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Improving the World's Financial Architecture. The Role of the IMF

by Horst Siebert

CONTENTS

- The IMF must change its sanction and incentive systems so that the next crisis is more likely to be prevented. It should concentrate more on *ex ante* prevention, which can be done by clearly specifying the rules that will be applied *ex post*. It should also rely more on automatic mechanisms that operate through the market in order to get to the roots of a potential crisis.
- Ex post, i.e., when a currency crisis has already occurred, the IMF can only play a limited role in mitigating the crisis. The IMF cannot play the same role for sovereign creditors as national institutions do in the case of illiquidity of domestic banks and firms. It cannot take over the role of a bankruptcy court judge.

The IMF cannot credibly play the role of a lender of last resort. First, the lender of last resort lends to financial institutions, while the IMF lends to national governments when they run into trouble. Second, the national lender of last resort can print money and can thus credibly stop a crisis. For the IMF, this is not possible. Therefore, the central banks will have to play the role of a lender of last resort in a coordinated action if a systemic crisis for the world economy develops. The IMF is involved only initially, somewhat easing the task of the true lender of last resort, the central banks.
- Ex post, the crisis has to be mitigated in such a way that dealing with the crisis does not generate processes and behavior that give rise to the next currency crisis. The IMF should avoid setting wrong incentives.
 - The IMF should not make up for national political mistakes and national institutional deficiencies.
 - The IMF should change its policy and not implicitly defend a pegged exchange rate.
 - The IMF should stop lending to countries that are in arrears to private creditors and bondholders (sovereign arrears) and should return to its previous policy.
 - The IMF should rule out credits to sovereign debtors if the government of a country takes over guarantees for nonperforming private loans, thus socializing private default risks.
 - The IMF should think about scaling down its level of operations. This recommendation is in stark contrast to the somewhat expansionist doctrine now being propagated by the IMF.
- Ex ante, some new rules should be established. In analogy to the “polluter-pays principle” of environmental economics, a “troublemaker-pays principle” should be used. This would hopefully internalize the social costs caused by countries behaving in a manner that generates instability and adds to the risk of a systemic crisis.
 - The IMF should improve its early warning system, create more transparency, and provide more information, including high-frequency debt-monitoring systems. The international community should intensify discussions on standards that countries would have to follow.
 - The IMF should specify the sanctions to be levied when standards are not respected. A penalty rate should be charged if additional credit is provided. Requiring collateral would also be a strong incentive to sovereign borrowers to build up assets.
 - The IMF should define the policy it would pursue in the case of a crisis more credibly. It should move away from the discretionary decisions of its case-by-case approach (favored by US pragmatism) and bind itself by rules (favored by the Europeans).
- One way to improve credibility of IMF policy would be to rely more on automatic mechanisms that internalize the external effects of national instability behavior. Thus, the IMF should not be a silent supervisor who deliberates behind closed doors. It is better to blow the whistle and apply the brakes before the train crashes.

Involving the private sector in the case of a crisis is an important means of internalizing the social costs of instability. In contrast to the mostly used American-style bonds, British-style trustee deed bonds are more appropriate to manage crises as they include sharing clauses and majority rules.

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Improving the World's Financial Architecture. The Role of the IMF

1. The IMF has not prevented the Asian crisis, it has not prevented the Brazilian crisis, not to speak of the Russian crisis. What can be done that the IMF will prevent the next crisis? Of course, it is an illusion that we can rule out financial crises in the future. Therefore, the question must be more modest. What can be done to mitigate the effects of a crisis once it breaks out, and what can be done to make a crisis less likely?

2. A first major issue is what type of crisis should be the IMF's concern? In today's world, the dominant problem is a systemic crisis, i.e., a crisis that is about to spread from one country to another and that is likely to affect the global financial system as a whole or a large part of it. This type of crisis should be the IMF's primary concern. In contrast, it must be questioned whether a purely national economic policy problem, which is not systemic, should be of concern to the IMF. Moreover, to shield a country in trouble against the negative long-term impact of a crisis is not of primary interest in a systemic crisis; the main task is to stop the systemic crisis although this should be done with minimum negative impact. Admittedly, it is difficult to distinguish a systemic from a nonsystemic crisis and to determine the extent to which a crisis is threatening to spread to other countries, that is, whether contagion is imminent. The countries are closely linked today, but it is simplistic to say that any threatening national default is already a systemic crisis.

Furthermore, the main concern to the IMF should be a currency run and not just any financial crisis; other types of financial crises, such as a stock market slump, should only be relevant to the IMF in that they lead to a currency run. Again, delineating a currency run from other types of financial crises is difficult. Moreover, a precondition for IMF intervention is a liquidity crisis, i.e., countries being illiquid. If a country is not solvent and if an economic situation is not sustainable, the IMF should not provide credits anyhow. Apparently, it is difficult

to determine whether illiquidity or insolvency is at the heart of the problem.¹

The IMF's dilemma stems from the very fact that it is difficult to define a systemic crisis and that the IMF, de facto, lends to governments in trouble. In this more-down-to-earth role of IMF's lending to troubled governments,² the so-to-say "ideal" case is when financing is needed because there is a temporary negative external shock that will eventually go away, but that is causing problems in the interim period. In the days of Bretton Woods, this was the traditional balance of payments crisis that arose from a widening trade deficit, due, for instance, to temporarily unfavorable terms of trade. Today, it is a currency crisis triggered by a sudden capital flow reversal, reflecting some fundamental disequilibrium in the economy, i.e., a situation that is not sustainable. Unfortunately, in the real world the external shock may prove to be permanent instead of transitory so that there was no reason for interim financing in the first place. Even more unfortunately, the crisis may very well be homemade, i.e., it may be the result of a domestic institutional failure or of a national policy failure. As a matter of fact, all the financial crises of the nineties have domestic causes with homemade failures or weaknesses becoming apparent under changing international conditions. Thus, the IMF is very close to national policy failure. It should be careful not to become a funding agency for countries in self-made trouble, that is the troubled countries' global bank.

