirements could be made so comprehensive and detailed as to rule out insolvency problems. Once a country has been admitted into the list of eligible borrowers, will the threat of expulsion for a subsequent regulatory failure be credible? No domestic lender of last resort has ever announced publicly that it would not support a given institution because it failed to comply with supervisory standards. Can that be expected of an international organization even if it risks precipitating an otherwise avoidable crisis, taking into account that international organizations typically enjoy less technical discretion than do well-established national central banks?

In such circumstances, the risk is great that the attempt to preselect countries eligible for public liquidity support might increase the level of moral hazard in the system, the more so because it somewhat dampens the incentive of creditor countries to control the risk taken internationally by their own financial institutions.

A less ambitious, but more promising, way to manage the problem can be labeled the "carrot and stick" solution. The "carrot" would consist of a conscious attempt on the part of authorities to buttress voluntary anticrisis arrangements so as to make resort to a moratorium unnecessary, or at least more remote, in the face of foreign-exchange turbulence. As discussed above, these arrangements currently suffer from three important weaknesses: (1) their size seems too small to allow the borrowing country to offset the outflow of capital generated by a confidence crisis; (2) they seem unlikely to withstand significant foreign-exchange pressures; and (3) they are automatic and therefore might lead the government to postpone adjustment. The first two weaknesses might be overcome by changing the incentive structure under which the participating banks operate. This could be done in many ways. One option has recently been attempted by the World Bank, which on November 10, 1998, approved a $500 million Special Repurchase Facility Support Loan in favor of Argentina. The purpose of the loan was to assure banks participating in the Argentine contingent facility that, if the price of the collateral fell by more than 5 percent, the central bank would have an additional source of funding to meet the relative margin call. The main drawback of this solution is that it amounts to a hidden subsidy in favor of private creditors, whose freedom of maneuver, including the possibility of hedging their exposure, is otherwise left unaffected.

A more transparent way of encouraging private creditors would arguably be for the IMF and the World Bank to condition access to their emergency facilities to the existence of a private contingent facility—or in a less extreme approach, to link the terms of their emergency financing—if necessary waiving their *de facto* superior seniority in favor of private creditors participating in the scheme. The principle that an insolvent firm can raise new financing that is senior to outstanding debt, subject to the agreement of the court, forms an integral part of the bankruptcy code of most developed countries. Moreover, the waiving of seniority finds an analogy in the domestic context in the provision by central banks of uncollateralized liquidity in exceptional circumstances. Something similar would happen if option-like agreements of the kind being tried in Argentina and Mexico were explicitly linked to contingent-credit lines provided directly by, for instance, the IMF itself. If this were the case, private creditors would be encouraged to enter into the private contingent line, because they would know that whatever drawing the country effected would be based on a *pari passu* clause with the IMF, and that, analogously, whatever repayments were made would be shared with the IMF on a *pro rata* basis.

Both options can at first glance seem to contravene the "adequate-safeguards" principle set forth in the Articles of Agreement, all the more so because the guarantee provided to private creditors, either explicitly or in the form of higher seniority, inevitably involves some risk of moral hazard. This need not be the case, however, if contingent-credit lines are linked to an IMF program featuring the appropriate degree of conditionality. Such an association also appears desirable to cure private credit lines of their second weakness, a bias in favor of financing to the detriment of adjustment. Combining conditionality with the provision of incentives aimed at encouraging private creditors into a more cooperative stance might very well reduce moral hazard, compared with the situation today, by rendering less real the prospect of a moratorium, which is arguably the most risky option from this perspective.[32]

The alternative to the "carrot" is obviously the "stick." The stick would consist of a more or less explicit endorsement by the international community of a country's recourse to a temporary moratorium, along the lines envisaged in both the G–10 (1996) and G–22 (1998) reports. In a more extreme version, the declaration of a moratorium could be made a condition for accessing IMF resources, an option that neither of these reports contemplates explicitly. Whatever form it might take, this option presupposes that the IMF, and perhaps other international financial institutions as well, will be willing to use lending into arrears, because moratoria do not eliminate the need for a lender of last resort; they only reduce the scope of its responsibilities.

