Recent Emerging Market Crises: What Have We Learned?

Guillermo Ortiz

Basel, Switzerland • 2002

ISSN 0252-3108

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Composition: Joseph A. Kumar
Figures: Lai Oy Louie
Cover design: IMF Graphics Section

Foreword

On Sunday, July 7, 2002, the Per Jacobsson Foundation organized a lecture at the City Hall of Basel, Switzerland, with the joint sponsorship of the Bank for International Settlements. The lecturer was Guillermo Ortiz, Governor of the Bank of Mexico, and he spoke on the topic "Recent Emerging Market Crises: What Have We Learned?"

The Per Jacobsson events, which include both lectures and occasional symposiums on topics of international finance and monetary cooperation, are usually held annually in the context of the Annual Meetings of the Boards of Governors of the International Monetary Fund and the World Bank and, on a number of occasions, of the Annual Meetings of the Board of Directors of the Bank for International Settlements in Switzerland. The Foundation was established in 1964 in honor of Per Jacobsson, the third Managing Director of the IMF, to promote informed international discussion of current problems in the field of monetary affairs.

The lectures are published in English, and some are also available in French or Spanish translation. They are distributed free of charge by the Foundation (see page 77). Further information may be obtained from the Secretary of the Foundation or may be found on the website at *www.perjacobsson.org*. The most recent lectures are also available electronically on the website.

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Opening Remarks

Jacques de Larosière

Ladies and Gentlemen, dear friends, it is my pleasure and also my privilege to introduce this afternoon Mr. Guillermo Ortiz for his lecture.

Before I do that, let me just observe that if you look at the list of lectures that have been given under the aegis of the Per Jacobsson Foundation since 1964—and you have that in your program—you will observe a 10-year rhythm. In 1972, there was a lecture by Henry Wallich, called "The Monetary Crisis of 1971: The Lessons to be Learned." And then in 1981, nearly a decade later, you see "Central Banking with the Benefit of Hindsight," which is another way of drawing lessons, and that was a lecture by Governor Zijlstra. Ten years later, in 1991, you see that Alexander Swoboda gave a lecture on "The Road to European Monetary Union: Lessons from the Bretton Woods Regime." And two years ago, we had the historical lecture from our friend Josef Tošovský, under the heading "Ten Years On—Some Lessons from the Transition." And now, well before the next decade, we have another title this time from the "Recent Emerging Market Crises: What Have We Learned?" today's lecture by Governor Ortiz.

I shall be extremely brief in introducing Guillermo Ortiz because really all of you in this circle of Basel know him. I'll just say that he became Governor of the Bank of Mexico in January 1998, and prior to that, from 1994, he served as Secretary of Finance and Public Credit in the Mexican Federal Government, and before that he had been Secretary of Telecommunications and also Under Secretary of Finance. And before that—and I remember this very vividly, dear Guillermo—you served as an Executive Director at the IMF from 1984 to 1988, when I was Managing Director at the time.

You have taught at universities in Mexico and the United States. You have a Ph.D. in economics from Stanford University. So you've got all the credentials, dear friend, to give an admirable lecture, and we are all eager to listen to you. You have 40 minutes at your disposal, after which you can take some questions.

So, Guillermo, the floor is yours.

Recent Emerging Market Crises: What Have We Learned?

Guillermo Ortiz*

It is an honor to be invited to deliver this lecture in memory of Per Jacobsson, a man who dedicated his life with great success to promoting international cooperation. I find this occasion particularly meaningful because this is the second time that the head of Mexico's central bank has been honored with an invitation to take part in this important event. Rodrigo Gómez, Director General of Banco de México from 1952 to 1970, delivered one of the inaugural lectures under the aegis of the Foundation in 1964. His insights on the importance of economic stability for the achievement of economic development explain the impressive economic performance of the Mexican economy during his tenure at the central bank, and continue to be very much valid today.

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Since the devaluation of the Mexican peso in December 1994 and the ensuing financial crisis, emerging market economies have been subject to frequent crises. These crises share many features that distinguish them from those that struck emerging markets in the 1980s and early 1990s. Among these I would like to highlight the following.

1. Many of the affected economies were considered star performers by market participants and international financial institutions.

* I would like to thank Alfredo Cuevas, Miguel Messmacher, and Alejandro Werner of Banco de México, Peter Kenen of Princeton University, and Ted Truman of the Institute for International Economics for their valuable comments and suggestions.

2. Although, as is always the case, there were some voices that warned of forthcoming problems, overall, many of these economies were considered fundamentally sound. Most of the crises, in fact, were not anticipated.
3. The magnitude of these crises, both in terms of capital account reversals and GDP contractions, was much larger than expected.

The novel characteristics of these crises prompted an intense debate on the appropriate policy response, both domestic and external, as well as on the reform of the international financial system.

The lecture is structured as follows. First, Section I briefly describes the main analytical issues that have figured in debates on recent emerging market crises. Here, I point out that, although weak fundamentals did play a role, the main common feature of these crises is the financial panic that affected these economies. Based on this diagnosis, I stress that the combination of a strong domestic policy adjustment and a large international financial assistance package was the appropriate response to contain these crises. This section also discusses the possibility that these large packages generated moral hazard among domestic policymakers or international investors. Finally, I touch upon the possibility that in some of these crises there might have been an element of insolvency. Section II looks at crisis management. With this aim, the paper explores the experience from recent crises to justify the argument that, in most cases, these were not driven by solvency considerations and that a strong and fast policy response complemented by a large international financial assistance package was able to restore a sense of stability to financial markets. I also emphasize the difficulty of identifying ex ante those few instances in which default was the ultimate consequence. Section II then studies the domestic policy response. Finally, this section goes over the challenges faced by IMF programs due to the different nature of the current crises. Section III looks at the implications of these crises on domestic policy management and on the design of the international financial architecture, with the aim of preventing future crises. I conclude with some thoughts on the reform of the international financial system.

I. Main Analytical Issues Regarding Recent Emerging Market Crises

Three issues have dominated the debate surrounding recent emerging market crises:[1]

1. Whether these episodes can be explained by economic fundamentals or they represent examples of pure financial panics;
2. Whether the support packages put together by the international financial institutions generated moral hazard, and if so to what extent; and
3. The possibility that some of these episodes represent true solvency crises.

The discussion about crises in emerging markets, from Mexico 1994–95 to Argentina 2001–02, first concentrated on whether important fundamental imbalances were behind them or whether they were the result of a pure creditor panic, similar to a bank run. Nowadays (although there are still some differences of opinion) a consensus has emerged around the notion that the majority of these economies were subject to a dual crisis.[2] On the one hand, to different degrees, almost all of the crisis economies went through typical balance of payments problems where they needed to correct their overspending (in the private or public sectors) that led to large current account deficits and appreciated real exchange rates, caused mainly by substantial capital inflows in the precrisis stage.

However, in almost all of the crisis countries, the imbalances—monetary, fiscal, or the private sector savings–investment balance—were not large enough to explain the virulence of the crises that followed.

On the other hand, many observers, while disagreeing on which economic fundamental or structural feature of the econ-

[1]An abundant literature on these crises has developed. The following are only a few examples, ranging from narratives of the events to essays and even theoretical pieces motivated by the crises: Boorman and others (2000); Corsetti, Pesenti, and Roubini (1998); Eichengreen (2002); Ghosh and others (2002); Krugman (1999); Mussa (2002); Radelet and Sachs (1998); Sachs, Tornell, and Velasco (1996a); and the many speeches and essays by Joseph Stiglitz, including Stiglitz (1998).

[2]I am referring to the crises of Mexico (1995), Argentina (1995), Thailand (1997), Indonesia (1997), Malaysia (1997), Korea (1997–98), the Philippines (1998), Russia (1998), Brazil (1998–99),Turkey (2001), and Argentina (2001).

omy might have been out of line in each crisis, coincided in their assessment that the main common element was the financial panic that took place and the self-fulfilling nature of the events that followed.

Thus, the recent crises should be characterized as capital account crises (as opposed to current account crises), where balance sheet issues are central in explaining the buildup, onset, and propagation of the crises. These episodes are essentially refinancing problems, of either public or private debt. Thus, the magnitude, maturity, and currency composition of debt are crucial.

In this context, a liquidity crisis occurs if a solvent borrower is unable to obtain fresh funds from capital markets to remain current on debt-servicing obligations even though this borrower has the net worth to repay the debt in the long run. The unwillingness or inability of capital markets to provide fresh loans to the illiquid but solvent borrower is the key to this matter. If each individual creditor is too small to provide all the loans needed by the illiquid debtor, these creditors as a group would be willing to give a new loan, but individually it is completely rational for them not to lend if the other creditors do not lend as well. Thus, a liquidity crisis results.[3]

Owing to the dual nature of the crisis, the policy response was directed to address both types of issues. On the one hand, the implementation of tight fiscal and monetary policies, together with the devaluation of the currency, contributed to correct the overspending aspect of the problem. On the other hand, the large international support packages were instrumental in stopping the run on the countries' assets, by assuring investors that the country had the liquidity to fulfill its financial obligations.

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[3]These new factors present in emerging markets' financial crises parallel the theories explaining bank runs, in which depositors of solvent banks suddenly demand their funds when they fear that other depositors will be withdrawing their money. This can drive the bank into illiquidity and eventual liquidation. Owing to the maturity transformation function performed by banks, any bank in principle is subject to a bank run. In practice, the probability of an event of this nature developing will increase when the bank is in a weak situation. Theoretical models featuring multiple equilibria explain this phenomenon; see, for example, Diamond and Dybvig (1983). These types of models have also been used to study international crises of the type we are discussing. A traditional treatment of bank runs can be found in Lewis and Davis (1987). An up-to-date collection of essays touching on bank runs and their similarities and relation to macroeconomic crises can be found in Goodhart and Illing (2002).

However, by acting as a quasi-lender-of-last-resort the IMF was judged to be creating moral hazard by setting an incentive structure in which investors did not pay due attention to default risk. The evidence supporting this hypothesis is extremely thin. However, based on this theoretical possibility, on the perception that the IMF's resources were not sufficient to deal with these kinds of crises, and on the political opposition in developed nations to these types of programs, there was a strong impulse toward the inclusion of "private sector involvement" in some IMF programs.[4]

In the latest discussions on the causes of recent emerging market crises, the distinction between liquidity and solvency crises has played a major role, among both academics and policymakers.[5] The crises in Russia, Ecuador, and Argentina highlighted that the run on assets could also be the result of fears of insolvency. A liquidity crisis arises because investors experience a confidence crisis or exhibit herd behavior, or because a country faces contagion from another emerging market. On the contrary, a solvency crisis is due to deterioration in the economy's capacity to fulfill its financial obligations. The focus on solvency gave way to the extension of private sector involvement to cases in which partial default was deemed warranted and eventually led to proposals for a sovereign debt restructuring mechanism (SDRM) by the IMF. The current international financial architecture does not have an accepted framework to deal with insolvency, and thus a country confronting this type of situation faces enormous uncertainty. Therefore, this proposal would try to apply in an international context some of the principles governing debtor and creditor relations during corporate bankruptcy cases in domestic economies.

But even if conceptually liquidity and solvency crises should be treated differently, there are few clear-cut cases where we can be sure in advance which type a particular balance of payments crisis is. Analytically, the distinction is made using debt sustainability criteria. Nevertheless, these results are extremely sensitive

[4]This initiative means making the private sector contribute with funds to allow the country in trouble to meet its financing needs. For an in-depth discussion of private sector involvement, see Fischer (2001).

[5]See for instance Sachs (1998); the Meltzer Report of the International Financial Institution Advisory Commission, included in Goodhart and Illing (2002); and Detragiache and Spilimbergo (2001).

to the assumptions made about the future behavior of several macroeconomic variables in the country, such as its rate of growth, the evolution of commodity prices, and the level of future interest rates and exchange rates. There is always great uncertainty about the evolution of these variables, in particular because such evolution might depend in part on the availability of resources from official sources. For example, if a country with a liquidity crisis is not given support, the reaction of interest rates and the exchange rate—and the possibility of social and political instability—could be such that the country is driven toward insolvency. More important, sustainability depends on the ability of the government to implement the required adjustment policies. Thus, political developments that put in doubt the willingness or ability of the government to make adjustments have contributed, in many cases, to the onset of of the crises.[6] Furthermore, the sustainability of a given situation depends, to a large extent, on unknown parameters such as investors' expectations, all of which can lead to multiple equilibria and self-fulfilling crises.

Therefore, although the analytic distinction between solvency and liquidity crises is a natural starting point in establishing a taxonomy of recent emerging market crises, its applicability to sovereign debt faces several shortcomings, among which the following two stand out.

1. To assess the probability of a sovereign defaulting, one should analyze the debt service requirements in relation to the government's capacity to undertake the required adjustments without jeopardizing the country's political stability. This is a much more subjective assessment than the balance sheet analysis required for corporations. The difficulty relates not so much to the identification of a critical minimum level of the primary surplus but to the evaluation of the government's ability to generate the required surplus.
2. As has been stressed by Kenen (2002) and Tirole (2002), a liquidity crisis rarely occurs unless there are suspicions of

[6]For example, in Mexico there was an uprising in Chiapas, two political assassinations, and a presidential election during 1994 and in the Korean case there was uncertainty about the implications of the forthcoming presidential election in 1997. Undoubtedly, in the recent collapse of Argentina, the political difficulties encountered by President de la Rua's fragile coalition and its eventual rupture were very important in triggering the events that followed.

insolvency. Also, a liquidity crisis could turn into a solvency crisis if it is not rapidly contained.

Hence, most recent emerging market crises fall into the multiple equilibria category. If the country is given the opportunity to address its imbalances in an orderly way—without creditor panic—and its internal political structure allows for the implementation of the appropriate policies, the crisis will prove to be one of liquidity. However, if the panic is not addressed it can easily evolve into a solvency issue.

Thus, to deal with these crises, two essential elements are needed: financing and adjustment. This does not sound very different from the traditional view behind IMF programs dealing with traditional balance of payments crises. The point here is that the dual nature of these crises—the fact that they involve balance sheet adjustments—requires much larger amounts of financing (and also of adjustment, as I will argue later) than traditional crises. Packages, thus, have been much larger, triggering a strong response from creditor countries. Based on the argument of moral hazard and the idea that IMF money should not be used "to bail out private creditors," the discussion on private sector involvement and a sovereign debt restructuring mechanism has evolved mostly as a political reaction to the use of IMF resources.

In the next section, I look at some lessons from the recent emerging market crises on the origins of these crises and the policies that were put in place to deal with them.

II. Some Lessons from Recent Experiences with Emerging Market Crises

The crises experienced by emerging markets in the past decade have received considerable attention (including the response of the international financial institutions), starting with the controversy surrounding the size of the Mexican rescue package of 1994; the surprising realization that the Asian tigers were also vulnerable; that Russia was not, after all, too big to fail; that debt crises were not necessarily a thing of the past, as the current Argentine plight suggests; and that contagion was not dead, as the recent Brazilian episodes indicates. This section provides a brief overlook of recent crises to see what lessons regarding crisis management can be drawn from these experiences. The following issues are studied:

- the nature of recent crises;
- the difficulty in predicting the outcome and how this outcome depends on the policy response;
- some issues related to the domestic policy response; and
- the challenges faced by the IMF and the incidence of moral hazard.

One of the main themes of this section is that today, as in the past, successful crisis resolution depends on finding the right balance between financing and adjustment. Capital account crises are no exception to this rule. But the virulence of the capital flow reversals that distinguishes these crises, resulting from sudden changes in expectations and herd behavior by investors, implies that in these cases crisis management demands extremely strong responses in both the adjustment and the financing dimensions. In fact, strong adjustment has been undertaken by some countries, and IMF packages have been larger than before. This last trend has given rise to an outcry about moral hazard and investor bailouts that, as I will argue, is overblown, and in fact responds more to domestic political concerns in the G-7 countries than to any actual evidence from the international arena. Notwithstanding its weak foundation, this concern has been a force behind the search for effective forms of private sector involvement, and is also in part behind the discussion on the SDRM.