3. A second major issue concerning the role of the IMF is what has to be done *ex post* once the currency crisis is there and what should be

¹ It has been pointed out that the Diamond-Dybvig (1983) bank run model, in which illiquidity turns into insolvency as a result of the run and ensuing fire-sales of bank assets, does not portray reality, and that historically it has been insolvency that caused bank runs (Folkerts-Landau and Garber 1999).

² Compare Article 1 Section v of the Articles of Agreement of the International Monetary Fund: "To give confidence to members ... providing them with the opportunity to correct maladjustments in their balance of payments"

done *ex ante* to prevent a crisis. My proposition is fourfold:

- (i) *Ex post*, when the currency crisis is there, the IMF can only play a limited role in mitigating the crisis. The IMF cannot play the same role for sovereign creditors as national institutions do in the case of illiquidity of domestic banks and firms. It cannot take over the role of a bankruptcy court judge. It also cannot play the role of a lender of last resort.
- (ii) *Ex post*, the crisis has to be mitigated in such a way that dealing with the crisis does not generate processes and behavior that give rise to the next currency crisis. The IMF should avoid setting wrong incentives.
- (iii) *Ex ante*, all possible steps should be taken to prevent a national (not yet systemic) crisis from arising so that it cannot feed a systemic crisis. The IMF should revise its rule system to internalize the social costs of instability behavior of countries.
- (iv) Automatic mechanisms rather than discretionary decisions should play a more important role in allocating the risks of instability behavior of countries to the countries that cause the risks.

I. Dealing with Global Systemic Risk once It Is There — The Limits of the Ex Post Approach

4. Once a systemic currency crisis has already occurred, or if a currency crisis is about to break out or if a currency run problem is about to spread in a process of contagion, it would be the role of the IMF in an idealized world to step in and stop the currency run. However, this simple statement is subject to many qualifications.

5. The IMF has only limited power to stop a systemic crisis, and this is likely to remain so. Using the analogy to national bank regulation (which in some countries is the responsibility of the central bank, in others of an independent institution), the IMF does not have similar powers vis-à-vis its partners, the sovereign national

governments. Using the analogy to national bankruptcy laws, the IMF does not have the legal powers of a national bankruptcy court judge (Sachs 1994, 1997; Minton-Beddoes 1995), who can impose a standstill and stop the run of creditors on a firm's assets, impose a solution for the creditors, and make sure that sufficient incentives exist to provide working capital. Projecting these national approaches to the global level, a moratorium would have to be declared, existing debt would have to be restructured, and working capital would have to be made available.³ Fresh working capital would have priority over obligations to previous creditors. Such institutional mechanisms do not exist internationally, and it is realistic to assume that analogous institutional arrangements of the same caliber will not be around for quite some time.

The IMF has circumvented this institutional void by implementing *ex post* conditionality. This is an attempt to enforce restraints on a country's government and thus to change its economic policy. This approach raises the question of what the basis of legitimacy is for the IMF to be a disciplinarian or taskmaster of national economic policy, for instance, when a small team of country experts can specify important aspects of national politics, as was done, for instance, in the program for Korea (Feldstein 1998; Sachs 1997), where even the false conditionality was imposed.⁴ In defining the role of the IMF, a line must be drawn somewhere, which prevents the IMF from becoming the chief controller of national economic policy.

6. The IMF cannot credibly play the role of a lender of last resort.⁵ There are three major differences between the IMF and the national

3 This would be different from the involuntary lending arrangements following outright sovereign defaults of developing countries in the 1980s; this approach has been ineffective in attracting fresh money.

4 It now seems to be agreed in the literature that, for instance in Korea, conditionality on fiscal policy and on structural reforms was too tight. It is still being debated whether conditionality on monetary policy to keep the interest rate high in order to avoid further devaluation of the won was justified (Ito 1999; Radelet and Sachs 1999).

5 On lender of last resort, see Claassen (1985) and Fischer (1999).

lender of last resort besides the lack of institutional system for bankruptcies of sovereign states, including the lack of international procedures for a restructuring of the national financial sector in the case of illiquidity. *First*, the lender of last resort lends to financial institutions, while the IMF lends to national governments when they run into trouble or threaten to default. *Second*, in the international context an insurance mechanism between banks such as national insurance schemes in the case of bank failures does not exist. *Third*, the national lender of last resort can print money and can thus credibly stop a crisis. For the IMF, this is not possible. On the contrary, the IMF has only a limited amount of resources. The usable IMF resources of about \$113 billion (April 1999)⁶ would be a trickle if an extended crisis developed, for instance, if Japan or Euroland needed financial assistance or if a group of countries that are more important than the past problem countries became involved in a financial crisis.⁷ In addition, weak currencies are not usable for lending. Therefore, the IMF could even accentuate a currency problem if it ran out of funds. This would be a destabilizing function because of “bets” of financial markets on IMF budget constraints.⁸

7. If a systemic crisis for the world economy develops, the central banks will have to play the role of a lender of last resort in a coordinated action. The IMF should not have any function that could affect the world’s money supply. If it had, it would interfere with the role of central

banks.⁹ This would violate the assignment of policy areas to institutions. In this assignment, institutions are responsible for these policy areas and policy targets for which policy instruments have been assigned to them.¹⁰

It seems that the IMF is only involved in the pre-battle ground of the lender of last resort, somewhat easing the task of the true lender of last resort, the central banks. Borrowing an expression from chess, in the lender-of-last-resort game the IMF is the pawn, the central bank is the king.