Unlike traditional lending of last resort, however, lending into arrears tends to run against the creditors' immediate interests by giving the distressed country the means to afford, so to speak, a moratorium. It is thus confrontational in a way that traditional lending of last resort has never been. It consequently raises the issue of its impact on creditors'

[32] A similar view has recently been put forward by Goldstein (1998), who argues that recourse to moratoria could significantly reduce moral hazard by setting a higher systemic-risk threshold before the international community intervenes. It should be noted, however, that existing option-like arrangements give creditors the power to suspend the facility in case of sovereign default. Thus, the absence of a moratorium is a necessary condition for the facility to work.

litigiousness, on the program's chances of success and, ultimately, on the IMF's resources. The risk is that aggressive litigation on the part of creditors, involving extensive seizure of assets, could effectively prevent balance-of-payments adjustment and thus derail the whole program.

When lending into arrears took its present form, in the late 1980s, litigation did not prove to be a major problem. Creditors generally did not resort to legal remedies, and a number of agreements were reached within a reasonably short time after the IMF's announcement that it would support a debtor, notwithstanding its arrears. The creditors at the time, however, were primarily commercial banks, and national central banks played an important role behind the scenes in encouraging them to accept a cooperative settlement. Such forbearance cannot be expected of all creditors—certainly not of bondholders in general. Indeed, investment-fund managers and other similar financial agents are likely to have a fiduciary obligation to customers to make the most of their holdings of distressed securities.

The risk that the declaration of a moratorium could be followed by prolonged and heated litigation is therefore a serious one, even though its precise contours will depend on the circumstances. The assets of a sovereign debtor are not easily attached, unless they are held abroad and the sovereign has waived its immunity as part of an international bond issue. But waiving sovereign immunity has become common practice in several important financial centers (Eichengreen and Portes, 1995). As to nonsovereign debtors, the declaration of a moratorium on their debt amounts to a suspension of the country's bankruptcy law. Consequently, foreign creditors would not be able to have recourse to the national courts. They would, however, be able to attach assets located in foreign jurisdictions, and one can easily imagine the emergence of "vulture" intermediaries specialized in buying cheap distressed debt and then suing the issuer for the face value.[33] A worst-case scenario would also need to contemplate the possibility that the IMF, having endorsed the moratorium, or even made it a condition for initiating a program, might be dragged into the litigation.

These risks could be averted only if the international community had a legal means of temporarily suspending not only the country's foreign

[33] See Miller and Zhang (1997) for a formal analysis of the impact on the valuation of sovereign debt of the existence of "vulture" firms of this kind. The risk associated with disorderly moratoria is well epitomized by the decision of the U.K. courts to accede to Lehman Brothers' request to seize the U.K. bank accounts of Inkombank, Russia's second largest depository institution, in the aftermath of the Russian moratorium.

payments, but also the creditors' legal rights. As the word "stick" suggests, a certain amount of coercion is indispensable to make this solution feasible. But how is such coercion to be legitimized? The obvious place to look is in the IMF's Articles of Agreement. As mentioned above, Article VI.1(a) empowers the IMF to require that a member impose controls on the outflow of capital as a condition for the use of its resources. In turn, Article VIII.2(b) states that "exchange contracts which involve the currency of any member and which are contrary to the exchange control regulations of that member maintained or imposed consistently with this Agreement shall be unenforceable in the territories of any member."

Invoking Article VIII in its present form to justify a moratorium, however, would require some measure of creative textual interpretation. The IMF board could say that the expression "exchange contracts" is to be interpreted as encompassing credit agreements. Interpreted this way, Article VIII would make claims arising from sovereign default temporarily unenforceable following a decision by the board. It is debatable whether this would really settle the matter, however. Rule bending may be acceptable in dealing with sovereign entities that find the expanded interpretation in their own interest, but it can hardly be expected to hold when it involves private creditors who might take their case to a perhaps unsympathetic national court. Thus, if moratoria are to be added as an international tool for dealing with foreign-exchange crises, changing the language in Article VIII appears highly advisable. This change could be made in the context of a general revision of the IMF's mandate as regards the capital account. By giving the IMF responsibility for fostering capital mobility, a clear signal would be sent to the financial markets that they are seen to perform an important function both in allocating resources worldwide and in disciplining domestic economic policies. At the same time, by explicitly contemplating moratoria as a policy tool, to be used only as an *ultima ratio* expedient, and in the context of a strong adjustment effort, the authorities would make it clear that there is no reason to believe that international financial markets are immune from the imperfections that have prompted the development of an extensive regulatory framework at home. To reduce moral hazard on the debtor side, appropriate language could be found to convey to member countries that activation of lending into arrears would be tied to each member's past surveillance record and, in particular, to the degree of compliance with the code of conduct set forth in the Articles of Agreement, including the steps to be taken in the process of capital-account liberalization. This would arguably encourage members to follow sound economic policies, possibly with the help of an IMF program, even when they do not need resources for immediate balance-of-payments purposes, thereby strengthening the credibility of the IMF as a confidence-enhancing mechanism. Within this strategy, surveillance would increasingly acquire the function supervision already has in a domestic context—that of allowing the lender of last resort to evaluate the good will of the distressed debtor and to decide accordingly which of the instruments at its disposal to use.