For this discussion, I will look at the crises of Mexico (1995), Argentina (1995), Thailand (1997), Indonesia (1997), the Philippines (1998), Korea (1997–98), Russia (1998), Brazil (1997–99), Turkey (2001–02), and Argentina (2001–02).[7] In looking at these crises, I will address the following questions. Did these crises stem from fundamental macroeconomic imbalances? Did they in-

[7]These crises had in common the involvement of the IMF. Malaysia (1997), another example of a capital account crisis, did not negotiate IMF support, but for the most part followed policies similar to those of the countries that had IMF arrangements. The most visible departure from this similarity was the use of capital controls in Malaysia. However, these were actually introduced belatedly, after the worst of the capital flight had taken place and the government had put together a strong adjustment package with "full ownership." Malaysia's commitment to its program stands in contrast with the Indonesian case, in which the proposed adjustment measures often were implemented halfheartedly because they were the result of tense negotiations between the government and the IMF, which did not agree on many issues, ranging from the required macroeconomic policy effort to the need to contain related lending and corruption more generally.

Appendix I contains information on the main macroeconomic indicators in these countries before and after the onset of their crises.

volve self-fulfilling elements? Was the policy response of the international community and of the national authorities appropriate in each case? Did the resolution of these episodes, especially that of the "first crisis of the twenty-first century," as Michel Camdessus called the 1995 Mexican crisis, sow the seeds of major future problems by promoting irresponsible behavior among investors and policymakers in emerging markets?

I will briefly go over these issues, pointing to some of the most meaningful similarities among the major currency and capital account crises of the past decade. The main themes I will touch upon are not new, but they bear reemphasizing. Perhaps the most distinct and important characteristic of many of these crises was the self-fulfilling nature of the (pessimistic) expectations driving capital outflows. In that sense, it is appropriate to think of those episodes as liquidity crises, a characterization with important policy implications. Acknowledging this feature of many of the worst crises of the past decade does not deny that those self-validating expectations interacted with specific vulnerabilities in the affected economies. The result of that interaction was deep economic dislocation, which made it necessary to put together the most impressive financial rescue packages in the history of the IMF.

Capital Account Crises of the Past Decade

Two common features of most major emerging market crises of the 1990s were the enormous reversal in the capital account that prompted the crises and the presence of a fixed exchange rate arrangement of some sort. It was especially significant that the collapse of the capital account occurred in countries such as Brazil, Argentina, Mexico, and Korea, which were among the main recipients of international private capital—that is, in countries that seemed to be successfully taking advantage of the new globalization trends. But, as the crises were to show, these countries' very success made them dependent on the continuation of the capital flows and vulnerable to a change of sentiment among foreign investors. For their part, the foreign exchange regimes of these countries, adopted in many cases as cornerstones of previous stabilization programs, fostered for years the expectation of a stable exchange rate. This expectation influenced the composition of the balance sheets of banks and firms, which engaged in practices

that resulted in an excessive exposure to exchange rate risk and thus became highly vulnerable to movements in the currency.[8]

Balance of payment crises are often the result of persistent flow imbalances in the macroeconomic accounts. In the "classic example," continuing fiscal deficits financed with money issuance weaken the central bank's balance sheet, gradually depleting net international reserves until the monetary authority is no longer in a position to defend the domestic currency peg, which will then be successfully attacked by speculators. That is, fiscal policy is often suspected of lurking behind a macroeconomic disequilibrium.

However, private sector deficits can also lead to persistent external imbalances and to eventual crises. There was a widespread notion in several policy circles during the 1980s and early 1990s that increasing indebtedness by the public sector was a source of future vulnerability, but there was much less concern if the private sector, financial and nonfinancial, was the one accumulating foreign liabilities. The argument was that private agents are better at appraising the risk of their operations, both as lenders or borrowers, and that if payment problems occurred, these would be specific to a given firm and lender and need not generate any of the strong aggregate effects associated with sovereign default.[9] Bankruptcies occurred with frequency in industrialized countries and did not lead to major macroeconomic instability.

This view turned out to be too simplistic, as investors realized that implicit or explicit deposit insurance implies that in the case of a systemic crisis, domestic (and sometimes foreign) liabilities of banks are effectively a contingent liability of the public sector. In addition, political pressures surely arise to bail out private nonfinancial firms and the government may cave in to them. This is more likely to occur when producers of nontradable goods have foreign currency liabilities and when an efficient bank-

[8]The most dramatic example of this situation was the pervasive liability dollarization of the Argentine economy during the 1990s, which made the eventual abandonment of the currency board especially painful. In the event, vulnerable balance sheets, exchange rate pegs, and volatile capital flows were to prove a highly combustible mix.

[9]This view, which one may consider complementary to the concern in the United States over "the twin deficits" during much of the 1980s, is known as the "Lawson doctrine" because it was most clearly expressed by Nigel Lawson, British chancellor, who in 1988 stated that the current account deficits in the United Kingdom should not be a matter of concern, because no government deficit was behind them (see Reisen, 1998). Prior to 1994, Mexican officials subscribed to this theory.

ruptcy procedure is not in place. As a result of that intervention, public debt will rise, often dramatically, and possibly feeding concerns about the solvency of the government or an eventual monetization of the public sector deficit. Thus, large foreign debt by the private sector will also tend to increase the vulnerability of the economy to shocks and to changes in perception.[10] In fact, crises with roots in private overspending tend to be harder to address than those where the key vulnerability is in the public sector deficit, because the former type is more likely to cause disruptions in the banking system than is the latter one.

Much of the private indebtedness was intermediated through domestic banks. In the absence of adequate prudential regulation and supervision coupled with a more open capital account, banks provided credit to risky projects and quite often provided credit for the production of nontradable goods with resources coming from foreign sources. These unhedged positions taken by banks, as well as the fragility of the projects they lent to, implied that several of these capital account crises were associated with important banking crises, or even caused by them. Thus, with an open capital account, regulation and supervision of financial intermediaries are key.[11]

Therefore, the three places to look for fundamental weaknesses that might signal potential solvency problems are the fiscal stance of the government, private sector indebtedness, and weak financial systems.[12]

The main examples of situations where public finances represented a clear source of vulnerability are found in the cases of

[10]Articles in which this contingent liability argument has been explored formally are Dooley (2000) and Burnside, Eichenbaum, and Rebello (1998).

[11]Mexico's banking sector went through a process of consolidation and recapitalization after the banking crisis that followed the balance of payments crisis. In addition, it allowed full foreign participation in the banking sector. Nowadays, the capitalization ratio of the Mexican banking system stands at 15.1 percent (taking into account credit risk), considerably above the minimum suggested by the Bank for International Settlements.

[12]It is also useful to compare currency crises between emerging and industrial countries. A possible comparison is between the British crisis of 1992 and the 1994 Mexican crisis. The main coincidence was the continuing real appreciation of both countries' currencies. However, the United Kingdom had gone into a downturn in 1989, leading to a shrinkage of the current account deficit and of the private investment-saving balance; by contrast, Mexico was experiencing a widening current account deficit in 1991–94. In 1991–92, the United Kingdom was faced with rising German interest rates associated with reunification, and decided not to raise interest rates in case they endanger an incipient recovery. In 1994, in Mexico, depreciation pressures arose from a severe political crisis and growing concern over the current account.

Brazil in 1998, Russia in 1998, Argentina in 2000–01, and Turkey in 2001. At the outset, these cases did not look too different from each other, in the sense that they all showed high levels of indebtedness and continuing fiscal deficits. In Russia, although public debt was still relatively moderate at end-1997, when it reached some 35 percent of GDP, poor economic growth and high deficits of over 7.5 percent of GDP put the public debt to GDP ratio on an explosive path. In Brazil, public finances were also on a clearly unsustainable trajectory, and the high level of debt and its contractual characteristics made the government especially vulnerable to increases in interest rates. In Argentina, the ratio of public debt to GDP rose continuously during the second half of the 1990s to exceed 50 percent of GDP in 2001, with a consolidated deficit of over 3 percent of GDP in 2000 and 2001. Turkey's ratio of public debt to GDP reached 61 percent in 1999 and 57 in 2000, before jumping to over 90 percent in 2001 as a result of the steep depreciation of the Turkish lira that accompanied the crisis. In short, all of these countries presented highly worrisome fiscal outlooks going into their crises, which only got worse when the collapse of confidence hit them, closing their access to private financial markets.

However, key differences in the management of those crises made big differences in terms of outcomes.[13]

- Brazil (1999) and Turkey (2000) are two cases in which determined fiscal adjustment made possible a return to private capital markets without needing to resort to any sort of default. In Brazil, the government pursued fiscal consolidation by increasing its primary surplus by 3.5 percent of GDP in 1999, an amount sufficient to stabilize public debt as a percentage of GDP. In Turkey, the government targeted an improvement in the primary balance of over 3 percent of GDP in 2001, and of an additional percentage point in 2002 to bring it to a surplus of 6.5 percent of GDP, a level consistent with declining debt ratios. So far, Turkey has delivered on its fiscal program and, indeed, overperformed in 2001.
- By contrast, weak responses have lead to default. In Russia, the government failed to follow through on its fiscal commitments under an existing IMF arrangement, and the fall in

[13] See the Appendix.

world oil prices found it with a wide deficit and a demanding schedule for the rollover of short-term debt. An unsuccessful attempt to restructure that debt without an accompanying set of fiscal measures ended up in the default on GKOs that shook markets in 1998. In the event, however, the Russian government did take steps to increase revenue collection and to curb spending, and thus managed to turn its finances around, reaching overall surpluses of over 3 percent of GDP in 2000 and 2001. The Argentine story is still unfolding, but the main lesson so far is that, as the government was unable to deliver on its fiscal adjustment commitments, rolling over public debt became increasingly difficult. The last effort was the zero-deficit law: the government would keep a strict balance, and the international financial institutions would finance falling maturities. Yet, the national and provincial governments continued to post deficits. Scared depositors (who saw the connection between weakening government finances, the stability of a banking sector with a large exposure to government risk, and the sustainability of the currency board) fled the banks, so the government responded by freezing deposits and the IMF program went off-track. Argentina is now in default, and its government has yet to put forward a strong action plan to get it out of this situation.

The Argentine case deserves a few additional comments. Argentina made a remarkable comeback after tackling hyperinflation, and made significant progress in several structural reform areas in the first half of the 1990s, including privatization and a first wave of social security reform. However, Argentina failed to eliminate important inconsistencies from its economic framework. Living under a currency board demanded reforms to achieve a flexible labor market, a hardening of the budget constraints facing provincial governments accustomed to bailouts from the federal government, and fiscal discipline at the national level. But Argentina put off these reforms; in fact, privatization operations allowed the government to finance its growing spending, thus postponing the need for fiscal adjustment. All this while the Argentine authorities managed to stay on the good side of the international financial institutions, in no small measure thanks to the considerable goodwill they had gained during the first half of

the 1990s. Those international organizations, in their turn, insisted on the need for the required reforms, but did not negotiate hard enough for them, perhaps because they were too concentrated on the Asian crises. Thus, the second half of the 1990s represents a time of missed opportunities for Argentina. The result was stubborn unemployment and a gradually brewing public debt problem that were not addressed when there was time and political capital to do it from a position of relative strength.[14] So, to some extent, the Argentinean case also illustrates the shortcomings of the IMF strategy of large packages once a nation starts faltering on its adjustment effort and sliding into default, as there is no established "exit strategy" for the IMF to leave the country to sort out its own problems in an orderly way. The fact that it is difficult for the IMF to withdraw its support from countries in unsustainable situations is mainly due to the following reasons: (1) the inherent inertia in an institution where policies are decided after long debate; (2) there is never a good time to leave a country that is moving toward default; and (3) it is highly likely that the IMF would be blamed for the ensuing crisis if it were to abandon a country to sort out its own problems. Partly because of these concerns, the IMF is pushing for the development of a mechanism to deal with solvency problems of countries in crisis.

As I mentioned earlier, the story of the fiscal-driven crisis does not fit all situations. In particular, it does not help one to understand the Mexican devaluation of December 1994 and the Asian crises of 1997–98. In those cases, public finances were mostly healthy. The most extreme examples of such health were Thailand and Korea, whose public debt-to-GDP ratios were, respectively, 5 percent and 13 percent, and whose deficits were 0.5 percent and 0.9 percent of GDP, respectively, going into their crises. However, the private sector had been accumulating large debts.

The private sectors of Thailand and Korea were running high deficits and becoming highly indebted in the run-up to their ex-

[14]Michael Mussa, a former Director of Research at the IMF, has written that one of the two mistakes the IMF made in dealing with Argentina was "failing to press the Argentine authorities much harder to have a more responsible fiscal policy, especially during the three high-growth years following the tequila crisis of 1995." (The second mistake was to continue lending to that country in the fall of 2001, when all hope had been lost.) See Mussa (2002).

ternal financing crises. Therefore, along with fiscal consolidation, the Mexican program included debtor support programs, the extension of full deposit guarantees, the provision of liquidity to the banking system by the central bank and a program to help banks clear their balance sheets of nonperforming loans in exchange for new injections of capital by bank owners.[15] Strengthened supervision and liberalized rules for the participation of foreigners in the ownership of banks were the remaining piece of this comprehensive strategy to keep the payment system functioning while removing the main threats to its integrity. This made it possible for the corporate sector to remain viable and for activity to rebound in 1996, along with a resumption of private capital flows.

Mexico was not alone in facing complications from the impact of the crisis on private sector agents. As I have noted, private saving-investment balances had been strongly negative for many years in the Asian economies,[16] and servicing their accumulated, and suddenly revaluated, liabilities became excessively onerous for numerous firms, leading to waves of bankruptcies and to a worsening of the delinquency rates among banking sector debtors.[17]

The last factor influencing the possibility of a crisis was the degree of transparency and communication of the government with market participants. While limiting access to information from market participants may win some breathing space for a country when it is under pressure, market participants find out sooner or latter. Even if a temporary disturbance has been solved, once investors learn that the government has discretionally changed the conditions for access to information due to a negative development, there is an automatic loss of confidence. If the disturbance has not dissipated, the fact that investors find out later only increases the effects of the loss of confidence, as the external

[15]The eventual cost of the bank rescue operations, meant to be spread over time, was as much as 19 percent of GDP.

[16]See the Appendix.

[17]In this connection, Indonesia provides an interesting counterpoint to Mexico. Early in 1998, an economic program was announced, including measures to restructure the banking system. However, the government failed to implement these measures promptly and decisively, and the corporate debt problem was allowed to linger. The economic downturn deepened and the economy remained in a state of chaos, which lead in short order to social unrest and to the fall of the government. Short narratives of the crises in Indonesia and other Asian tigers can be found in Appendix V of Ghosh and others (2002). See also Radelet and Sachs (1998).

disequilibrium will have accumulated for longer, making the capital account crisis worse. Thus, the possible short-term advantage a policymaker gains from having better information than the markets can turn into large costs once market participants perceive that information is being used strategically to influence market prices.[18]

Another element that was present in recent balance of payments crises was that of contagion. As is well known, during the late 1990s there were several cases in which a balance of payments crisis in a country was followed by intense pressure on the balance of payments of other countries. In this broad definition, contagion is not really new. The clearest previous example is the Latin American debt crises of the 1980s. However, there is a large difference in some of the causes behind the contagion in the late 1990s.

The main factors that have been associated with contagion are:

1. Common external shocks, such as a deterioration in the terms of trade of countries that produce or export similar types of goods, or an increase of interest rates in industrial countries;
2. The adoption of similar policies in the affected countries, so that when these turn out to be unsustainable in one case, investors interpret that it will also be the case in the other countries;
3. Direct trade or financial links between the countries;
4. Institutional practices requiring that an investor cover a loss suffered in one market by liquidating positions in other markets; and
5. Panic and herd behavior.