8. In the main function of the IMF to stop a run problem, intricate psychological aspects have to be taken into account. It has been claimed that the IMF’s initial response to the Asian crisis added to the uncertainty and exacerbated the crisis (Radelet and Sachs 1999). An important corollary of IMF success is that in the case of a crisis or an imminent crisis the IMF keeps things calm and does not give signals that something worse could eventually happen.¹¹ The IMF should take care not to make lenders more nervous and induce them to move out more quickly. This means that the IMF must not destabilize the economic situation in a country by its own actions. This is especially relevant, since the IMF lacks the institutional backing of a national bankruptcy court judge, a national insurance scheme, or a national lender of last resort.

⁶ Net uncommitted usable resources: \$77 billion; balances available under the General Agreement to Borrow and the New Arrangement to Borrow: \$46 billion.

⁷ To illustrate the relative volume of IMF resources, world trade is at about \$5 trillion per year, total imports of developing countries are \$1.8 trillion (IMF 1997), total external debt of low- and middle-income countries is at \$2.1 trillion (World Bank 1997), international claims by reporting banks outside the reporting region are at \$1.1 trillion (BIS 1998), problematic credits of the Japanese banking system in 1998 are estimated to run as high as \$0.6 trillion according to press reports.

⁸ Compare with the destabilizing function of resource buffer stocks.

⁹ There are good reasons why the institutional arrangement for a lender of last resort by the central banks cannot be put into writing and why there has to be some constructive ambiguity. It has to be left open whether and under what conditions central banks will step in. If the conditions were specified *ex ante* and if they became known, an uncontrollable moral hazard problem would develop where market participants and governments would play strategically against the central banks.

¹⁰ Thus, the IMF should make sure that it does not lend *de facto* to private financial institutions via national governments.

¹¹ This does not contradict the recommendation (see below) that the IMF should provide information before a crisis develops.

II. Avoiding Wrong IMF Incentives

9. The IMF should be more aware of what can be done to prevent a crisis from developing. A currency crisis arises when market participants lose confidence in a currency, i.e., in the money of a country relative to other monies, and when they move out of it. An economic situation and the exchange rate are judged to be unsustainable; and what is not unsustainable is vulnerable. The root of this evaluation is that a fundamental disequilibrium or an imbalance exists that has to be corrected. Possible causes for this are that

- the money supply has expanded excessively so that there is an oversupply of the national money and devaluation is unavoidable,
- financing a current account deficit for private or government consumption has driven up foreign debt, so that the intertemporal mechanics mandates some adjustment,
- financing long-term private investment by short-term foreign capital eventually runs into problems, especially if overcapacity and external shocks make the investments more risky.

In these and other cases, the currency crisis is rooted in a policy failure, especially in a deficiency of the institutional arrangements of the economy such as the misuse of monetary policy to finance public deficits, lacking independence of the central bank, unsustainable exchange rate binding, nonexistent rules to prevent public deficits and the accumulation of public debt, and insufficient strength of the financial sector due to ineffective regulation that does not prevent short-term financing of private long-term investment.

10. Following the argument that crisis prevention has to start with the prevention of root causes of a crisis, a major line of attack must be to correct the political failures and to improve the deficient institutional setup. Countries have to commit themselves to internationally accepted standards. These norms relate to prudential standards for banks and other financial institutions, to guidelines for monetary expansion (linking it at least in some measure to the

growth of the production potential), and to limits for public deficits and public debt.

11. By lending to national governments, with most crises being homemade and being the result of a national institutional or a policy failure, the issue arises as to what extent the IMF sets the wrong incentives, so that governments (and lenders) tend to rely on future IMF help and become negligent in their own efforts to prevent vulnerability. Since the IMF itself is subject to political pressure, then there is the risk of becoming an international correction agency for national government failure.

This problem of wrong incentives, also discussed under the heading of moral hazard, is a complex issue (Hayek 1973). Thus, wrong incentives and moral hazard do not necessarily mean an explicit calculus to take advantage of IMF support in the future in the form of opportunistic behavior. However, potential IMF support may be in the back of the heads of economic agents; more formally, with IMF support a side condition of decision making changes, thus influencing behavior more or less implicitly. Countries or creditors may feel protected against low probability-high damage risk in the tails of the probability distribution. The impact of institutional arrangements on incentives and the real economy is difficult to prove, especially econometrically, because the effects show up in a long-run process, very often with not too much short-run movement in the data. In addition, there is the question what would have happened under different institutional arrangements (“Lucas critique”, Lucas 1981).¹² Nevertheless, there is so doubt that institutions matter and have an impact on economic behavior and processes. Examples are the erosion in the efficiency of central planning systems, as predicted by Hayek (1973), and the effect of labor market rules and social security systems in Europe on the demand for labor.

The IMF should not make up for national political mistakes and national institutional de-

¹² It can be argued that IMF intervention in Mexico has prevented a larger rise in emerging market bond spreads and has contributed to a remarkable reduction in the spread from spring 1995 to December 1997 (see Mussa et al. 1999: Figure 3).

ficiencies. If it did, and sometimes it does, it would honor economic policy mistakes and it would thus be likely to induce new ones in the future, generating a *perpetuum mobile* in which the causes for the next crisis are laid down. A case in point is the IMF's role in Russia, where the IMF failed to implement conditionality and where it seems to be trying to iron out internal problems without being able to change the fundamental economic situation.