5 Conclusion

Well-functioning financial markets are conducive to a more efficient allocation of resources, greater risk diversification and, through their continuous monitoring of governments' actions, better economic policies. Unfettered financial markets are unlikely to deliver these goods, however, mainly because of informational imperfections. Thus, a certain amount of government intervention is a precondition for financial markets to work effectively. This, in essence, was the discovery made, through painful experience, at the national level in the first decades of this century. It led to a three-pronged response comprising *ex ante* measures (regulation and supervision), a crisis-management structure (built around the lender-of-last-resort concept) and *ex post* arrangements meant to facilitate the liquidation of insolvent financial firms.

The globalization of capital has left no alternative to facing the issue of how financial markets' malfunctionings can be better prevented, and their consequences more effectively contained, at the international level. With *ex ante* and *ex post* measures being relatively underdeveloped beyond national borders and slow to adapt, the challenge has mainly been met by extending the coverage of lender-of-last-resort operations in response to a number of unprecedented financial crises.

This has been achieved by invoking Bagehot's dictum that a lender of last resort should "lend freely to illiquid but fundamentally solvent institutions, at penalty rates and on good collateral." Bagehot's doctrine, however, is a poor description of current national practices. What makes lending of last resort effective at the national level is neither the distinction between illiquidity and insolvency nor reliance on the provision of unlimited penalty-rate liquidity. Rather, it is constructive ambiguity, a complex notion the main components of which are uncertainty as to whether liquidity support will be forthcoming, discretion regarding the conditions attached, pervasive *ex ante* supervision, and extensive enforcement powers.

As discussed in the introduction, replicating constructive ambiguity at the international level is no easy task. The ultimate risk is that of increasing politicization, with resources ultimately being used to serve the interest of the stronger members, rather than the collective interest. As a consequence, it could prove difficult in the long run for the crisis manager to sustain its legitimacy. Another problem is related to the fact that, when dealing with sovereign countries, the risk of policy reversals following last-resort lending cannot be disregarded, because the lender of last resort has limited enforcement powers. As a result, it will have to ration its liquidity support and rely on the continuous collaboration of the debtor. Finally, although a national lender of last resort has, through the special body of legislation regulating the banking business, at least some control over the legal claims of the ultimate creditors—that is, the depositors—international creditors are largely beyond the reach of international organizations. To contain moral hazard on the creditor side, the crisis manager will therefore need to rely on the cooperation of the authorities located in creditor countries, over whose behavior, however, it cannot be expected to have much leverage.

Any satisfactory solution to the problem of coping with international financial crises should face these difficulties squarely, for shortcuts are unlikely to constitute a lasting improvement upon present arrangements. Although regional lending of last resort and concerted lending could, in principle, provide alternatives to a universal, and centralized, lender of last resort, both suffer from important weaknesses in the present context. In a world of globalized financial markets, regional lending of last resort exposes the entire system to regulatory failures in one or more regions. Concerted lending, for its part, appears incompatible with the highly competitive climate of today's world financial markets and is therefore likely to prove infeasible in most circumstances.