The first two causes had been observed before. The Latin American debt crises of the 1980s were preceded by a deterioration in commodity prices, while the levels of indebtedness and the models of development were fairly similar across these countries. However, commercial and financial links between them

[18]For a detailed description of the policies followed to increase transparency and communication in Mexico after the 1994–95 crisis, see Ortiz (2002).

As noted by Stanley Fischer (2001) in his Lionel Robbins lectures, the lack of transparency was also a problem within the IMF, and thus the transparency revolution that has taken place gradually within the institution is considered by him as "the most important change in the IMF during the last seven years."

were few and small. These types of linkages seem to have played more of a role in the East Asian crises than in South America. Nevertheless, this is also a fairly traditional channel of transmission of shocks from one country to another.

The fourth and fifth factors—institutional investment practices and panic or herd behavior—have received the most attention recently and, in a sense, are the most worrying. The reason is that they are unrelated to country fundamentals, contrary to the other causes of contagion. In addition, financial contagion driven by herd behavior may have a self-fulfilling component. For these reasons, policy discussions have centered on identifying the particular practices that give rise to unjustified fluctuations in a country's asset prices and the reasons why some investors do not discriminate correctly among countries with very different fundamentals.[19]

The clearest case of financial contagion occurred as a result of the Russian crisis in 1998. This led to a large increase in spreads for a very large number of emerging market countries. Of these, some were European transition economies, in which cases there were rather fundamental linkages to Russia. Latin America was strongly affected too, but in this case there were no fundamental contagion channels, because there are hardly any direct linkages (commercial or financial) between Russia and emerging market countries in Latin America. This deterioration in asset prices was temporary for several countries of the region, but it may have been the element that tipped Brazil into its balance of payments crisis in 1999.

An element of the Russian crisis that seemed to have generated such large financial effects was the fact that it surprised investors and policymakers alike. In contrast, the recent Turkish and Argentinean crises did not seem to have major effects, with the exception of countries that had more fundamental linkages with Turkey and Argentina.[20] These two crises were widely antici-

[19]There is an ample literature on contagion, self-fulfilling runs on a country's currency, and herd behavior. The pioneering paper in this literature is Obstfeld (1986), but during the late 1990s there was much discussion on this matter. A good survey is Edwards (2000). This and other related papers can be found in the World Bank–hosted contagion website (http://www1.worldbank.org/economicpolicy/managing%20volatility/contagion). See also the essays in Claessens and Forbes (2001), especially the piece titled "Measuring Contagion: Conceptual and Empirical Issues," by Roberto Rigobón and Kristin Forbes.

[20]A clear example is Uruguay in the Argentine case. In fact, Uruguay has been affected through fundamental financial and psychological channels and today is facing a very unstable situation.

pated, so investors were able to adjust their portfolios gradually in advance of the moment when the countries would devalue or declare debt-service standstills.

The most recent developments in Argentina and Brazil, however, suggest that financial contagion is a complex, imperfectly understood phenomenon, and that there is therefore a need for further analysis of its causes. For a short while there seemed to be a risk that the low rates of contagion from Argentina's current crisis might be lulling policymakers in many countries into the belief that markets would discriminate more fully among different economies. Brazil is now in renewed difficulties, in part because it continues to have a high level of public debt (either indexed to the exchange rate or paying a floating rate) and is in the middle of a presidential campaign whose outcome may produce important economic policy changes, since important aspects of policy are not anchored in sufficiently strong institutions. The deterioration in asset prices recently observed in Brazil has also been observed in other South American countries that have important trade or financial linkages with Brazil. However, the effects of all this noise have also reached, albeit slightly, even Chile and Mexico, two countries with which Brazil has limited fundamental links and which have aimed in recent years to differentiate themselves from other emerging markets through the pursuit of prudent financial policies. The recent Brazilian situation has revived the issue of contagion, as a country that has important links to the rest of the region and is considered, as recent data indicates, to be conducting its macroeconomic policy correctly, now has one of the highest implicit default probabilities in the world. Therefore, the situation in Brazil is contaminating the region through fundamental channels but also through the perception that default is now a much more likely outcome for emerging market debt than before.

Financial contagion was dealt with in past crises in a completely piecemeal fashion. The country and the IMF would sign an agreement so a sufficient amount of resources was available to ensure that investors following blindly institutional practices or herd behavior would lose in the medium term from selling the assets of the country with solid fundamentals. As the IMF programs designed to deal with more fundamental problems, these

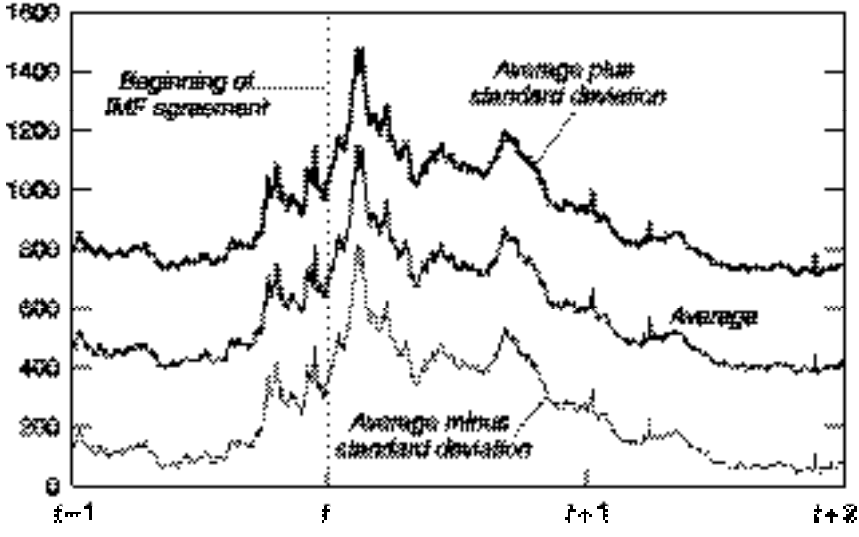
support packages were generally successful, as can be seen by the fact that spreads for many countries quickly returned to the levels seen before the Russian crisis.

In spite of the quick reestablishment of orderly conditions in many of these countries, the temporary shocks led to a deceleration of economic growth, an increase in inflation rates, and generally to large welfare losses—hence the search for a mechanism to prevent unwarranted contagion from occurring in the first place. As a consequence, the IMF designed the Contingent Credit Line (CCL), about which I will talk in detail in the following section.

Perhaps the main lesson from this brief overview is that, although crises may reflect vulnerabilities in the public or the private sectors, it is always up to the government to take the lead to face the crisis once it has erupted. Decisive action is what determined the ultimate outcome in each crisis. When the government adjusted its own budget as demanded by the situation, and provided early and firm support for private debtors and banks, the crises could be contained and in fact reversed. But when the government procrastinated, or was unable to put forward and implement a strong program of action, the crisis continued and even worsened. In these situations, the lack of a clear mechanism to restructure sovereign debt put the IMF in a difficult position that in some instances led to a very complacent attitude toward program countries.

Figure 1 shows the average sovereign spread as measured by the emerging market bond index (EMBI) around the time of some of the crises that were handled successfully. As the figure indicates, two years after their crises, the governments of these countries had returned to voluntary debt markets and faced terms not too different from those they had enjoyed prior to their crises. Therefore, the assumption that these crises were mainly liquidity ones was on average correct. Moreover, at the start of each crisis it would have been hard to tell which were going to end as success stories and which were going to end in default. It was what one may call an "overshooting" of adjustment that made the difference for those countries that managed their crises successfully. Therefore, it is important to go over the main aspects of the policy response in more detail. That is the subject of the next section of this lecture.

Figure 1. Sovereign Bond Spreads in Brazil, Mexico, the Philippines, South Korea, and Thailand



A Closer Look at Some Policy Issues

As I have noted before, the mix of adjustment and financing continues to be a crucial determinant of success when addressing a dual crisis, where capital account shocks play a major role. In these instances, one needs large amounts of both adjustment and financing. Some observers have criticized the policy response implemented by many of these countries and recommended by the IMF, as well as the IMF's participation in the response to the crises. These criticisms have focused mainly on one of the two aspects of the crises. Therefore, the critics are also divided in two camps.

1. On the one hand, from what might be called the financial panic perspective, criticism (for example, by Joseph Stiglitz) has centered on the degree of adjustment. The main problem this critique finds is that adjustment programs may have been unduly strict, arguing that adjustment measures were not needed and may have been counterproductive in the middle of a crisis by weakening governments and pushing vulnerable groups into poverty.
2. On the other hand, from a liberal perspective that only focused on the adjustment effort and on moral hazard, the

provision of financial support was criticized (for example, by Allan Meltzer). In this case, the main focus of criticism is the alleged bailout of private investors, which in turn will promote risky behavior and feed the appetite for more rescues.

Many of these comments face serious flaws, but they do reflect dilemmas faced by policymakers in each country and by the international financial institutions. I am convinced that the financial panic element was present in almost all of these crises and that a large financial assistance package was needed to stop them. However, given that those few cases in which the crises turned into solvency problems were difficult—or almost impossible—to detect in advance and that to an important extent their fate was decided by the lack of adjustment, an overshooting of the policy response was needed: first, to correct any fundamentals that may have been out of line; and second, to restore the credibility of the authorities. In this subsection I will discuss the dilemmas faced by policymakers in each country, especially those regarding the handling of monetary and fiscal policies and the framework to deal with banking system problems. In the next subsection I will look at the dilemma faced by the IMF, since this is an issue that arises directly from the hypothesis that moral hazard is a serious problem.

The first policy dilemma had to do with the main decisions concerning monetary policy.[21] After the fixed parities were abandoned, the exchange rates plummeted in most cases. The observed depreciations caused by the large capital outflows were much larger than anything that might be justified by real exchange rate misalignments prior to the crises. Therefore, after

[21]In the cases we have been discussing, the real exchange rate had been appreciating prior to the eruption of the crises. Observers tended to concur that some degree of overvaluation was present and that the dual objectives of improving competitiveness and implementing short-term external adjustment could be advanced by a moderate real depreciation (see, for example, Dornbusch and Werner, 1994). However, there was fear that a sudden change in the exchange rate regime, or even in the exchange rate level, might lead to instability and inflation, especially when policymakers were aware of vulnerabilities to exchange rate risk in the private sector. In general, the initial policy response gave precedence to the preservation of exchange rate stability. This response was also justified by the initial assessment of the problem as temporary, which was consistent with the relatively strong fundamentals of many of these countries. Sterilized intervention, however, would ultimately prove unsuccessful in the face of strong pressures on the exchange rate. In the event, all the countries we are discussing (except for Argentina in 1995) ended up being forced to give up their exchange rate pegs.

letting go the exchange rate, central banks pursued a policy of high interest rates in the hope of containing the extent of the depreciation and its inflationary effects. Limiting the fall of the currency was essential to moderate any potential damage to the solvency of corporations with external debt.

But monetary tightening had problems of its own. It was feared by many observers, including Joseph Stiglitz (then Chief Economist of the World Bank), that high interest rates would stop investment and cause further deterioration in economic activity, possibly with long-term consequences for unemployment because of the risk of hysteresis. Moreover, a rising debt service burden might also drive into delinquency those borrowers with local currency–denominated debt who had contracted floating-rate loans. This problem could, in turn, end up having adverse effects on the banking system. This situation, then, called for complementing monetary tightening with debtor support provisions. In fact, in some cases, as in Brazil, the domestic borrower with the largest exposure to interest rate risk was the government itself. In those cases, high interest rates had direct strong negative effects on public debt dynamics that could undermine the integrity of the program. In any of these cases the recommendation is that monetary tightening had to be accompanied by additional fiscal tightening, and not that the tight policy response should have been abandoned.

In short, an active monetary policy was necessary, but it was crucial that it be supported by fiscal policy and enhanced protection for the banking system. Thus, it was hoped that the initial monetary tightening would not have to be maintained for too long, and that it would become possible to revert the tightening as other elements of the economic program began to take root and produce a recovery of confidence.

The second policy dilemma concerned the proper role of fiscal policy. In a few of the cases at hand—notably Russia in 1998 and Argentina in 2000–01—there was a direct case for fiscal consolidation given the contribution to the crises of public finance problems, including concerns over government solvency. However, in crisis countries where the government finances were in better shape, the case for fiscal retrenchment was of a more indirect nature. The initial programs did provide for fiscal consolidation on four grounds.

- First, the government should start adjusting to face the carrying cost of the additional public debt that would likely result from domestic bank bailouts and other emergency operations to address the effects of the crises on the balance sheets of private sector agents.
- Second, if some increase in domestic saving was needed to face the sudden unavailability of foreign savings, it might be appropriate for the public sector to contribute to the increase in domestic savings, even if it was not responsible for the original saving-investment imbalance.
- Third, these governments faced difficult cash flow situations with amortizations of short-term debt coming due and with substantial resistance on the part of creditors to roll over their holdings.
- And fourth, it was thought that, given the market's doubts over the solvency of these governments, a stabilization program including fiscal consolidation elements would strengthen foreign investors' confidence in the prospects for the country, thus helping induce a turnaround in the capital account. The credibility problem signaled toward an overadjustment. This is because the cost of falling short of the adjustment considered necessary to restore solvency is much larger than the cost of overadjusting.

However, by imparting a negative impulse to aggregate demand, a policy of fiscal consolidation might damage the prospects of a recovery and fuel social discontent, ultimately damaging the confidence of foreign investors—exactly the opposite of what was intended. Confidence could be further damaged if IMF support appeared uncertain, contingent on delivering a minimum degree of fiscal adjustment that, in the circumstances, might simply be unattainable.[22]

Partly in response to such considerations, but largely in recognition that economic growth was in most cases lower than

[22]Moreover, a negative fiscal impulse, by deepening the recession, would have a direct impact on the well-being of the population. This line of criticism was especially loud in the Asian cases, which had been characterized by prudent fiscal policies prior to the crises, and less so in the Mexican, Brazilian, and Turkish programs, surely because public finance problems had been recurrent in those countries. A Latin American case in which this criticism was strong in spite of the importance of fiscal imbalances was the Argentine program of 2000–01, in this case because the economy seemed to have lost its ability to grow.

anticipated, many programs were redesigned along the way, protecting essential social spending and relaxing the fiscal targets (allowing "automatic stabilizers" to work, as it was often phrased). This change occurred mostly in those countries where public finance problems were not important, but it was also seen when the preservation of the original fiscal targets would have implied an actual tightening of fiscal policies.[23]

The crises that have been discussed affected private agents' levels of indebtedness and thus created serious problems for the domestic financial systems. These issues had to be dealt with by supporting viable banks, closing unviable ones, and allaying the fears of depositors. It was also necessary to expedite the resolution of bankruptcy cases. All of these issues were, to different degrees, addressed in the economic programs put together by the governments. In fact, decisive implementation of these measures was crucial to ending the crises.

Addressing banking problems is essential to protecting the real sector for several reasons. I will just mention three: first, the financial wealth of large segments of the population is held in the form of bank deposits; second, individuals and corporations depend on a well-functioning payments system to conduct their daily business; and third, if depositors are not convinced that their funds will be available in the future, it is very likely that a bank run will be experienced, which in turn will probably translate into further capital outflows and a larger balance of payments crisis. Bank and debtor support programs, and bank rescue operations more generally, imply the use of a substantial amount of fiscal resources, but in light of the importance of maintaining a functioning banking system, it is deemed necessary. Of course, for the banking support programs to work, this requires that the government be able to commit to generating the resources necessary to finance these operations.

In the Mexican case, the government carried out an important fiscal adjustment and undertook a comprehensive program to ensure that banking sector problems could be kept under control and thus maintain credibility with depositors. Acting mostly

[23]An example of this type of redesign was the change in the overall deficit ceilings during the December 2000 review of the Argentine program, which accepted the postponement of the attainment of overall balance from 2003 to 2005 in light of the ongoing recession.

through the deposit insurance agency (FOBAPROA), the government strategy involved the following elements.