12. The IMF should change its policy and not implicitly defend a pegged exchange rate (Rubin 1999). It should be a specific rule that the IMF does not intervene and defend a pegged exchange rate when the money supply has increased excessively and when the nominal and the real rate have been drifting apart markedly for some time (a year or more) while the current account deficit has been worsening.^{13,14} On the contrary, this should be a signal that the IMF will not provide funds.

13. The IMF should stop lending to countries that are in arrears to private creditors and bondholders (sovereign arrears) and return to its previous policy.¹⁵ This change of policy, which should be credibly announced, is a necessary step in order to involve the private sector (see below). This means that if a country cannot pay its debt, the debt titles (bonds) and credits should be devalued so that the private sector takes the risks. Admittedly, a default means that it will be much more difficult for a country to find access to the international capital market again. But this is a burden that the country has to bear itself.

14. The IMF should rule out credits to sovereign debtors when the government of a country

takes over guarantees for nonperforming private loans, thus socializing private default risks. A minimum condition is that the government has applied bankruptcy proceedings to the firms and banks in trouble and that the proceedings satisfied international standards.

15. The new IMF facility, the Contingent Credit Line, which is supposed to prevent contagion spreading to member countries with solid economic policy, raises new risks, one being that the country applying for the credit line may signal to the markets that a problem exists. Moreover, the IMF accentuates the problem if it withdraws this facility once the country's policy deteriorates in the course of time. Then, this new facility may turn out to aggravate a crisis. Furthermore, the credit line may be seen as a guarantee which may lead to less careful behavior (Golder 1999). It seems that this new facility is moving the IMF in the wrong direction. Care must be taken that this facility is not used to implicitly defend an overvalued exchange rate.¹⁶

16. With respect to wrong incentives we must raise the question what the optimal size of IMF operations for individual countries is (Siebert 1998). It is obvious that with an increase in the scale of operations, the risk of moral hazard will rise: the larger the scale of operations, the weaker the incentives for governments to prevent problems in the future.¹⁷ Moreover, the larger the scale of operations and the bigger the role of the IMF, the lower the losses that the private lenders will have to take. If private lenders can expect to be bailed out, they will not have a strong incentive to be cautious in giving credits. Thus, with a larger scale of operation the moral hazard problem increases and there is a point where the costs in terms of moral hazard and the loss of taxpayers' money outweigh the benefit from resolving the crisis. Apparently, there must be some limit for the scale of operations.

¹³ In the extreme, a case can easily be constructed in which a systemic risk develops *because* a crawling peg is not sustainable. If then the IMF contributes to defending the exchange rate, it will get into a situation in which it has to pay without limits. It is therefore apparent that conditions must be specified under which the IMF will not intervene.

¹⁴ A more difficult question is to what extent this also holds in the context of a currency board assuming that the institutional arrangement is credible.

¹⁵ Even if there is no explicit lending areas, there is a fungibility problem in that IMF loans set free financial resources of national governments which may then be used to service sovereign debt.

¹⁶ A new short-term facility to counter speculative capital flows as discussed by Williamson (1996) and proposed by Camdessus in 1994 (see Williamson 1996), seems to be a misguided concept. Such an idea can only be born in a mind frame of regulated exchange rates and "equilibrium exchange rates," which is a rather unrealistic concept.

¹⁷ For a somewhat different view, see Nunnenkamp (1999).

In the past, the IMF increased the level of its operations considerably. In the sixties and the seventies, credits (mostly given to the industrialized countries in Europe) amounted to roughly \$1 billion per case or less than 1.5 percent of the GDP of the recipient country. In the early eighties, the credit level reached \$3.5 billion per case or up to 8 percent of GDP. In the nineties, the amount of credits (now as in the eighties to the developing countries) was at \$20 billion and between 2 and 6 percent of GDP (Figure 1 and Table 1 in the Appendix).¹⁸ Not counting the outliers such as Bangladesh, Egypt and Pakistan, IMF credits seem to follow an exponential curve. Taking into account the total credit package by other institutions, credits have reached nearly 20 percent of GDP for Indonesia and 18 percent for Mexico (Table 2 in the appendix).

17. The IMF is subject to political pressure to provide funds not only when there is a systemic risk but also when there is a national problem. Since any organization is interested in increasing its level of operations, as public choice theory suggests, the IMF may not be strong enough to resist political pressure to expand its activities. The IMF would then degenerate into a credit machine for political reasons. Moreover, the size of operation of the IMF has come under severe criticism. If there are no restraints to the financial means of the IMF, it must be feared that due to the processes of political economy, the IMF will become a bottomless pit.¹⁹

This criticism also applies to the newly proposed facility of a trust fund (Lipton 1999) financed by a large general increase in countries' SDR allocations.²⁰ The purpose of such a facility would be to permit the IMF to give low conditionality loans. Such a fund would easily become the pray of countries interested in new

avenues of financing or it might serve as a fund for US policy and be a way to circumvent Congress.

18. In any case, the IMF cannot keep up the level of loans that it has given out in the nineties for two reasons. First, markets get used to the high level of financial support. Lower levels of IMF loans may be expected to not credibly improve the situation and thus are believed to be ineffective. Second and more importantly, a further increase in the level of loans clashes with the IMF's financing constraint. Thus, an increase in the level of credit support cannot be projected into the future unless there is a quota increase. If not, an expansion of credits is not sustainable. This may prove to be yet another moral hazard problem, one which affects IMF's credibility and which is more basic than its explicit or implicit invitation to national governments to be lenient in their stability behavior or its inducement to private lenders to be less risk-prone in their lending behavior. All this, together with the incentive problem, are reasons why the IMF should think about scaling down its level of operations in the future.