A number of far-reaching proposals to address the problem have recently appeared in the literature. They range from the suggestion of Calomiris (1998), Sachs (1995), and Fischer (1998) that the IMF should be transformed into a full-fledged lender of last resort, willing to provide unconditional liquidity to countries satisfying certain criteria *ex ante*, to Schwartz's (1998) argument that it is now time to abolish the IMF altogether and let the market work. I have argued, in this essay, against such grand reform plans, because they seem to me to contradict what is perhaps the most interesting contribution of recent reflection on the theory and history of institutions—namely, that successful institutional adaptation tends to take place *at the margin*, rather than by quantum jumps. Somewhat more specifically, the attempt to transform the IMF into a Bagehotian lender of last resort would risk fueling moral hazard beyond acceptable limits, given the peculiarities of the international environment. Suppressing it, by contrast, would probably pave the way, given the inherent instability of financial markets, for a new wave of financial and commercial protectionism, the evil Sir John Hicks (1967) evokes in the passage preceding this essay.

I have therefore proposed a more modest, but given existing constraints, more practical agenda, including both a carrot and a stick. This plan would give priority to efforts to sustain and encourage contingent liquidity facilities in which the private sector would take an important stake (the carrot), while improving existing work-out arrangements to make moratoria at once a more concrete and a less disorderly option (the stick). This strategy, although forcing international investors to embody the risk of sovereign default within the terms they charge their foreign customers, would leave open the possibility of a lender-of-last-resort role for the IMF. Under "carrot," it would take the form of conditional financing advanced through the Supplemental Reserve Facility in connection with drawdowns on contingent-credit lines previously negotiated by the borrowing country with international private banks. Under "stick," it would take the form of so-called lending into arrears, along the lines first envisaged by the G–10 (1996) and now endorsed by the G–22 (1998). This suggested approach also appears consistent with the tendency over the past twenty years to enhance the role of the IMF as a "signaling," or confidence-enhancing, device and simultaneously to downplay its role as lender, although this role remains of crucial importance for countries whose access to capital markets is still limited or nil.

A strategy that attaches greater weight to the possibility of temporary moratoria would not necessarily be unfriendly to the market. It would clearly not be unfriendly, for instance, if moratoria were credibly circumscribed to being a last-resort measure, to be used to facilitate creditors' coordination only when all other options had failed (including private contingent facilities backed in part by the public sector), and to the extent that the country concerned was making a strong effort to adjust. To this end, however, a change in the fundamental charter governing international monetary relations—the IMF Articles of Agreement—seems highly advisable for two reasons. First, endorsing moratoria without simultaneously asserting that a reasonable degree of freedom in the allocation of capital worldwide represents one of the fundamental aims pursued by the international community would encourage member countries to reverse whatever progress they had made toward capital-account liberalization, and even to contemplate a return to the Bretton Woods regime of all-encompassing capital controls. Second, the handling of moratoria, without amending the Articles to legitimize a suspension of creditor rights in the presence of goodwill efforts at adjustment, could very well trigger a disorderly process and even risk dragging the IMF and possibly other international financial organizations into legal disputes. I have accordingly suggested that the possibility of temporary moratoria be made explicit through a change of language in Article VIII, to be made in the context of a broader revision of the Articles aimed at giving the IMF responsibility for encouraging appropriately sequenced, but nonetheless extensive, capital-account liberalization.

Some see little prospect of amending the Articles of Agreement in this way. This was clearly the view of the G–22, which dismissed the possibility as politically infeasible, and among academics as well. Eichengreen (1998), for example, has suggested that national legislations concerning sovereign immunities should be amended to make it easier for countries to resort unilaterally to temporary moratoria. It is not clear, however, why the countries in which the main financial centers are located, notably the United States and United Kingdom, should find it politically more palatable to grant a blanket immunity to sovereign debtors (which, moreover, have voluntarily chosen to waive it in order to attract foreign finance) than to accept a coordinated, and overall more creditor-friendly, international mechanism to deal with sovereign arrears. More generally, if the relatively modest move of changing Article VIII should really prove infeasible, it is hard to see how the far more ambitious goal of establishing a moral-hazard-free lender of last resort at the world level could ever be achieved.

It may be worth emphasizing that redefining the role of the IMF along the lines suggested above need not imply ruling out international bailouts altogether. Indeed, in certain circumstances, helping a country through a foreign-exchange crisis might be highly desirable, economic objections notwithstanding. It would appear advisable, however, in keeping with national practices, to leave responsibility for politically motivated rescues to governments, so as to protect both the legitimacy and the resources of the technical agencies placed at the center of the international monetary system. This was the choice made by the Bretton Woods architects, and in retrospect, it does not appear to have been unwise.

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