- Several programs for the restructuring of credits aimed at debtors, which gave a discount on the principal and allowed debtors to redenominate their loans in inflation-indexed accounting units to protect them from the surge in nominal interest rates. In this way, nonpayment was reduced.
- A dollar liquidity facility aimed at banks with relatively high levels of external liabilities. The facility charged a high dollar interest rate to ensure that the resources were only used for temporary liquidity shortages.
- A temporary capitalization program (PROCAPTE) to compensate for the loss of capital due to the increase in nonperforming assets. In this program, FOBAPROA purchased subordinated and convertible debt issued by banks with low capital-asset ratios.
- Facilitating a more permanent recapitalization by buying credit portfolios and accelerating the liberalization of the rules governing foreign ownership of banks in Mexico. The loans were only bought on condition that the amount of resources provided by the operation be matched by a certain amount from the owners. In addition, the loans that were bought were still to be collected by the banks and any loss would be shared between FOBAPROA and the original bank, thus giving incentives for the recovery of the most resources possible.
- Support for recapitalization was provided to those banks that were considered to be in good shape and that followed more conservative banking practices. Those banks that had deeper solvency problems or had followed more risky strategies were intervened by the National Banking Commission (CNBV). This was very important to reduce moral hazard in the future.

The cost of this program has been estimated at approximately 19 percent of GDP. As mentioned, it implies a substantial use of fiscal resources, but the cost was smaller than that of other banking support programs such as Indonesia's, which cost 40 percent of GDP after its crisis in 1997, or Chile's, which cost 33 percent of GDP during the 1980s. But the success of the program was crucial for the quick recovery of the Mexican econ-

omy observed in 1996 and its subsequent growth. A significant measure of that success is that in Mexico there was not a single bank run during the crisis of 1995, and depositors had to bear no losses. The absence of bank runs is a direct consequence of the support programs implemented and of the overall policy response that backed this strategy fiscally and generated incentives to avoid a run on foreign currency by means of a tight monetary policy.

An important counterpoint to the genesis and resolution of the Mexican banking crisis is the dramatic situation in Argentina. In that country, banks had gradually built up a large exposure to sovereign risk, and since early 2001 the government had exerted pressure to have banks roll over their holdings of public debt. After the large swap of government bonds in June, banks ended up with large amounts of long-term government bonds with high coupon rates, long grace periods, and an increasingly illiquid and depressed market. In fact, the government itself became the largest source of risk to the banking system. Fearing that a government default might lead to confiscation of their deposits, account holders tried to get their money out of banks, which produced a continuous run until deposits were largely frozen by the government in December 2001. This measure signaled the end of the regime. Social protests over the freezing of deposits led to the downfall of the government and this, in turn, triggered the collapse of the currency board and the declaration of default. Both these events had dire consequences for the banks, which not only had government debt on the asset side of their balance sheets, but had an essentially dollarized liability side too.

So far, a number of schemes have been tried to address the problem posed by the dollar deposits and the nonperforming loans on the banks' balance sheets. The crucial element in this story is the role of the government, whose own fiscal problems helped generate the banking crisis, and have prevented it from acting to solve the crisis that broke out. The Argentinean government has been unable to find mechanisms to spread any losses over time and to protect depositors or put the burden of the adjustment on depositors in a politically sustainable way. As long as this problem remains unresolved, it will be difficult for Argentina to find its way to recovery.

IMF Programs and Moral Hazard

Recent crises lead to a reassessment of the size and timing of IMF disbursements. Traditional IMF programs involve limited, and evenly phased, access to Fund resources. This practice, though rooted in that institution's experience, does reflect a number of important assumptions concerning the nature of the shocks suffered by a country and the best response to them. Typically, a country facing an adverse external shock or reaching the day of reckoning for unsustainable behavior must undertake some amount of adjustment. IMF assistance aims to allow for the needed adjustment to take place gradually, and in cases where the disruption is deemed temporary, to reduce the absolute amount of adjustment needed by helping the country to finance its temporary problems on reasonably favorable terms. The gradual delivery of financial support takes into account the need to provide incentives for the country authorities to follow through in the implementation of their responses to the economy's problems. Normally, such phasing should not in itself constitute a problem, since the difficulties facing the country, as well as their solution, are of a flow nature, and gradually unfold over time. However, if a crisis is triggered by a change in investor attitude owing to events unrelated to the affected country's fundamentals, as in the case of contagion or in a self-fulfilling speculative attack, the typical rules for the IMF response can run into difficulties.

To begin with, there is no clear and simple concept of how much macroeconomic flow adjustment may be necessary, and therefore the flow accounts are not a sufficient guide to determine the size of support. Typically, IMF assistance is determined on the basis of repayment capacity and balance of payments needs estimated on the assumption that some adjustment is undertaken, that economic activity unfolds according to some reasonably conservative scenario, and that certain sources of financing remain available. But these dimensions get blurred in an expectations-driven crisis. As noted before, the volatility of the exchange rate during capital account crises and the fragility of macroeconomic forecasts make the evaluation of balance of payments needs especially difficult in these cases. Moreover, forecasting the non-official elements of the capital account is the main problem, given the binary behavior of private capital flows, which is affected by

herd behavior. In fact, the measure of balance of payments needs and repayment capacity are endogenous to IMF financing itself. Undershooting the critical amount of official support will not elicit a favorable response from investors, leaving the program underfinanced. In contrast, meeting or overshooting that critical level of support might have the effect of making it unnecessary for the country to use all available official resources.[24]

Phasing and conditionality (apart from size) are two elements affecting the ability of IMF support to act as a catalyst of private capital flows. Here the dilemma is between being an effective catalyst of external capital reflows by assuring that sufficient resources will be available up front to see the country out of its difficulties, and loosening the incentives for the proper implementation of the economic program. The latter possibility, in fact, entails a risk that markets will expect that important elements of the economic program will not be fully implemented. Such a belief would again be an obstacle to the return of voluntary capital. Phasing and conditionality, therefore, do play an important role.

These facts have been recognized by the IMF. The size relative to quota of the programs studied in this section was unprecedented, as Table 1 shows. In this regard, the most noteworthy cases are Turkey in 2002, with 2,544 percent of quota; Korea in 1997 with 1,938 percent of quota; the initial 2001 Turkish program with 1,560 percent of quota; and Argentina's revised program of September 2001, with 800 percent of quota. Not only were the sizes of access under these programs unusually high, they were also often supplemented by other official resources. In many cases the overall rescue packages included large bilateral components. In addition, the calendar of IMF disbursements under these programs was considerably more frontloaded than usual, with over 60 percent of total resources scheduled to be disbursed during the first six months of the programs. However, the IMF did not go as far as to give up phasing.

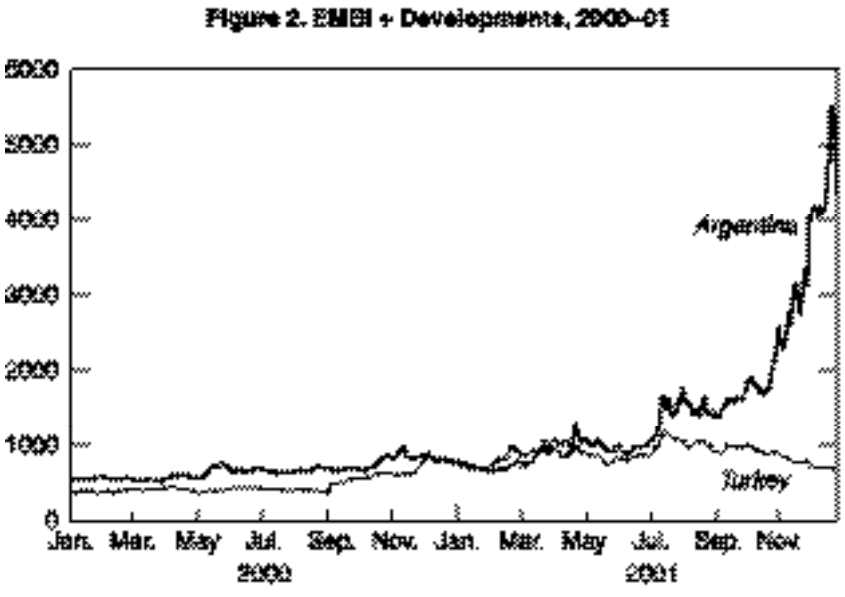
[24]The Mexican case provides a useful illustration. The size of the Mexican program had to be large (in fact, it approached US$50 billion including all bilateral and multilateral sources) to restore confidence, as it did. The main reason was the pressure represented by maturities falling due and by the increasing difficulties rolling over the stock of short-term government securities denominated in dollars (the "tesobonos"), which represented a gross financing need of almost US$30 billion in 1995. On top of that, other financing needs of the government and those of the private sector meant that the overall gross financing needs in 1995 exceeded US$60 billion.

Table 1. Total Access to IMF Resources in Some Recent Programs
(Percent of quota)

Country	Year	Total Access
Mexico	1995	688
Thailand	1997	505
Indonesia	1997	490
Korea	1997	1,938
Russia	1998	449
Brazil	1998	600
Argentina	January 2001	500
Turkey	2001	1,560
Argentina	September 2001 (includes amount of January 2001 program)	800
Turkey	2002 (includes amount of 2001 program)	2,544

Source: IMF.

I want to reemphasize the importance of a signal by the country itself and by its government that problems are being addressed. In that regard, a significant adjustment serves a double purpose: to correct any flow imbalances and to rule out any suspicion that a country may in fact be insolvent. The reason is that insolvency is, to a large extent, a function of the ability of an agent—a government in this case—to take the necessary steps to modify the trajectory of its debt. Such ability was made patent in the cases of Mexico in 1995, Brazil in 1999, and Turkey in 2001 through the delivery of difficult and important improvements in their primary fiscal balances; by contrast, this ability to correct course seems to have been limited in the current Argentine crisis. It takes time to implement measures; it takes time to verify that measures are adhered to; and it takes time for measures to bear fruit. In fact, looking only at the sovereign spreads of the last two countries I mentioned, it is remarkable how for a while the EMBI indexes for Turkey and Argentina tracked each other, and how they went their separate ways since mid-2001 (Figure 2). It took markets some time to distinguish between these countries, and for the countries themselves to show their ability to handle their crises. In any case, it is interesting that both country risk measures started diverging in August 2001. That month saw three contrasting announcements from the IMF: a new Stand-By



Arrangement for Brazil, the successful completion of Turkey's mid-year review under its program, with a strong backing from the IMF's Executive Board, and the acceleration of disbursements for Argentina under its existing program to permit it to face maturities falling due. This suggests that what is seen in the divergent paths of the Turkish and Argentinean spreads is that markets were reacting to the same information analyzed by the IMF. But might investors have been taking a clue from the differences of treatment by that institution? The latter hypothesis brings us to the issue of moral hazard, which I will discuss next.

However complicated the circumstances of an individual program may be, the IMF must also look beyond any given case and consider the consequences of its actions for the international financial system at large. From a medium- and long-term perspective, financial support that is sizable enough to easily reactivate private capital flows may be too large for prudence, breeding moral hazard. This concern has been at the top of the list of concerns of IMF officials, supporters, and critics since the Mexican rescue package of 1994 seemed to set a new precedent for official support, and especially since the record-breaking Korean package. But what is the evidence in favor of the moral hazard hypothesis?

To start with the easier part of the answer, it is clear that no policymaker in the world likes to go to the IMF for help. As Stanley Fischer observed in his Robbins Lectures, 10 out of the 12 ministers of finance and central bank heads who presided over the onset of a major crisis were not there a short time later to work on its solution. Thus, they paid a price for whatever share they may have had in conducting policy imprudently. Let me add that the recession associated with the Mexican crisis of 1995 without a doubt contributed to the loss first of the majority in congress and later of the presidency by the PRI, until very recently the longest serving party in the world. These examples should suffice to dispel the notion that the availability of IMF support encourages government officials to pursue high-risk strategies.

The more contentious issue is whether the actions undertaken by the IMF and other official providers of emergency financing, including governments, led to imprudent lending by international private investors. The proper departure point for the discussion of this issue is the acknowledgment that the absence of any prospects for official support during capital account crises would not lead to an efficient operation of world capital markets. There is considerable consensus among observers from the policy arena, academia, and the markets themselves on the proposition that market participants are prone to exhibiting behavior capable of producing suboptimal outcomes. Herd effects and other coordination problems produce excess volatility and will, left to themselves, make the cost of international financing high—both the ex ante cost paid in the form of interest rates and the effective, ex post cost paid in the form of a liquidity crunch. Therefore, from a normative perspective, the existence of official emergency financing, by reducing the volatility of capital markets, can improve welfare and efficiency.[25]

Then, the question is really whether, so to speak, we have "too much of a good thing," and the availability of official financing does not just moderate existing market imperfections, but produces new and larger distortions by encouraging careless lending. This is clearly an empirical question. Beginning with an informal look at this problem, one cannot fail to notice that contagion and

[25]This issue is well developed in De Long and Eichengreen (2001) and De Long and others (1990).

the typical run for the exit by herds of investors is itself a demonstration that private creditors do anticipate losses if they do not leave a difficult situation in time. In fact, with the possible exception of very short-term investors, some early leavers, and a few vulture creditors, most private creditors have taken losses as a result of the capital account crises that occurred.[26]

Rigorous research on the subject of moral hazard is, unfortunately, still limited. However, the work that has been carried out has failed to uncover clear signs of moral hazard. Work done by researchers at the U.S. Federal Reserve (see Kamin, 2001), for example, found that sovereign bond spreads of emerging markets were actually higher after the Mexican crisis of 1994–95 than in the preceding period, even after controlling for bond ratings. Also, the dispersion of those spreads across countries has been significantly higher following the Mexican crisis, suggesting that investors are becoming increasingly sensitive to the particular prospects of different countries. Moreover, this is confirmed by the finding that the sensitivity of sovereign spreads to changes in credit ratings increased after the Mexican crisis, contrary to what the moral hazard hypothesis implies. Thus, investors seem to have been more wary of going into emerging markets after the first big support package than before. Similarly, controlling for other factors that determine creditworthiness, there is no evidence that spreads are lower for large countries, so moral hazard owing to the perception that there are countries that are too big to fail and, therefore, will receive large support packages, does not generally hold.[27]

Economists at the IMF have also looked at the issue of moral hazard using statistical tools (see Lane and Phillips, 2000). One of the tests they carried out is based on the idea that if the IMF has more resources at its disposal, the possibility of moral hazard should grow. Therefore, they test whether increases in the IMF's

[26]Even in Mexico in 1995, where tesobonos offered protection against exchange rate risk, discounts were high and original holders who tried to exit took losses. More generally, the practice of marking to market is especially useful in this regard, as investors have to show their accrued losses in "real time."

[27]One possible exception may have been the Russian case in 1998. In the run-up to the declaration of default, the purchase of GKOs was sometimes referred to as "the moral hazard play" among some investors who did believe the West would not let Russia fold down. Those investors took heavy losses, and their example should provide a harsh lesson to others.

loanable resources have an appreciable influence on sovereign spreads, but find no important effects. The most promising piece of evidence in favor of the moral hazard hypothesis is the rise in spreads following Russia's default on its GKOs, which some observers attribute to a reduction in moral hazard. Now, if that interpretation is correct, it is still possible to wonder whether observers have not interpreted the Russian crisis as a regime change and whether the finding of moral hazard before the Russian default does not imply the continuing presence of moral hazard. Moreover, it is just as easy to argue that the rise in spreads observed after the default on GKOs was due to a "wake-up call" effect rather than to a decline in moral hazard.[28] In sum, the available evidence does not allow us to assert with a reasonable degree of confidence that moral hazard induced by emergency financing is a serious problem.