19. This recommendation is in stark contrast to the somewhat expansionist doctrine now propagated by the IMF. Its managing director pushes the argument of increasing the short-term SDR allocation in order to have more financial resources and to be able to step in in extreme cases. The idea is to specify conditions for a facility to solve a "short-run liquidity crisis" by using SDR allocations. This would take a restraint away from the IMF; it would imply that the IMF can create money.²¹ The first deputy director, Stanley Fischer, writes about the IMF's role as a lender of last resort (Fischer 1999) and stresses Article XVIII of the Articles of the Agreement, which specifies that, with a majority of 85 percent of the votes, the Fund can allocate SDRs "to meet the long-term global need, as and when it arises, to supplement existing reserve assets."

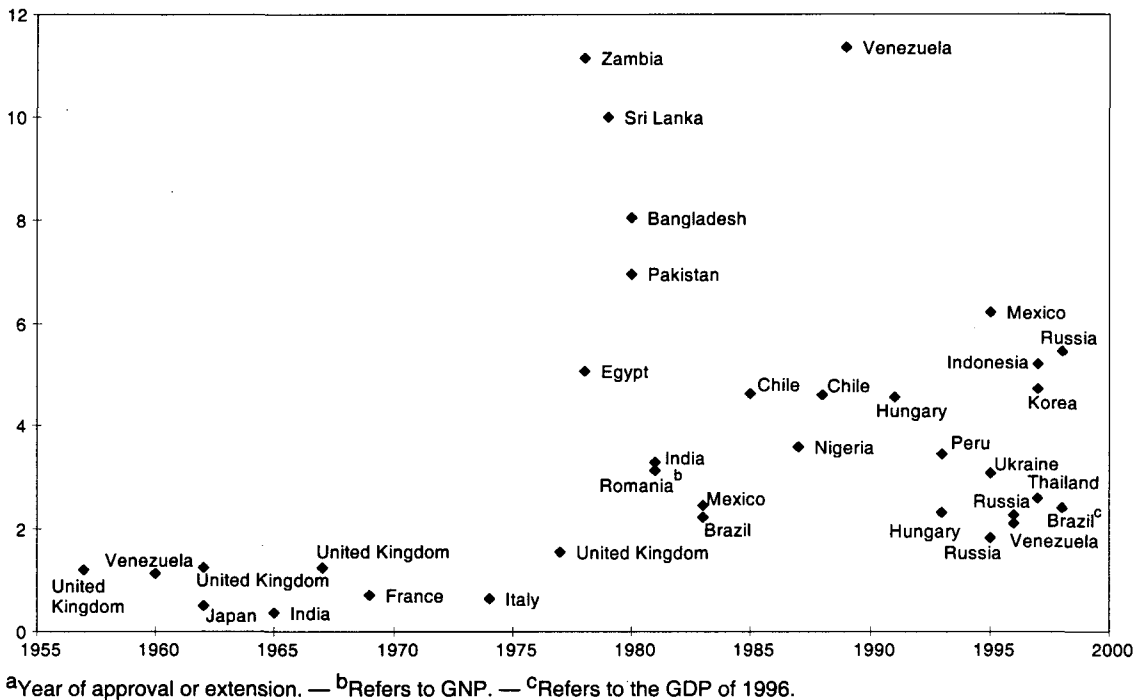
¹⁸ Figure 1 suggests that structural problems were at the root of lending in the sixties and seventies, whereas the eighties and the nineties may correspond to financial crises in credit cycles. On boom and bust cycles, see Mussa et al. (1999).

¹⁹ For these reasons, Fischer's argument that the IMF can take over the role of lender of last resort is not convincing. The term "credit union" (Fischer 1999: 11) suggests too much.

²⁰ Such a decision requires 85 percent of the votes.

²¹ *Frankfurter Allgemeine Zeitung* (1999).

Figure 1: IMF Credits^a in Percent of GDP of Recipient Country



Source: For credits, see IMF, *Annual Report* (various issues), and IMF, *International Financial Statistics*, CD-ROM 1999; for GDP, see World Bank, *World Development Indicators*, CD-ROM 1998. See also Table 1 in the appendix.

III. Internalizing the Social Costs of National Instability Behavior by Using Ex Ante IMF Rules

20. So far, the IMF has relied on *ex post* conditionality to influence the stability policy of countries as of the moment support was given. *Ex ante* conditionality has been more or less neglected. An important result of the current discussion about the deficient incentive system induced by the role of the IMF and the moral hazard behavior generated by it is that more *ex ante* conditionality should be imposed by the IMF. In any case, taking over an *ex post* role has an *ex ante* impact in that it forms expectations and influences creditor and debtor behavior.

21. Countries that diverge from stability pose a risk to the international financial system. Consequently, they should bear the burden of their behavior and should bear the costs of their unsound economic policy and of the externalities of instability they cause other countries as well as the international commu-

nity. In analogy to the “polluter-pays principle” of environmental economics, a “troublemaker-pays principle” should be a line of orientation. Such an approach attempts to internalize the social costs caused by countries behaving in a manner that generates instability and adds to the risk of a systemic crisis. The obligation to provide stability is assigned to the individual country. It should make sure that stability prevails at home and that the economic situation is sustainable.²² The alternative would be the “victim-pays principle,” which implies that the international community has to compensate the potential troublemaker for not causing trouble.

²² A more positive approach is to reinforce the self-interest of countries and of political groups in countries to support stability. Compare also the WTO approach to generating cooperative behavior of national governments by using supporting mechanisms such as the most-favored-nation principle and the single-undertaking principle. One would have to look for analogous reinforcement mechanisms in the world’s financial architecture.

22. There are several institutional approaches to internalizing the externalities of instability:²³

- The IMF should improve its early warning system, create more transparency, and provide more information (Mussa 1997), including high-frequency debt-monitoring systems (Transparency Report of the IMF). Information should include the vulnerability in the balance sheets of firms, banks, and government with respect to foreign debt and long-term debt. High risk weights should be put on countries with a poorly regulated banking sector. This approach means providing more and better information to the markets and then relying on the fact that markets will require higher risk premia from countries with poorer economic performance. By strengthening transparency and surveillance before a crisis can fully develop, there is less need for large-scale operations. Secondary markets will develop.
- The international community should intensify discussions on standards that countries would have to follow. These standards should be clearly defined. Whether they are adhered to or whether they are violated should be observed not necessarily by the IMF, but by other institutions such as the Bank for International Settlements in Basle and by the Financial Stability Forum.
- The IMF should specify the sanctions to be levied when standards are not respected. For instance, if standards relating to the banking system are ignored, countries should not have access to IMF loans (Calomiris 1998; Calomiris and Meltzer 1998). This can mean that an individual country would go without IMF support. The alternative is that nonqualifying countries would have to pay a higher interest rate on the IMF loans.
- A penalty rate should be charged if additional credit is provided (Meltzer 1998). A penalty rate, which should be preannounced together with the modalities of the early warning system when IMF credits have not yet been provided, would be an important signal to mar-

kets. The costs of unsound economic policy should not jump upward in a discontinuous way (or to infinity) when the economic situation worsens. Applying a sliding scale of the costs for IMF credits in terms of higher interest rates, the country would have an incentive to avoid getting into a situation of illiquidity. A penalty rate could partly reduce the borrower moral hazard problem.

- Requiring collateral would be a strong incentive to sovereign borrowers to build up assets, including currency reserves, and not to run them down. Requiring collateral would serve as an incentive to private lenders to find appropriate forms in which assets can serve as collateral.

23. The IMF should be more conscious of the incentive and moral hazard aspects of its support policy. It should define more credibly its line of operation in the case of a crisis. It should move away from the discretionary decisions of its case-by-case approach favored by US pragmatism and bind itself by rules (favored by the Europeans).²⁴ Preannouncing *ex post* rules and sanctions serving to deal with a crisis would reduce systemic risk *ex ante*. This would also protect the IMF against implicit or explicit political influence, including the criticism that IMF lending is dominated by US foreign policy interests.

IV. Internalizing the Social Costs of National Instability Behavior by Using Automatic Market Mechanisms

24. A major question is, of course, whether such new sanctions would be credible and whether the IMF could stick to them in the end if political pressure is strong. Thus, it may be argued that tough standards and stricter sanctions may widen the gap between the developed and the developing countries and that therefore the standards would not be acceptable and also not implemented. And it may be argued that a systemic

²³ For a survey of proposals, see Eichengreen (1999b); see also Siebert (1999a, 1999b).

²⁴ Since financial crises will be different with respect to size, structure and cause, only broad rules can be developed.

crisis may develop nevertheless and that if it is actually threatening or if the argument of an imminent systemic crisis is used, the IMF may prove to be too weak to resist political pressure. In these cases, standards may not be credible.

25. If the credibility of IMF rules is uncertain, one way to improve credibility is to rely more on automatic mechanisms that internalize the external effects of national instability behavior. This means using (and designing) market mechanisms that can partially fill the institutional void caused by the lack of an international rule system for bank supervision and for the bankruptcy of sovereign borrowers. The task is to let markets²⁵ be instrumental in finding an intertemporal fix point that can stop bubbles from starting and expanding and in defining the penalty in form of higher risk premia. This means that also for this reason the early warning system should be improved. The IMF should make it known when standards are not adhered to so that the country would have to bear the burden. As long as we do not have an international institutional setup in which the IMF can act as a bank regulator and bankruptcy court judge analogous to a national setting, *ex ante* mechanisms will have to be relied on all the more in order to avoid defaults.

26. The IMF should not be a silent supervisor who deliberates behind closed doors with the country where a problem is developing, as this involves the risk that not enough will be done to prevent the crisis (Siebert 1998). It is better to blow the whistle and step on the brakes before the train crashes. It is better to allow a small crisis if, in this way, you can prevent a large one.^{26,27} Changing the role of the IMF in this

regard implies that internal procedures of IMF decision making will have to be revised.

27. An important means of internalizing the social costs of instability is to involve the private sector in the case of a crisis.²⁸ "Bailing in" the private sector requires an arrangement on how to handle private credits when private debtors and sovereign countries get into trouble.²⁹ For equity capital, private creditors are bailed in automatically when stock prices fall. This holds irrespective of whether equity ownership is widely spread or concentrated on a few equity holders. For bonds and bank credits, sharing clauses, rules on collective representation, and majorities required for the modifications of the terms of credit represent an institutional mechanism by which creditors could assume some of the risks (IMF 1999; Eichengreen 1999a). These rules would help to internalize the credit risks to the creditors, inducing them to be more cautious in giving credits. In contrast to the mostly used American-style bonds, British-style trustee deed bonds are more appropriate as they include such provisions. These provisions would also be instrumental in reducing aggressive litigation by dissident creditors.³⁰ The clauses should not require a discretionary decision of the IMF to become active. Additionally, private creditors should develop their own international insurance schemes.³¹ Note, however, that this type of bonds and these arrangements mean that foreign capital would become more costly for the debtor countries because it would increase the risk for creditors, so that they would be more cautious in buying bonds and giving credits.