This lack of convincing evidence notwithstanding, many politicians and observers in the West argue that moral hazard is a grave issue, and therefore advocate the adoption of a series of measures, including letting debtors fail to provide a lesson to future lenders.[29] This is a very delicate matter, for the welfare costs of providing such a lesson can be enormous. Therefore, very strong and persuasive evidence should be required before accepting this type of recommendation. Such strong evidence does not exist, and so the international community should not risk provoking concrete and real problems—including the transformation of a liquidity crisis into a solvency crisis—to prevent a potential problem whose importance has not been established, and which, on the contrary, has been found to be limited by the most rigorous empirical research available.

Finally, the concern about moral hazard and the perception of insufficient IMF resources on the part of G-7 countries and international financial institutions led to the involvement of private creditors in the resolution of capital account crises. In the cases

[28]See Dell'Ariccia, Gödde, and Zettelmeyer (2000).

[29]Moreover, they often argue that their taxpayers are directly subsidizing IMF program countries, a situation that naturally creates discomfort among political constituencies. This view is incorrect for two related reasons: a country receives a market-based remuneration on any positive net position held at the IMF; and conditionality, monitoring, and phasing of financial support have ensured an impressive record of repayment by countries with IMF programs, which fully justifies the low funding costs faced by the IMF. See Jeanne and Zettelmeyer (2001).

mentioned in this subsection, perhaps the most successful example of private sector involvement was the preservation of private credit lines during the Korean and Brazilian crises. This was possible because the private creditors involved were foreign banks, over which their own monetary authorities could exercise some influence. Other attempts at private sector involvement were largely unsuccessful, given the dispersion of international creditors, mostly anonymous bondholders. The most visible attempts at private sector involvement were the voluminous debt exchanges carried out by the Argentine government in 2001. While they meant some relief for 2002 and a few years more, these swaps were actually costly in cash terms, since they required the payment of accrued interest.[30]

Summing Up

Emerging markets, by the very nature of their participation in world capital markets, are exposed to liquidity crises arising from changes in sentiment among investors. These changes in perception, by drying up external financing, create severe recessions. In addition, the exchange rate depreciation and interest rate hikes caused by those crises have adverse effects on the balance sheets of public and private agents in emerging market countries, as these effects are compounded by underlying imbalances (reflected in large deficits, be they in the private or in the public sectors). Thus, the emerging market crises of the past decade had a very negative effect on these economies.

Two factors were essential for the successful resolution of most of these crises:

1. The determined response of the government and the pursuit of prudent, ambitious, and flexible stabilization programs, and

[30]Moreover, they involved high costs in the medium and longer terms, since creditors would only take the swaps if they could lock in the very high yields implicit in secondary market prices. In fact, these swaps may have worsened the long-term prospects of the government. In short, the advisability of these swaps remains an open question. Private sector involvement remained, throughout these crises, an unresolved issue.

There have been few cases of private sector involvement for large countries. More frequent have been those involving smaller countries and smaller groups of creditors, such as the Ukrainian bond exchange. However, even in some of these cases private sector involvement was not enough to avoid a drastic and sustained reduction in foreign private financing.

2. The timely availability of significant financial support from official sources.

In other words, the need for overshooting adjustment and financing in response to severe capital account reversals is clear. Two phrases used at the time of the Mexican program illustrate this approach:

1. Prepare for the worst and hope for the best, and
2. Treat negative shocks as permanent and positive ones as transitory.

In those cases where countries undertook significant adjustment, adopted structural measures to protect the financial system and address balance sheet imbalances, and could count on strong support from official financing sources, relatively quick recoveries followed, in terms of both economic activity and the return to world private capital markets.

Considering the need for a strong policy response, countries are confronted with dilemmas, in particular regarding the appropriate degree of fiscal adjustment. Should they pursue vigorous fiscal consolidation or try to be mindful of the possible negative impulse thus imparted to aggregate demand? After looking at the contrast between the success of the Mexican strategy of 1995, the Brazilian 1999 program, and the Turkish efforts in 2001, on the one hand, and the dramatic problems caused by the initial hesitation of Russia in 1998 and the continuing paralysis of Argentina on the other, it seems to me that the balance of risks is clear. It is always better to err on the side of caution and to act resolutely to fix any public financial imbalances, ongoing or potential.

The same could be said of international support. Given the nonlinear response of credibility to the size of the packages, once the international financial institutions are satisfied with the intended policies by the country's authorities, a large and front-loaded package has the largest probability of success.

Adjustment programs take time to implement, and at the outset it may be difficult to tell whether a country will be capable of following through. In this sense, a government must not postpone action, since any action will take time to bring about its intended results. In turn, sufficient and early financial support from official sources is key, to allow the government time to act and to convince external creditors, that their initial flight should be reversed. In most cases, the debt sustainability criteria will not

give an unambiguous answer. In these instances, international financial institutions and bilateral sources must not prejudge the actual insolvency of a government, a banking system, or a corporate sector when a crisis has erupted, simply leaving them to confront their creditors. Solvency is an endogenous property that depends on the ability to take adjustment measures, and policymakers need to be allowed the necessary leeway to execute those measures. The experience from the most recent crises clearly shows that, on average, the assumption that these economies were going through a liquidity crisis was correct. In addition, it would have been impossible at the start of each crisis to predict if it was going to end in default. However, as the current situation in Argentina highlights, the absence of an established framework for sovereign debt workouts has also made things harder for the IMF when a program is going off track.

III. Policy Lessons in Preventing and Dealing with Crises in Emerging Markets

Now that the lessons regarding crisis management have been discussed this section looks at crisis prevention, an area in which there has been significant progress and less controversy.

Careful analysis of the balance of payments crises that occurred since 1994 highlights that the increase in the magnitude of capital flows going to emerging markets during the past 10 years, the speed with which these can revert, and the linkages between assets of different countries due to investment practices have the following implications:

1. A small deterioration in fundamentals or in the market's perception about them can lead to large capital outflows;
2. Large capital outflows (or the sudden suspension of inflows) can take place, even if a country's fundamentals have not changed, because of sheer panic or contagion caused by the response of investors needing to cover losses arising from problems in other countries;[31] and
3. Recessions are more severe and financial variables can be more volatile than in traditional current account crises, as was seen in the crises of the 1990s, given that the balance

[31]For an in-depth analysis of this phenomenon, see Calvo and Reinhart (2000).

of payments shortage can be larger owing to the potential size of fast capital outflows.[32]

Thus, the discussions on the policy lessons and the reform of the international financial architecture have centered on how to minimize the vulnerabilities to capital outflows that may arise due to small, actual or perceived, shocks; how to limit contagion; and how to reduce the damage done to a country when these occur.

There is broad consensus that sound domestic policies are the most important factors in reducing the vulnerability to shocks, changes in sentiment, and contagion. Policymakers in emerging markets have very little room for maneuver and need to act rapidly given that the response of the markets may be very swift.

These policies need to be supported by a strong liquidity position that guarantees investors of the country's capacity to pay even if financial markets shut down. However, it is not optimal to follow policies that reduce the probability of a crisis almost to zero. For example, accumulating international reserves is costly, as is issuing only long-term debt. In the extreme, the probability of a capital account crisis could be reduced by establishing draconian capital controls or keeping the current account permanently balanced, but these may have high costs in terms of foregone growth. Thus, international cooperation is needed to reduce this probability further in a cost-effective way and to help countries to reduce the negative effects of these events when they happen, not to mention avoiding the negative externalities that emerging market crises have had on international financial markets.

The recognition that countries with strong domestic policies can be subject to speculative attacks and the greater potential cost associated with capital account crises have generated a wide

[32]As Truman (2002) notes, "the crises of the three principal East Asian countries in the late 1990s exceeded in virulence those of Latin American countries" in both the 1980s and 1990s. He also argues that for the three major Latin American countries "the external financial crises of the l980s were more disruptive than their crises in the mid- and late 1990s." There are several things to note with respect to this last result. First, Argentina's recent crisis is still unfolding. Second, the degree and causes of the external disequilibria were different in the two decades. Third, the response of the countries themselves, that of the industrial countries, and that of the international financial institutions differed significantly between decades.

discussion about the need for a reform of the international financial architecture. As I mentioned before, this discussion has focused on two extreme cases, the first being the establishment of mechanisms to prevent and solve liquidity crises, and the second being the development of procedures that facilitate renegotiation in the case of solvency crises. I will later argue that these are not enough, as they only deal with some of the risks in this new environment of large private capital flows, but do not address the most important cases of countries that have some fundamental weaknesses—and therefore are not pure liquidity crises—but are not insolvent. With this framework in mind, I will discuss in more detail the domestic policies that need to be followed as well as the reforms to the international financial system that have been proposed, to reduce the frequency and negative effects of future crises.

Domestic Policies

Sound monetary and fiscal policies are considered crucial in avoiding balance of payments crises. It was already widely recognized that lax policies that led to an excess aggregate demand or an inconsistent policy mix could lead to a high current account deficit, an unsustainable external debt burden, and vulnerability to shocks. What is new about the more recent episodes is that they occurred even in countries where inflation was low, fiscal deficits were small or even absent, and the level of government debt was low.[33] It is true that in most cases the crises were preceded by shocks, but in no case did they imply a deterioration in policies such as those observed in the past—for example, before the Latin American debt crisis of the 1980s. Thus, it has become clear that good monetary and fiscal policies are necessary but not sufficient conditions to avoid a capital account crisis and that a slight change in policies can lead to a significant deterioration in the perception of a country's prospects. So what was behind this vulnerability to sudden mood swings among participants in international capital markets?

[33]As a share of GDP, exports, or international reserves.

For example, fiscal balances as a proportion of GDP were 0.7 percent and –0.1 percent in Mexico during 1993 and 1994, 2.4 percent and –2.1 percent in Thailand, and 0 percent and –1.7 percent in Korea during 1996 and 1997, respectively.

The abrupt changes in perception are affected by several other factors and not just by the stance of monetary and fiscal policies. The main elements that have been identified are:

1. the liquidity position of the public and private sectors;
2. the level of public and private indebtedness, particularly foreign indebtedness;
3. excessive risk-taking behavior by banks; and
4. lack of transparency and communication with market participants.

I will discuss each of these in detail, as well as their implications for domestic policies.

The Mexican crisis of 1994–95 made it very clear that investors focus on the debt amortization schedule, and not only on its level. A large amount of short-term liabilities compared with reserves levels drastically increases the probability that a temporary liquidity shortage will translate into a massive capital account crisis due to a confidence turnaround. The solution is clear: increase the level of international reserves and reduce the amount of short-term liabilities.[34]

Probably the main reason why this solution is not always followed is that a policymaker undertaking serious reforms and stabilization policies tends to believe that these will succeed, while market participants will have some doubts. This generates an important expectations wedge about where interest rates and exchange rates will be in the future, with the policymaker believing that the fixed exchange rate regime is sustainable, that the differential between domestic and foreign interest rates is thus due to erroneous expectations, and that interest rates will fall in the future by more than the markets expect. Thus, there would seem to be an arbitrage opportunity and a bias in favor of issuing debt in foreign currency and in the form of short-term liabilities. However, the increase in the probability of a balance of payments crisis associated with these policies suggests that this arbitrage opportunity is largely an illusion. The potentially higher cost of issuing long-term domestic debt is an adequate insurance premium paid to reduce vulnerabilities and increase the probability of success. In addition, a proactive debt management strategy needs to be

[34]As I discuss further on, some cost-efficient ways to increase international reserves are through the contingent credit line, by augmenting the allocation of SDRs, or by raising IMF quotas.

followed to ensure there will be no amortization problems due to a sudden drying up of international capital flows.[35]

In the previous section I mentioned that large external private sector indebtedness increases the probability of a crisis. This implies that there is a potential negative externality, as firms and banks do not internalize the effect that their additional debt places on the probability of a capital account crisis. In part, this phenomenon is related to the fact that firms and banks do not fully internalize their exchange rate exposure owing to the implicit exchange rate insurance that exists in a fixed exchange rate regime.

Negative externalities are typically dealt with through taxes, and correspondingly a resurgence of the discussion on the optimality of imposing levies on capital flows has reemerged. Taxes can be imposed both on outflows and inflows, and can be used to promote different types of investment. It seems that taxes on inflows are the best option, as the Chilean experience suggests. However, they seem only to work for a short time, as firms and investors tend to find ways around them with certain ease. This is likely to always be the case in the absence of very stringent regulations that would have the countereffect of limiting the development of the financial system. In fact, Chile recently abandoned its implicit taxes on capital inflows.

A more efficient way to deal with this problem is to have a flexible exchange rate and better regulation and supervision of the financial sector. The floating exchange rate regime changes the composition of capital flows toward longer maturities and foreign direct investment, as the volatility of the currency is higher in the short term than in the long term. This, in turn, limits the size of possible flow reversals.[36] In addition, the volatility

[35]In the Mexican case, the ratio of internal public debt to total public debt changed from an average of 26.5 percent in 1994 to 48.1 percent in 2001. In addition, the average maturity of domestic debt has increased from 284 days to 646 days in the same period. As for external market debt, Mexico's strategy has been to issue bonds far in advance in order to roll over the liabilities.

In addition, there has been a substitution of foreign for domestic debt. Proponents of dollarization in emerging markets have argued that there exists "original sin"—that is, an inability of emerging markets to issue long-term debt in their domestic currency leading to either currency or maturity mismatches. However, Chile and Mexico have managed to issue long-term debt denominated in domestic currency.

[36]The composition of the capital account in Mexico has changed dramatically between 1994 and now. From 1990 to 1994, portfolio flows represented 67.1 percent of the net capital account on average while foreign direct investment was 25.4 percent. In the period 1996–2000, these proportions changed to 37.3 percent and 91.3 percent on average.

of the exchange rate rules out the perception by the private sector of the existence of implicit guarantees and avoids one-sided bets against the currency. The fact that the exchange rate adjusts automatically under a flexible exchange rate limits the generation of political pressures to defend unrealistic levels of the exchange rate, to establish ex post capital controls or dual or differential exchange rates, or to implement bailouts of both foreign and domestic investors.[37]

Finally, by allowing adjustments in the level of the nominal exchange rate in response to domestic and external shocks that affect the equilibrium level of the real exchange rate, the flexible rate limits the volatility of production and the level of external imbalances. A related point is that this regime allows the central bank to follow an independent monetary policy in response to these shocks. The number of emerging market countries adopting flexible exchange rates is a clear indication of the benefits associated with this regime. Even though most of the countries were forced to adopt flexible exchange rates owing to a loss of international reserves, they did not return to fixed regimes once the level of international reserves recovered.[38]

There are several costs associated with a floating exchange rate. First, investors command a risk premium owing to the higher volatility and increasing domestic interest rates. In turn, these higher domestic rates can give a relative advantage to large exporting firms, which typically find it easier to obtain resources from abroad. Second, the informational content of exchange rates determined by market participants is limited if the market is thin or dominated by a small number of agents. Finally, the absence or low level of development of derivatives markets—which allow hedging of exchange rate risk—can imply high costs in the form of an inefficient allocation of resources as banks, firms, and individuals need to limit their exchange rate exposures by them-

[37]For a more complete discussion of the benefits of a floating exchange rate and the Mexican case, see Ortiz (2000).

[38]However, even when the flexible exchange rate regime works as a stabilizing device or allows independent stabilization policies, its role is clearly conditioned by the fact that it limits short-term capital flows. Otherwise, sufficiently large short-term flows not guided fully by fundamentals can generate deviations of the real exchange rate as well as limit the ability of the central bank to determine monetary conditions in the economy. Thus, the first role of the exchange rate is a prerequisite for the adequate functioning of the other two.

selves. The magnitude of these costs is compounded by the financial fragility of the country.

To reduce these costs, several measures to reduce financial fragility are necessary. The three most important measures are the following:

1. development of derivatives markets;
2. adequate debt and liquidity management policies; and
3. development of markets for long-term domestic debt, either with fixed nominal rates or through bonds indexed to the consumer price index.