²⁵ The problem remains that markets can overshoot due to expectations. In the long run, expectations that move away from the fundamentals will be corrected in the market process as soon as the fundamentals become apparent. The solution is to make sure that an intertemporal fix point of sustainability as an anchor for expectations is established. This can be done by generating enough information on long-run sustainability as possible.

²⁶ Of course, signaling more actively to the markets that a problem is developing is a very delicate task, and the IMF should not unleash the hurricane or reinforce it, but it also should not hold back information, so that people are misdirected in their decision making.

²⁷ The role as a silent supervisor brings the IMF into an untenable position: at first sight, it seems to immunize the IMF against criticism, but at second sight, it makes the IMF extremely vulnerable as an institution in the long run because secrecy undermines credibility.

²⁸ For a critical view, see Institute of International Finance (1999).

²⁹ Private debt and debt of a sovereign country are hard to distinguish. If private debt threatens to cause negative externalities, the government may be forced to underwrite the private debt in order to prevent a currency run.

³⁰ It is then required less to amend Article VIII, Section 2(b) in order to allow the IMF, by a discretionary decision, to sanction a temporary stay on creditor litigation.

³¹ See, for instance, Grubel (1979).

28. A universal debt-rollover option with penalty (UDROP) as proposed by Buitert and Sibert (1999) for all foreign-currency denominated loans and credits would give the borrower the option of extending maturing debt for a period. In order to prevent opportunistic behavior on the part of the borrower, a penalty rate would have to be paid if the option is chosen. The rollover option could be stripped from the loan and could be traded separately, thus indicating the risk of that option. Since creditors may not be inclined to agree to this type of option, because only rather risky borrowers would like to have it (adverse selection) and because then high penalty rates would be required, UDROPs are likely not to be used extensively on a voluntary basis. Consequently, mandatory universal adoption is proposed. In the case of a pure liquidity crisis, UDROPs would provide breathing space and have a similar function as deposit insurance schemes. However, they would precipitate the crisis in giving borrowers the additional time to continue the same old policy, thus increasing the possible losses that creditors have to take. Thus, UDROPs may make a crisis more likely (Eichengreen 1999a).

29. In addition, institutional arrangements for orderly workouts in the case of a financial crisis are needed. One aspect is that satisfactory national bankruptcy procedures should exist to deal with a national crisis. The IMF cannot substitute for an institutional void in problem countries that is caused by lacking bankruptcy laws. National procedures are also necessary to make sure that the government does not have to take over private debt. Furthermore, national insurance schemes for banks that can deal with the insolvency of individual banks are necessary; these schemes need to be designed as to prevent moral hazard behavior.³² The other aspect is that mechanisms should exist that allow an orderly international workout. Here, some issues can be solved by incorporating them into the bond and credit contracts, such as sharing clauses. But in addition, some quasi-bankruptcy rules for sovereign debtors in analogy to chapter 11 should be developed. This is a difficult task,

but implicitly rules are used anyhow, for instance, in the Paris and London clubs. In these rules, some basic aspects should be specified as to how illiquidity and insolvency of sovereign creditors have to be handled.³³ The IMF should, by credibly pre-announcing conditions for its interventions, establish international rules analogous to national bankruptcy rules for sovereign countries that it expects to be respected if it is supposed to intervene. In any case, it should specify such rules for national bankruptcies as a precondition for lending support in the case of a crisis. The IMF could also help to bring about the writing of standards into international bond and credit contracts which have to be respected by private lenders when a liquidity crisis develops.

30. All these institutional incentives should signal to lenders that they need to take credit risks into account and should induce countries to make sure that they are in a sustainable situation and that they are not vulnerable. This includes a solid economic policy, national institutional arrangements that support sustainability, and sufficient economic strength that a country can ride out a crisis. The country should have a low-risk profile. Specific aspects are an effective regulation of the financial sector that prevents the vulnerability of the financial institutions, an appropriate debt structure that avoids a too high exposure to short-term debt, and a volume of international reserves that ensures that speculative attacks do not pay.³⁴

31. The IMF must change its sanction and incentive systems so that the next crisis is more likely to be prevented. The IMF should concentrate more on *ex ante* prevention; this can be done by clearly specifying the rules that will be applied *ex post*. It should also rely more on automatic mechanisms that operate through the market in order to get to the roots of a potential crisis.

³² Deposit insurance schemes should apply to small holders only.

³³ For instance, sovereign debtors should expect that they will not be fully bailed out and that there will be a cost for them if their default is to be prevented.

³⁴ Precautionary credit lines for national government financed by the private sector may be another instrument.

Appendix

Table 1: IMF Credits^a

Country	Year of inception	IMF credit (billions of dollars)	GDP ^b (billions of dollars)	Percent of GDP
Belgium ^d	1952	0.05	8.16 ^c	0.61
Mexico	1954	0.05	na	
UK	1956	0.74	58.16 ^c	1.27
France	1956	0.26	54.60 ^c	0.48
UK	1957	0.74	61.38 ^c	1.20
Netherlands	1957	0.07	9.13 ^c	0.76
France	1958	0.13	58.30 ^c	0.22
Argentina	1959	0.10	na	
Venezuela	1960	0.10	8.90	1.12
Argentina ^e	1960	0.10	24.45	0.41
United Kingdom	1961	0.50	76.77	0.65
Brazil	1961	0.16	15.21	1.05
UK	1962	1.00	80.68	1.24
Japan	1962	0.31	60.95	0.50
India	1962	0.10	38.91	0.26
UK	1963	1.00	85.53	1.17
United States	1963	0.50	602.06	0.08
UK	1964	1.00	93.48	1.07
United States	1964	0.50	646.60	0.08
Japan	1964	0.31	82.06	0.37
India	1965	0.20	54.84	0.36
Brazil	1966	0.13	27.06	0.46
United Kingdom	1967	1.40	111.30	1.26
Argentina	1967	0.13	24.26	0.52
Finland	1967	0.09	9.08	1.03
New Zealand	1967	0.09	6.76	1.29
Argentina	1968	0.13	26.44	0.47
United Kingdom	1969	1.00	112.79	0.89
France	1969	0.99	136.79	0.72
Indonesia	1969	0.07	8.80	0.80
Turkey	1970	0.09	17.88	0.50
Brazil	1970	0.05	42.33	0.12
Yugoslavia	1971	0.84	na	
Brazil	1971	0.05	49.20	0.10
Indonesia	1971	0.05	9.85	0.51
Pakistan	1972	0.11	9.31	1.17
Brazil	1972	0.05	58.54	0.09
Indonesia	1972	0.05	11.61	0.47
Pakistan	1973	0.09	6.32	1.41
Italy	1974	1.20	187.57	0.64
Chile	1974	0.10	7.23	1.32
Pakistan	1974	0.09	8.77	1.03
Finland	1975	1.15	28.05	4.11
Chile	1975	0.24	7.23	3.32
United Kingdom	1976	1.16	224.60	0.51
Italy	1976	0.90	209.75	0.43
Spain	1976	0.32	108.61	0.29
United Kingdom	1977	3.92	254.08	1.54
Mexico	1977	0.61	87.35	0.69
Italy	1977	0.53	241.06	0.22
Egypt	1978	0.75	14.85	5.06
Turkey	1978	0.38	67.23	0.56
Zambia	1978	0.31	2.81	11.14
Peru	1979	0.36	15.54	2.30

Table 1 continued

Country	Year of inception	IMF credit (billions of dollars)	GDP ^b (billions of dollars)	Percent of GDP
Sri Lanka	1979	0.34	3.36	9.99
Pakistan	1980	1.65	23.69	6.97
Turkey	1980	1.63	68.79	2.37
Bangladesh	1980	1.04	12.95	8.04
India	1981	5.90	178.92	3.29
Yugoslavia	1981	1.96	na	
Romania ^f	1981	1.30	41.58 ^c	3.13
Hungary	1982	0.83	23.15	3.60
South Africa	1982	0.40	74.17	0.54
Brazil	1983	4.53	203.30	2.23
Mexico	1983	3.65	148.91	2.45
Argentina	1983	1.60	103.98	1.54
Argentina	1984	1.45	79.09	1.84
Philippines	1984	0.63	31.41	2.01
Chile	1985	0.76	16.46	4.62
Thailand	1985	0.41	38.90	1.04
Mexico	1986	1.64	128.79	1.28
China	1986	0.70	295.72	0.24
Nigeria	1987	0.84	23.44	3.59
Egypt	1987	0.32	40.51	0.80
Brazil	1988	1.47	448.76	0.33
Chile	1988	1.11	24.15	4.59
Venezuela	1989	4.94	43.55	11.35
Mexico	1989	4.18	222.98	1.88
Argentina	1989	1.42	76.64	1.85
Poland	1990	0.74	58.98	1.25
India	1991	3.02	251.55	1.20
Poland	1991	1.67	76.48	2.19
Hungary	1991	1.52	33.43	4.56
Argentina	1992	3.50	228.78	1.53
Brazil	1992	2.11	209.02	1.01
Russia	1992	1.01	445.48	0.23
Peru	1993	1.42	41.28	3.44
Hungary	1993	0.89	38.60	2.31
Poland	1993	0.66	86.00	0.77
Pakistan	1994	1.41	52.05	2.71
Algeria	1994	0.65	42.06	1.56
Mexico	1995	17.80	286.30	6.22
Russia	1995	6.54	357.55	1.83
Ukraine	1995	1.51	49.06	3.08
Russia	1996	10.02	440.56	2.27
Venezuela	1996	1.42	67.31	2.11
Argentina	1996	1.05	294.69	0.35
Korea	1997	20.90	442.54 ^c	4.72
Indonesia	1997	11.20	215.00 ^c	5.21
Thailand	1997	4.00	153.91 ^c	2.60
Brazil ^g	1998	18	748.92	2.40
Russia	1998	15.1	276.61 ^c	5.46

^aStand-By Arrangements, Extended Fund Facility Arrangements, (Enhanced) Structural Adjustment Facility Arrangements, Purchases under the Oil Facility; approved or extended in the listed year. — ^bGDP at market prices in current dollars; Source: World Bank, *World Development Indicators*, CD-ROM (1998). — ^cSource: IMF, *International Financial Statistics*, CD-ROM (1999); own calculations. — ^dGDP refers to 1953. — ^eGDP refers to 1962. — ^fRefers to GNP. — ^gGDP refers to 1996. — na = not available.

Table 2: IMF and Other Credits to Countries in Crisis (billion of dollars), 1995–1998

	Year	IMF	World Bank	Regional Development Banks	Bilateral credits	Total	Total credits in relation to GDP of recipient country (percent)
Mexico	1995	17.8	1.5	1.3	31.0	51.6	18.00
Indonesia	1997	11.2	5.5	4.5	21.1	42.3	19.67
South Korea	1997	20.9	10.0	4.0	23.3	58.2	13.15
Thailand	1997	4.0	1.5	1.2	10.5	17.2	11.18
Brazil	1998	18.0	4.5	4.5	14.5	41.5	5.54
Russia	1998	15.1	6.0	–	1.5	22.6	8.17

Source: Sachverständigenrat (1998: Table 3); own calculations.

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