Transparency and communication are key for the adequate functioning of a flexible exchange rate regime. One of the great advantages of this regime, which is to allow for a gradual and orderly adjustment in response to shocks, will not occur if markets do not receive gradual and orderly information. In addition, a policy of continuously explaining the government's actions is the best way to avoid misinterpretations of policy actions. It is also a two-way channel of communication, by means of which policymakers can receive firsthand feedback about the concerns of the private sector.[39] These elements are crucial to avoid confidence crises.

Overall, in this more vulnerable environment, policies should aim at establishing a much more solid macroeconomic environment. To provide greater certainty, these should be institutionalized as much as possible. One example is to grant autonomy to the central bank. Another area in which significant progress has been made is the development and adoption of uniform standards and codes that impose discipline on policymakers through greater transparency.

However, there are other institutional aspects that should be strengthened. One of the most important is to reform the legal framework so that markets operate properly by reinforcing the protection of property rights or providing adequate regulation or market incentives when market failures are present and promoting competition. All these elements are important from the viewpoint of crisis prevention but also from the perspective of higher long-term growth, as they allow firms and individuals to under-

[39]Mexico established an Investors Relations Office in 1995. Its functions include continuous communication with analysts and investors and preparing conference calls and documents, initially quarterly and now monthly, to explain the economy's evolution as well as government policies. For a more complete description of Mexico's policies on communication and transparency, see Ortiz (2002).

take projects with a medium-term perspective in mind. In sum, one of the greatest challenges confronting emerging markets is to guarantee that appropriate policies will be followed in the future. Therefore, building institutions to reduce the uncertainty regarding future policies is an important task.

In the Mexican case, an institutional arrangement that has contributed significantly in all these aspects by limiting the discretionary actions of the governments involved and reinforcing the institutional environment is the North American Free Trade Agreement (NAFTA). It seems fair to say that NAFTA has led to greater certainty and stability, as can be judged from the flows of foreign direct investment into Mexico and the important increase of Mexican exports in the years that followed the signing of the treaty. Also, the autonomy granted to several central banks in emerging markets is one of the elements that explains the significant reduction in inflation in many developing countries.

In summary, the lessons from the recent balance of payments crises have led countries to undertake the following policy adjustments:

1. Maintain very sound fiscal and monetary policies;
2. Implement proactive liability management strategies to reduce the proportion of foreign and short-term liabilities of the public sector as well as to limit concentrations of amortizations in a short period of time;
3. Establish adequate regulation and prudential supervision of the banking sector;
4. Provide market incentives to private agents so that they limit their indebtedness in foreign currency, among which the most efficient is a flexible exchange rate;
5. Adopt flexible exchange rates to limit short-term capital flows, to allow adjustment of the real exchange rate to shocks and carrying out of independent monetary policies;
6. Increase transparency by publishing timely information at fixed intervals as well as establishing channels of communication with the private sector; and
7. Undertake institutional reform that increases certainty for the private sector both for operations with other private agents and by limiting discretionary actions of government authorities.

Implications for the International Financial Architecture

As I mentioned before, the most important factor in crisis prevention is to follow adequate domestic policies. Nevertheless, while some of these policies could be carried out to their full extent unambiguously, others typically imply trade-offs. Accumulating international reserves is costly. Imposing regulation that stifles all financial sector development implies potentially large costs in terms of growth, and maintaining a rigid fiscal stance implies that important social needs, such as investment in education and health, are underfinanced even though they have high returns from both economic and equity viewpoints. It is also likely that many of these extreme measures would meet with intense political resistance.

Thus, the discussion on the reform of the international financial architecture has to center on how coordination between countries and international financial institutions can lower the cost for countries of preventing crises, and how to reduce the cost of crises when they happen in the current context of larger and more volatile capital flows.

Recent crises pose several challenges to the current international financial architecture due to several factors, among which the following should be highlighted.

1. Countries may face a speculative attack even if their policies are adequate, mainly owing to liquidity problems. Therefore, it has become more difficult to anticipate crises and prevent them;
2. The increase in the size of private capital flows implies that the currently available amount of official resources may fall short of what is needed to stabilize the situation after a capital account crisis, not to mention the political stance toward a large package of major creditor countries; and
3. The increase in indebtedness in the form of bonds implies that debt renegotiations in the context of a solvency problem are more difficult owing to the complexity of coordinating a significantly larger number of parties.

The recognition of these three problems has conditioned the discussion on the reform of the international financial architecture, which has been structured around the dichotomy of liquidity versus solvency problems. The first case corresponds to those

countries with adequate policies that suffer mostly unjustified speculative attacks (i.e., a pure liquidity crisis). The second case concerns countries that have serious fundamental problems and will require a partial default on their liabilities to return to a sustainable situation.

It is important to discuss these two extremes. However, this approach does not pay sufficient attention to the additional improvements that are needed to deal with those crises that are neither pure liquidity nor solvency problems. I believe this approach mainly reflects concern with the unwarranted contagion that followed the Russian crisis and the solvency problems of Ecuador in 1999 or Argentina today, while forgetting the lessons from the intermediate crises in Mexico, Southeast Asia, Brazil, and Turkey. Thus, in what follows, I will discuss each of the three types of crises, the proposals that have been made to resolve them, and my own impressions about further work to do.

On Liquidity Crises

As mentioned earlier, several of the recent capital account crises occurred in countries that had some vulnerabilities but whose policies were widely perceived as adequate by domestic officials, international organizations, investment analysts, and rating agencies. Thus, the situation in these cases was not a moral hazard problem of countries following on purpose inadequate policies or maintaining unsustainable disequilibria. It was more of a potentially self-fulfilling confidence crisis.

Given the speed with which these events can take place, and the lag in putting together IMF packages, an investor can decide it makes sense to take its money out even if it knows that IMF support is being negotiated. Thus, to deal with these cases where the necessary policy adjustment is small, if one is needed at all, a fast response mechanism that is quasi-automatic is needed. This is the idea behind the contingent credit line (CCL), developed by the IMF in the aftermath of the Asian-Russian crises of 1998, a mechanism for which countries prequalify on the basis of their economic policies and macroeconomic situation. In addition, its size is larger than the typical program and its disbursements faster. When a country needs the resources, it would generally obtain up to one-third of the line of credit fairly quickly, with the

rest made available after a revision of policies that is deemed to be less exhaustive than the one associated with a Stand-By Arrangement.

Even though the creation of the CCL is a positive development, it competes with an existing practice: the negotiation of a "precautionary" Stand-By Arrangement.[40] The main advantages of the CCL are that it is a high-access, fast-disbursement facility. However, there are four main problems with it.

1. The first is that it can only be used for contagion problems. Contagion is the clearest case in which no significant policy adjustments are needed to ensure a recovery of economic conditions and repayment of the resources, as the shock is driven by panic or investment practices and not by a deterioration of fundamentals. However, a country can suffer from a speculative attack arising not from developments in other markets, but due, for example, to a temporary deterioration of its terms of trade or adverse developments in industrialized countries' financial markets. There is also the need for a fast response mechanism to counter these potential crises, so countries that have followed adequate policies, have repaid the IMF promptly, and have made the adequate adjustments when needed should be allowed to use the resources from the CCL for these other types of shocks.
2. Given that a gain or loss of the CCL has the potential of being similar to changes in an investment-grade rating, it is necessary to have a clearer set of guidelines for market participants to react in an orderly and gradual way to potential changes in access to the CCL. An exit strategy for those countries that lose their CCL is of particular importance. An option would be to replace a lost CCL with a Stand-By Arrangement to be nogotiated and approved before any announcement that the country would lose its CCL.[41]
3. To make the CCL more attractive, the commitment fee should be reduced, perhaps to zero. This makes economic sense if there is a perception that externalities exist in international financial markets, particularly if contagion is considered a real

[40]The main distinguishing features of a "precautionary" Stand-By Arrangement are that there is no immediate need for resources and that the country does not intend to draw funds from the arrangement unless exceptional circumstances arise.

[41]This idea was suggested by Peter Kenen.

problem. Also, ways should be found to ensure that this mechanism not carry the stigma of traditional programs.

4. The one-year maturity of this facility is too short. This reduces the country's interest in it and the disciplining role it should have as the country and the IMF can just let it expire.

The CCL is mainly meant to provide additional international reserves to a country facing liquidity problems. As such, it should reduce the probability of a loss of confidence in a country's debt-servicing abilities from occurring in the first place, and when they do occur, it should help to solve temporary liquidity problems that require minimum policy adjustments.

Calls for private sector involvement in the case of liquidity crises have taken the form of establishing contingent credit lines with private banks and the inclusion of options in bonds that would allow a late repayment under certain conditions. These are actually considered by the IMF as desirable prerequisites to access its CCL.

The establishment of private contingent credit lines is desirable in itself and should be complementary to the CCL. However, having a working CCL in the first place could be very important to promote the development of private contingent lines. With the CCL in place, the private sector can take advantage of the monitoring abilities of the IMF, and the event that would grant access to the resources in the private line could be obtaining access to the IMF's CCL. In this respect, there should be a wider dialogue between the IMF, private sector financial institutions, and emerging markets.[42]

As to the inclusion of options in debt instruments, these have not yet been tested in a significant way by emerging markets,

[42]The argument has been made that private CCLs do not work because the institution providing the line will probably hedge the risk associated with it, potentially transferring the risk to other domestic agents or reducing the amount of funds it gives to them. This argument is inaccurate, as it does not reflect the way a bank would typically cover its risk from such a line. Once it grants the line, it has to cover its current contingent exposure by shorting a certain amount of the country's assets according to the probability that the line is exercised—but this is something that happens today, not at the moment the line is exercised. Once the line is drawn, dynamic hedging would require the bank to hedge more fully but given that this would occur in circumstances when the country is not able to obtain any other private funds it is unlikely that the hedging would imply an additional reduction of inflows to the country. This implies that, by establishing the line, the amount of inflows will be smaller in good times and larger in bad times than otherwise.

with the exception of some Brady bonds, whose payments were made contingent on the evolution of certain commodity prices for some countries. Even though the Brady bonds were relatively liquid instruments and the option was almost never in the money, they were more expensive than other types of bonds, suggesting that even less well-known or less exotic instruments without significant liquidity could be very expensive. This is another area where feedback from private market participants—on how they view these different instruments and what characteristics could be easily included in bonds—is very important.

*On Intermediate Case*s

In the case of most balance of payments crises, the problem will remain between clear-cut liquidity and solvency crises. IMF programs have been developed to deal with these intermediate types of problems. As they typically require important policy adjustments for the country to return to a sustainable situation in the balance of payments, there needs to be a more complex negotiation process with the IMF, so access should probably not be given in a quasi-automatic fashion. In spite of all the criticism the IMF has received recently, these programs have a good track record, allowing many of the countries that suffered crises in the 1990s to recover macroeconomic stability and return to capital markets in a short period of time, as I reviewed earlier.

However, the new financial environment also has important implications on how these types of crises should be dealt with. The potentially larger flows imply that the depth of the crises may also be greater in these cases, and the importance of credibility and expectations in the recovery process suggests that as much certainty as possible should be given to markets about the implications of the programs.

In several of these cases, countries needed more resources than traditionally provided under IMF agreements. Some resources were provided by the IMF through its Supplemental Reserve Facility (SRF), but in some cases additional resources were supplied by industrial country governments and other international financial institutions. This is not a case of overkill, but rather a reflection of the challenges posed by open capital markets and globalization. As more capital flows to emerging mar-

kets, the larger is the potential for reversal or the more damaging occurrence of a "sudden stop." The number of exceptions being made in the size of IMF programs and the uncertainty regarding the size of the packages has added to the markets' uncertainty about the potential assistance of the IMF and the motives driving its differential treatment between members. Thus, for IMF programs to be more effective they will typically require more certainty and a larger amount of resources per agreement than in the past. This is particularly important given that industrial countries are likely to be less willing to provide financial support in the future given political pressures, even though the financial cost to their taxpayers of past support has been nil.

Much of the recent emphasis on private sector involvement is not only due to the recognition that public resources may be insufficient but also in order to limit the perceived moral hazard problem. As reviewed previously, the empirical evidence indicates that the moral hazard problem is not significant. Therefore, I think that the moral hazard issue has been grossly overstated.

Accepting this political reality, we should keep thinking about developing mechanisms that would allow for private sector involvement in these intermediate cases. In this sense, we should consider all those market instruments that have been proposed, such as the inclusion of options that would allow deferment of debt service, a private sector CCL, and voluntary agreements such as the rollover of bank credit lines.[43] However, I think that private sector involvement in these intermediate cases should only be that which can be carried out easily by voluntary agreements or that can be included as clear ex ante conditions in bonds.

In summary, to adapt the current IMF programs designed to deal with intermediate crises to the new international context of larger capital flows, there is a need for the following.

1. Increase the size of quotas and possibly the size of programs relative to quota. In this sense, the current revision to

[43]So far, the type and amount of private sector involvement that has been imposed in different programs, as in the cases of Brazil and Korea, has varied significantly across countries in a discretionary way, and it is unclear how much of it will be required in future support programs. This is probably an important source of uncertainty in international financial markets nowadays.

IMF quotas should put more emphasis on capital account determinants than in the past.[44] As noted by Truman (2002), the analysis of a sample of a dozen emerging market countries shows that the average level of international reserves to GDP has increased by almost 10 percentage points from 1980–84 to 1996–2000. Thus, countries themselves are recognizing the need for a larger amount of resources as should the international financial institutions.

2. Front-load IMF disbursements. In the typical capital account crisis, the need for up-front resources is larger than in the old current account crisis. If a SDRM is in place, the reduction in conditionality associated with front-loading will be substituted by the credible threat that there will not be additional funds, and that if the current programs fail, the alternative will be an orderly default.
3. Allow for the level of private sector involvement that could take place through the establishment of rescheduling options and collective action clauses on bonds and loans and the establishment of contingent credit lines.[45] The perception with the establishment of the SDRM that the IMF has an orderly "exit strategy" could set the right incentives for countries to develop additional instruments that foster private sector involvement.

On Solvency Crises

How to decide if a country's solvency crisis warrants a partial default and a subsequent renegotiation process? The decision is an important one, as the ability of a country to service its debt may depend on the amount of public support that is provided. As I mentioned earlier, in practice it is very difficult to judge whether a country is having a balance of payments problem that can be solved mainly by domestic policy adjustment or is facing

[44]In the current discussions to enlarge quotas, it has been argued that, as countries are following better policies, the likelihood of future credibility crises is smaller. I think this is too optimistic, as the recent events have shown that crises respond to more complex circumstances and not just to a policy stance that in many cases was considered solid by academics and policymakers.

[45]An extensive discussion on the case for these types of clauses is found in Kenen (2001).

a solvency problem that requires a partial default. In those circumstances where the debt sustainability criteria does not give a clear cut indication of insolvency (as it is mostly the case), countries in trouble should initially be given the benefit of the doubt because it is more costly to treat a liquidity problem as a solvency crisis than temporarily dealing with a solvency crisis as a liquidity crisis.[46] However, it still might be the case that the country carries out domestic policy adjustment and receives all the resources from an extended program and still financial flows have not stabilized. If this happens, then I think it is appropriate not to provide additional resources, so the country will need to renegotiate the principal of its outstanding debt. For this procedure to work, it is crucial that quotas are increased and, potentially, the size of programs to quota as well. Otherwise, there is the risk of cutting the support too soon by using quotas that were appropriate for a different environment in the current context of larger capital flows.

This approach has several advantages. It is simple and transparent, as market participants will know beforehand how much support a country can count on. It is also a compromise between two views: those that think that most recent balance of payments crises are of a liquidity or speculative attack nature and those that think there are serious moral hazard problems or that most crises are solvency ones. Certainly, the probability of crises driven by credibility problems is larger than before, as is the size of the capital flows reversal—and thus it makes sense to increase the amount of support a country can receive. On the other hand, it is important to establish a clear limit after which there will be extreme private sector involvement in the form of a partial default and renegotiation. The fact that this is a compromise between the two extreme views held by many policymakers and academics would make this option much more likely to be accepted by the international community.

[46]Even in a situation in which we have a working framework for debt workouts, the disruptions to the debtor economy caused by the standstill, the possibility of the imposition of capital controls and a freeze on bank deposits, will be associated with important economic costs. In the opposite case the cost is mainly associated with postponing the decision for a small period of time while the country is given the opportunity to put a comprehensive program in place.

If a country needs to renegotiate, this would ideally be done in an orderly and consensual fashion. However, the larger proportion of debt in the form of bonds implies that there might be several cases when orderly and consensual renegotiation is unlikely under the current international financial achitecture. This problem has led to two main proposals about how to facilitate a debt renegotiation process.

The first is to include collective action clauses in bonds, a proposal emphasized recently by the U.S. Treasury among others. This is an interesting theoretical idea but can have significant problems in practice. These have been noted by the IMF as well. The problems are the following.

1. Clauses would require separate renegotiation for each different issue of bonds;
2. The clauses may be interpreted differently in different legal jurisdictions;
3. The inclusion of clauses in new issues does not solve the possibility of problems in the near future, as the substitution of old debt for new debt with the clauses is likely to take time; and
4. The existence of pari passu clauses may imply that, even if there is a minimal amount of debt without clauses, these are useless, as an unsatisfied minority of the bondholders with clauses might try to legally block payments if they are not treated in the same way as the holders of bonds without clauses.

Thus, I agree with the view expressed by the IMF that, while collective action clauses may be a good complement to other approaches and the idea should continue being explored, there are important problems of implementation that limit their usefulness as a robust solution to a solvency crisis.

The second proposal implies an IMF statutory approach that would work by amending the Articles of Agreement of the IMF to establish a procedure for debt standstills where a qualified majority of creditors would be sufficient to accord the debtor relief from legal action and also to determine the terms of sovereign debt restructuring. In this sense, the new conditions would be determined by a negotiation between the sovereign and its creditors, not decided by a third party.

The more recent IMF proposal represents an important improvement on the initial one, but there are still two problems.[47]

- First, the IMF would still validate whether a country can use the procedure or not.
- Second, the IMF could react by withholding new financing if it is not satisfied with the final restructuring, and in particular if it perceives the new level of debt as still unsustainable.

With respect to the concern on validation, for the mechanism to diminish uncertainty in a significant way, and in order to have clear rules, it might be better to have a set of explicit conditions under which a country would have access to the process (even when access is voluntary). Thus, there is a need for a three-way dialogue between the IMF, the sovereign, and investors about the conditions under which countries could use the procedure almost automatically, while at the same time investors do not feel they are being colluded against.[48]

The IMF threat that it could withhold new financing from the country if it is not satisfied with the results of the renegotiation process would impose several distortions on the process, going back to the criticism made to the IMF that it would have too much power over the outcome. In an extreme case, it would be deciding the outcome of the negotiation as the country has incentives to get at least the haircut deemed necessary by the IMF, and private bondholders may have incentives to give only the haircut needed for the IMF to continue providing resources. In addition, if this power is not exercised in a transparent fashion it could turn the negotiation into guesswork about what the IMF considers to be the sustainable level of debt.

A more appropriate scheme that provides the three parties with the proper incentives is for the IMF to supply a certain

[47]The IMF initially proposed a statutory approach with enhanced IMF authority in November 2001. It implied the design of an international institution modeled on a U.S. domestic bankruptcy court, evaluating the conditions for sustainability of a country's debt and determining a haircut. This was criticized by both country governments and the private sector as giving too much discretion and authority to the IMF. Thus, there was a revision and an alternative proposal was made in March implying a statutory approach based on majority action. In this more recent proposal, the new conditions are determined by a negotiation between the interested parties, not imposed by the IMF.

[48]In addition, an ex post validation procedure has been proposed. This works by allowing a vote by creditors that would revoke the protection granted by the SDRM after a certain period of time.

amount of financing at a minimum haircut, but then be willing to provide more resources as the haircut becomes larger. This way, private investors may be willing to provide larger haircuts if the probability that their debt is repaid increases significantly. It also gives important incentives for the private creditors and the sovereign to have a constructive dialogue, so private creditors would be less likely to threaten the country with going back to domestic courts. As the IMF is forced to give more resources the larger the haircut, it does not have incentives to look for a haircut much larger than what is deemed to be strictly necessary. This proposal would involve a departure from the usual IMF practice of lending more when financial gaps are larger. This departure is necessary to strengthen the incentives of private creditors to provide a larger haircut and of the country to carry out the necessary structural adjustments.

It is also important to recognize that when (or even before) this mechanism would be activated, a run on the country's remaining assets (such as domestic bonds or banking system deposits) would develop. To avoid this, the use of capital controls has been suggested. Recent history in emerging markets shows that the use of these types of instruments is hardly effective, as agents find many ways to bypass them, and the economy ends up with significant economic distortions that in the medium run are not successful in avoiding capital outflows. In many instances, the imposition of capital controls is viewed as a way to avoid the inevitable correction of the price of the country's assets and therefore is a signal of an eventual weakening of bank's balance sheets. This has on many occasions been the trigger for systemic bank runs and, therefore, capital controls may have to be complemented with a freeze on banking system deposits.

A generalized use of collective action clauses and the statutory approach proposed by the IMF could complement each other as the first mechanism strengthens a framework in which creditor and debtors can reach an agreement on their own without entering into the statutory approach. However, if this fails there is a predictable framework to rely on. In addition, a more generalized use of collective action clauses could also help in liquidity crises when what is needed is only to renegotiate the maturity of obligations.

IV. Final Remarks

The current discussions about the reform of the international financial system have been strongly influenced by the proposition that moral hazard was being created by the international assistance packages put together to handle the financial crises in the second half of the 1990s. So far, this hypothesis has no clear empirical backing. In addition, as has been recently pointed out by Stanley Fischer, it is surprising to discover that after all the talk about moral hazard, the amount lent by the IMF in the period 1994–2000 was slightly smaller, relative to the global economy, than the loans it gave during the Latin American debt crisis of 1981–88.

However, once we accept that the current political circumstances in developed countries do not favor the type of programs followed in the second half of the 1990s, the current proposals for reform are moving us in the right direction. As I said, the current discussion is shaping a new international financial architecture that will address emerging market crises depending on which of the three following categories each crisis falls into:

1. Pure liquidity crises that would be handled with the CCL;
2. Solvency crises that would need, in addition to a typical IMF program, the restructuring of sovereign debt; or
3. The more typical balance of payments and financial crises in a solvent country. In these cases, the crises are frequently accompanied by a run on the country's assets. Let me say that most emerging market crises will fall in this last category, and in these cases we do not have anything better than the typical IMF adjustment facilities with significant resources upfront (possibly including from the SRF) and some private sector involvement to renegotiate maturities.

One very important point is that the new schemes for sovereign debt renegotiation depend on an evaluation of a country's sustainable level of debt. There is considerable uncertainty in the calculation of this level, so there is a large risk that countries with liquidity problems are deemed as having a solvency crisis. In addition, whether a country is in one or the other situation is partly dependent on actions by the international financial institutions, as a liquidity crisis can turn into one of solvency in the absence of temporary support. In addition, given the fact that the distinc-

tion between liquidity and solvency crises is a difficult one to make, and the uncertainty associated with it implies that a value judgment is needed on whether countries should be given the benefit of the doubt in those cases where there is no certainty about the nature of a crisis. Whereas in the mid-1990s most crises were considered to be liquidity crises, nowadays it seems that the opinion of many policymakers is biased toward solvency concerns. I think that the welfare costs are much larger if liquidity problems are treated as a solvency issue, compared with temporarily treating a solvency problem as a liquidity crisis. Unfortunately, it seems the prevailing view is more biased toward the second approach.

Another crucial element in determining the depth and duration of a crisis, and to a large degree whether we regard it in the end as due to a liquidity or solvency problem, is the response of the domestic authorities. When policies were adjusted substantially and in a timely fashion, there was a quick recovery of economic activity, confidence, and access to international financial markets. In fact, the self-fulfilling and confidence components of the capital account crises imply that there needs to be an over-adjustment of policies compared with what would be required to solve a more traditional current account crisis. However, fast as they can be, the development of a comprehensive adjustment package and its implementation are much slower than capital flows. Thus, official support during this period is essential to give authorities the breathing space that is necessary to carry out these actions.

The previous arguments imply that there is a very large middle ground where a country would not qualify to obtain a CCL, and yet after the fact it is clear that its problems were not of solvency given official support.

To make the CCL operational and to avoid the risk of sending too many countries to Mrs. Krueger's restructuring mechanism, the SDRM, we need to strengthen the way we deal with these liquidity and middle ground crises on several dimensions.

1. Make the CCL a less risk-averse instrument on the part of the IMF by lengthening its maturity and broadening its scope beyond financial "contagion;"
2. Increase the IMF's quotas and the predetermined size of IMF programs, make less frequent use of exceptions, and allow more front-loaded access to resources; and

3. Complement both of these mechanisms with funds provided by the private sector through refinancing options in bonds and loans and the inclusion of collective action clauses. Only after (2) fails call Mrs. Krueger and her SDRM.

However, I would like to stress that recently in the discussions on the reform of the international financial architecture, too much emphasis has been given to the design of the SDRM. Although this is understandable in light of the features of the Argentinean crisis, it has also distracted attention from the changes needed to address more common crises in a more efficient way. A similar problem happened after the East Asian and Russian crises, when we focused too much on the issue of contagion of solvent economies. As a result of that process we ended up with a CCL that has no willing participants.

Therefore, in parallel to the work that is being undertaken to develop the SDRM, we should also be directing our efforts to the development of more efficient mechanisms to deal with financial crises in countries that are neither insolvent no sufficiently strong to have access to the CCL, and to deal with the reasons why countries that complied with the preconditions established for access to the CCL nevertheless decided not to apply.

However, the SDRM will have an important influence on how these intermediate cases are handled since it will provide credibility to the IMF commitment to a limited amount of support, given that now there will be a framework to deal with sovereign insolvency. Owing to the availability of this tool, incentives will be there for the development of market instruments that promote private sector involvement.

We have to be aware that the current situation in international financial markets is a particularly dangerous one, as we have weakened important pieces of the existing architecture, while the new elements are only in the design stage. The volatility that the Brazilian economy is going through is, in addition to the domestic economic and political vulnerabilities, a reflection of this uncertain environment faced by emerging economies. The most striking illustration of this is that during the Argentinean crisis, country risk went beyond the 1,700 basis points mark, more than six months after the start of the crisis.[49] Now, Brazil in barely two

[49]We mark the start of the crisis on the date of resignation of Minister Lopez Murphy, when the EMBI stood at around 900 basis points.

months went from a country risk of 720 basis points to one of 1,730 basis points on June 21. This extreme uncertainty has many sources and I will only highlight those that I think are the most important ones:

- The current bias toward debt renegotiation perceived by market participants following the events in Argentina, which has increased risk aversion;
- The increased risk perceptions that the current difficult geopolitical situation entails;
- The volatility in developed markets associated with corporate governance scandals;
- The strong recovery that took place in many emerging economies after their crises of the second half of the 1990s was supported by a very dynamic world economy. Today, the business cycle in most developed countries is in the initial stages of its recovery phase and confronting many questions; and
- The conflicting message from G-7 countries on globalization, as this trend is promoted for emerging markets at the same time that protectionist policies are followed by them.[50]

Owing to the significant externalities that international financial markets suffer from this extreme volatility in emerging markets, there is an important leadership role for the international financial institutions and the G-7 governments to play, to make the transition toward the new architecture a smooth one. If we fail in this attempt, we run the risk of shutting emerging markets off from international financial markets and generating a political backlash in developing countries against trade and financial integration. In this scenario, even if the new architecture is an improvement, it would have arrived too late, as emerging economies and investors' interest in intermediating savings from developed toward developing countries would have greatly diminished.

[50]Well-known examples are the recent increase in steel quotas and the approval of agricultural subsidies in the United States and the continuing policy of support to farmers in the European Union.

Appendix. Selected Macroeconomic Indicators in Crisis Countries

(Percent)

	t – 2	*t* – 1	*t*	*t* + 1	*t* + 2
Argentina (1995)					
Real growth	6.3	5.8	–2.8	5.5	8.1
Current account balance	–3.4	–4.3	–1.9	–2.4	–4.1
Government balance	–0.2	–1.8	–2.3	–3.2	–2.1
Public debt	29.2	31.3	35.9	37.4	36.2
Argentina (2001)					
Real growth	–3.4	–0.5			
Current account balance	–4.4	–3.3			
Government balance	–4.1	–3.5			
Public debt	47.4	50.8			
Brazil (1998)					
Real growth	2.7	3.3	0.2	0.8	4.2
Current account balance	–3.0	–3.8	–4.3	–4.7	–4.2
Government balance	–5.9	–6.1	–7.9	–10.0	–4.6
Public debt	33.3	34.6	42.4	47.0	49.2
Philippines (1998)					
Real growth	5.8	5.2	–0.6	3.3	3.9
Current account balance	–4.8	–5.3	2.4	10.0	12.4
Government balance	–0.4	–0.8	–2.7	–4.3	–4.7
Public debt	53.2	55.7	66.2	59.1	
Indonesia (1997)					
Real growth	8.2	8.0	4.5	–13.1	0.8
Current account balance	–3.3	–3.2	–1.7	4.2	4.1
Government balance	0.8	1.2	–1.1	–2.3	–1.5
Public debt	30.8	23.9	72.5	53.3	44.4
Korea (1997)					
Real growth	8.9	6.8	5.0	–6.7	10.9
Current account balance	–1.7	–4.4	–1.7	12.7	6.0
Government balance	1.3	1.0	–0.9	–3.8	–2.7
Public debt	8.4	8.0	10.4		
Malaysia (1997)					
Real growth	9.8	10.0	7.3	–7.4	5.8
Current account balance	–9.7	–4.4	–5.9	13.1	15.9
Government balance	2.2	2.3	4.1	–0.4	–3.7
Public debt	41.1	35.3			
Mexico (1995)					
Real growth	2.0	4.4	–6.2	5.2	6.8
Current account balance	–5.8	–7.0	–0.6	–0.7	–1.9
Government balance	0.7	–0.2	–0.2	0.3	–1.0
Public debt	25.3	35.3	40.8	31.1	25.8
Russia (1998)					
Real growth	–3.4	0.9	–4.9	3.2	7.5
Current account balance	0.9	–0.1	–0.6	12.4	18.4
Government balance	–8.9	–7.5	–7.0	–0.2	–4.5
Public debt	32.3	31.0	54.8	79.9	65.6
Thailand (1997)					
Real growth	9.3	5.9	–1.4	–10.8	4.2
Current account balance	–7.8	–7.9	–2.1	12.8	10.2
Government balance	3.0	2.5	–0.9	–2.6	–2.9
Public debt	4.6	3.7	4.6	10.8	20.4
Turkey (2001)					
Real growth	–6.1	6.3	–9.4	3.0	
Current account balance	–0.7	–4.9	2.3	–1.2	
Government balance	–12.4	–6.9	–1.2	–3.5	
Public debt	61.0	57.4	93.3	77.2	

Sources: Ghosh and others (2002); and IMF, *International Financial Statistics*, various issues.

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Questions and Answers

Following the formal presentation, Mr. Ortiz answered questions from the audience.

MR. DE LAROSIERE: Thank you very much, Guillermo, for this extremely interesting presentation. I will ask now those who have questions to pass their written questions to Mr. Mountford or to raise their hands and speak up.

(FROM THE AUDIENCE): My concern relates to the easy extension of credit that has created fiscal irresponsibility in some of the emerging economies, which, in the end, the creditors didn't pay for. When a country found itself in difficulty, creditors demanded that the money would be paid in full. At the time of the 1995 crisis in Mexico, rates of interest in the United States were, for example, 5 percent for treasury bills, and creditors were enjoying 15 and 18 percent returns. When the crisis came, they demanded all their money back, which I think was the first and biggest mistake that started many countries on the same road.

Banks were extending credit with the assumption that they would be rescued. Countries were receiving this credit with the assumption that somebody would rescue them at the end of the day. I think this is something that we should reflect on. And this thing has spread now into the private sector: bonds of Alcatel yesterday were selling at 2,200 basis points above LIBOR. In other words, the Alcatel bond today yields 25 percent return.

So what we have seen in the public sector in these countries has now spread to the private sector, and we are heading more or less toward some kind of a crisis, the likes of which I don't think we have seen before, and I would like to have some comments on that from you.

MR. ORTIZ: Well, you are in fact referring to the moral hazard issue, and we can do all the conjecturing we want regarding the motivation. You said that lenders lent in the expectation that they would be rescued. What I can tell you is that all the empirical studies that have been done on the existence of moral hazard have been inconclusive. In fact, there has not been a single study that lends support to the moral hazard argument.

You can always argue about behavior, about motives, but it's pretty clear that, particularly after the Asian crisis, the flow of information to the markets, the remedial actions that were taken by the international community, have made investors much more discriminating in terms of risks, and you can see that spreads have been much more differentiated in recent times than in the past. The high spreads paid by governments and private companies in emerging markets that were mentioned are precisely a reflection that there is a substantial probability that countries and debtors won't be rescued. Otherwise, investors would be willing to lend at much lower rates.

MR. CROCKETT: Guillermo, you talked about giving countries the benefit of the doubt at the early stage of assessing the origins of a crisis. Do you not think that that contains the risk that either it would be an encouragement to the country concerned to treat the problem less seriously or, alternatively, it would give the possibility to aggravate the crisis, to dig the hole deeper, so to speak, such that when it came to face it, it would actually be a bigger crisis than before?

MR. ORTIZ: When I talked about giving the benefit of the doubt, I was referring to the conclusions of debt sustainability exercises. And, again, it's very difficult to come out ex ante with a definitive answer on this point. Let me again refer to the cases of Turkey and Argentina. If you looked coldly at all the basic indicators, debt ratios, real interest rates, growth prospects, etc., you may have thought that Argentina had a better chance of making it than Turkey. And yet, one case turned out to be a solvency case and the other one has, so far, been successfully dealt with. That was the sense of my comment, Andrew, in that you should give countries the benefit of the doubt.

A related important point is that the IMF should spell out exactly the conditions under which it will give financing. I think that part of the recent problems and misunderstandings with Argentina was that the Fund has not been sufficiently clear in spelling out exactly what it wants from the Argentine government. The Argentineans feel that they have complied with what the IMF has demanded, and yet, the IMF seems to be far from an agreement with this country. In this day and age, when the media play such an important role in shaping perceptions in international relations, it's particularly important for the international financial institutions to make themselves perfectly clear.

When I talk about giving the benefit of the doubt, Andrew, I mean basically that you should give the country a chance. You have to frontload both adjustment and financing. I talked about overshooting not only financing but also the policy measures that are needed. And if that fails, then you are sure that the problem was not one of liquidity and you go to the next stage. But ex ante, I think that the marginal cost of mistaking a solvency crisis as a liquidity one is much smaller than forcing a country with a liquidity problem to treat it as a solvency one.

MR. DE LAROSIERE: I have a follow-up question. It's very difficult to determine if a country's debt is sustainable. In principle, you can argue that a relatively heavily indebted country can demonstrate that the weight of its debt is diminishing, and you know that this depends largely on the fiscal primary surplus, if there is one, the amount of real interest rates, and the growth of the economy. If you have those three factors in the right place—that is, your economy is growing, your real interest rates are diminishing because your anti-inflationary policy is working, and you are developing a fiscal primary surplus—you can indeed demonstrate that the economic weight of your debt, domestic or external, is going down.

But things can happen otherwise, because, even in that favorable context, you can have the psychological reaction on the markets that for some political reasons or regional contagion that has not much to do with rationality, the country is not going to be able to roll over at reasonable interest rates what is needed for the amortization of the past stock of debt. In other

words, things look okay in terms of the stabilization or even the reduction of the weight of the debt on the economy, but spreads go up because you have some political problem, and then everything falls apart because you can't even make the amortization at a reasonable spread. How do you cope with that type of situation, Guillermo?

MR. ORTIZ: I think that is a very difficult case, Jacques, and we are, I believe, talking a little bit about what's going on in Brazil. It's pretty clear that Brazil made a very significant effort after the 1999 crisis to increase its primary surplus. Although the debt is relatively large, the debt dynamics started to look pretty favorable in 1999. And the fundamentals in terms of structural reforms and so on have also been falling into place. In fact, there is a widespread notion that the Brazilian authorities have been conducting macroeconomic policies, both fiscal and monetary, in a very responsible fashion. And yet, the fundamentals remaining the same, spreads have jumped from 700 to 1,700 basis points due to political risk.

I think, in that case, there are two things that could be done, which are not easy. Of course, the source of the problem is a perception that the primary surplus would not remain sufficient to service the debt because of political changes. We all know that there is a particular worry about the outcome of the election. The candidate who wins in Brazil will need a political coalition to ensure that the primary surplus will remain sufficiently large to service the debt. In other words, we're talking about an important positive fiscal shock; an overshooting. I mean that if with a primary surplus of 3.5 percent or 4 percent, you could stabilize the debt to GDP ratio, you should at least for a year or two aim for 5 or 6 percent, and in that way you would go into a virtuous circle. Of course, that is easier said than done. But it is a clear case where there has to be a confidence shock in the economy. Of course, if all parties subscribe to that notion, I think that we would see a very quick reversal of the current situation.

When a country has followed responsible policies, the international community should be ready to support with large resources—which should not be needed in the end because it's really not a problem of lack of resources, but just having the con-

fidence backing of the international community that would go a long way toward defusing the problem.

[In response to a question from the audience] This is a question about debt sustainability in sub-Saharan African countries, and I did not touch on those problems. I apologize, but I was basically referring to countries that have market access. In the case of sub-Saharan African countries, it's mostly official debt, which is a totally different problem.

MR. DAVID DODGE: One of the ways to meet excess demand for foreign currency is to increase the size of government debt that is linked to the exchange rate—in other words, changing the composition of the government debt and not increasing it. Mexico tried this option via the tesobonos in 1994. And I wonder what lessons can be drawn from that experience?

MR. ORTIZ: They were not happy lessons, David; they were not happy lessons. Let me make two comments on the tesobonos.

I think that the problem in 1994 was basically those famous tesobonos, which Hans Tietmeier told me, when I was at the Ministry of Finance, it had been a terrible idea to produce.

It has been pointed out repeatedly that this was a clear case of bailing out private investors, because it was official money used to pay in full the famous tesobonos. I believe that there's a fallacy there because investors incurred severe losses on the tesobonos. They had to market the tesobonos and there were very large losses on holdings of tesobonos sold in the secondary markets at big discounts. So even in that case, there was a lot of blood on the floor, notwithstanding the fact that they were ultimately paid.

The other point is that we made a big mistake there because the problem in Mexico in 1994 was a confidence shock, basically due to political reasons. We had the twin affairs of the assassination of the presidential candidate, Colosio, and the uprising in Chiapas. And it was thought at the time that those problems would be very temporary but, as it turned out, the problems did not go away, and we were left with an overhang of more than $40 billion dollars of very short-term debt.

In the case of Brazil, the indexing of part of the domestic debt to dollars has been done, I believe, routinely for a number of years and it is on a much longer-term basis. Nevertheless, this is not a policy that I would recommend widely.

MR. DE LAROSIERE: I think that we are close to the end of this extremely interesting lecture. I would like on behalf of all of us to thank Mr. Guillermo Ortiz for the remarkable lecture he has given.

I'll just say that it has brought a lot of ideas to our minds. The problems that emerging markets have known for some years could really be summed up under three headings. First of all, excessive indebtedness or excess of credit, as you like; second, currency mismatches; and, third, overly fixed pegs. And these three things are very much intertwined. The fix of the peg—the perception of the peg, even if it's not officially a peg, but if people feel that the currency is pegged to, let's say, a dollar anchor—and the currency mismatch is an enormous temptation because of the differential of interest rates. I borrow in cheap interest rate–wise dollars because it's less expensive than if I borrow in my own currency. So that breeds excessive indebtedness, and these three factors have been the great culprits of the past crises. Excess credit is excess credit from governments but perhaps even more so excess credit from the private sector.

So we now have to mend and pick up the pieces of this excessive credit creation mechanism, and, of course, we still have the excessive debt of the past, although it has been restructured and in some cases partially forgiven. But every day there is the temptation to reconstitute some debt, although fiscal primary surpluses are starting to mend the situation and to correct the balance sheets.

We still have currency mismatches, but currency mismatches are less of a temptation and more of a risk in a world where exchange rates are flexible. And, therefore, I think one of the lessons that you have brought to us, which is a common-sense lesson but a very powerful one, is that if we have this sort of flexibility, which is also a risk for the market participants in the exchange rate regime, and if we have the right "fiscal policies" building a fiscal primary surplus that eventually will mend the

past situation of indebtedness, and if we have an anti-inflationary policy in place—which can be enormously facilitated by independent central banks—I think the conditions that lead to crisis will be reduced. And, therefore, this is a very interesting agenda for the international financial institutions.

I'm not sure that it's going to be extremely helpful, as you have rightly suggested, Guillermo, to concentrate on mechanistic tools to cope with external debt or sovereign debt with bankruptcy—and it's an interesting subject, but I don't think that it is of the essence. What is of the essence is: don't live beyond your means, don't make terrible mistakes in mismatching your assets and your liabilities, and then, you know, God will take care of you.

So thank you very much.

Guillermo Ortiz

Guillermo Ortiz became Governor of the Bank of Mexico in January of 1998. From December 1994 to December 1997, Dr. Ortiz served as Secretary of Finance and Public Credit in the Mexican federal government. Prior to heading the Finance Ministry, he served briefly as Secretary of Telecommunications and Transportation at the outset of the Zedillo administration.

His past professional experience includes having served as Undersecretary of Finance and Public Credit from December 1988 to November 1994. Before that position, he was an Executive Director at the IMF (1984–88) and Manager, as well as Deputy Manager, in the Economic Research Bureau of the Bank of Mexico (1977–84), and an Economist in the Ministry of the Presidency of Mexico (1971–72).

Dr. Ortiz has also taught at universities in Mexico and the United States. He has written and published two books and numerous papers on economics and finance in specialized journals and magazines in Mexico and abroad. He has received several honors and awards. Dr. Ortiz is a member of the Group of Thirty.

Dr. Ortiz earned a Bachelor of Arts degree in Economics from the Universidad Nacional Autónoma de México and later a Ph.D. in Economics from Stanford University.

The Per Jacobsson Lectures

2001 No lecture took place due to the cancellation of the Annual Meetings of the IMF and the World Bank Group.

2000 *Ten Years On—Some Lessons from the Transition*. Lecture by Josef Tošovský (Prague).

Strengthening the Resilience of Financial Systems. Symposium panelists: Peter B. Kenen, Arminio Fraga, and Jacques de Larosière (Lucerne).

1999 *The Past and Future of European Integration—A Central Banker's View*. Lecture by Willem F. Duisenberg.

1998 *Managing the International Economy in the Age of Globalization*. Lecture by Peter D. Sutherland.

1997 *Asian Monetary Cooperation*. Lecture by Joseph C.K. Yam, CBE, JP (Hong Kong).

1996 *Financing Development in a World of Private Capital Flows: The Challenge for International Financial Institutions in Working with the Private Sector*. Lecture by Jacques de Larosière.

1995 *Economic Transformation: The Tasks Still Ahead*. Symposium panelists: Jan Svejnar, Oleh Havrylyshyn, and Sergei K. Dubinin.

1994 *Central Banking in Transition*. Lecture by Baron Alexandre Lamfalussy (London).

Capital Flows to Emerging Countries: Are They Sustainable? Lecture by Guillermo de la Dehesa (Madrid).

1993 *Latin America: Economic and Social Transition to the Twenty-First Century*. Lecture by Enrique V. Iglesias.

1992 *A New Monetary Order for Europe*. Lecture by Karl Otto Pöhl.

1991 *The Road to European Monetary Union: Lessons from the Bretton Woods Regime*. Lecture by Alexander K. Swoboda (Basel).

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1990 *The Triumph of Central Banking?* Lecture by Paul A. Volcker.

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Economic Restructuring in New Zealand Since 1984. Lecture by David Caygill.

1988 *The International Monetary System: The Next Twenty-Five Years*. Symposium panelists: Sir Kit McMahon, Tommaso Padoa-Schioppa, and C. Fred Bergsten (Basel).

1987 *Interdependence: Vulnerability and Opportunity*. Lecture by Sylvia Ostry.

1986 *The Emergence of Global Finance*. Lecture by Yusuke Kashiwagi.

1985 *Do We Know Where We're Going?* Lecture by Sir Jeremy Morse (Seoul).

1984 *Economic Nationalism and International Interdependence: The Global Costs of National Choices*. Lecture by Peter G. Peterson.

1983 *Developing a New International Monetary System: A Long-Term View*. Lecture by H. Johannes Witteveen.

1982 *Monetary Policy: Finding a Place to Stand*. Lecture by Gerald K. Bouey (Toronto).

1981 *Central Banking with the Benefit of Hindsight*. Lecture by Jelle Zijlstra; commentary by Albert Adomakoh.

1980 *Reflections on the International Monetary System*. Lecture by Guillaume Guindey; commentary by Charles A. Coombs (Basel).

1979 *The Anguish of Central Banking*. Lecture by Arthur F. Burns; commentaries by Milutin Ćirović and Jacques J. Polak (Belgrade).

1978 *The International Capital Market and the International Monetary System*. Lecture by Gabriel Hauge and Erik Hoffmeyer; commentary by Lord Roll of Ipsden.

1977 *The International Monetary System in Operation*. Lectures by Wilfried Guth and Sir Arthur Lewis.

1976 *Why Banks Are Unpopular*. Lecture by Guido Carli; commentary by Milton Gilbert (Basel).

1975 *Emerging Arrangements in International Payments: Public and Private*. Lecture by Alfred Hayes; commentaries by Khodadad Farmanfarmaian, Carlos Massad, and Claudio Segré.

1974 *Steps to International Monetary Order*. Lectures by Conrad J. Oort and Puey Ungphakorn; commentaries by Saburo Okita and William McChesney Martin (Tokyo).

1973 *Inflation and the International Monetary System*. Lecture by Otmar Emminger; commentaries by Adolfo Diz and János Fekete (Basel).

1972 *The Monetary Crisis of 1971: The Lessons to Be Learned*. Lecture by Henry C. Wallich; commentaries by C.J. Morse and I.G. Patel.

1971 *International Capital Movements: Past, Present, Future*. Lecture by Sir Eric Roll; commentaries by Henry H. Fowler and Wilfried Guth.

1970 *Toward a World Central Bank?* Lecture by William McChesney Martin; commentaries by Karl Blessing, Alfredo Machado Gómez, and Harry G. Johnson (Basel).

1969 *The Role of Monetary Gold over the Next Ten Years*. Lecture by Alexandre Lamfalussy; commentaries by Wilfrid Baumgartner, Guido Carli, and L.K. Jha.

1968 *Central Banking and Economic Integration*. Lecture by M.W. Holtrop; commentary by Lord Cromer (Stockholm).

1967 *Economic Development: The Banking Aspects*. Lecture by David Rockefeller; commentaries by Felipe Herrera and Shigeo Horie (Rio de Janeiro).

1966 *The Role of the Central Banker Today*. Lecture by Louis Rasminsky; commentaries by Donato Menichella, Stefano Siglienti, Marcus Wallenberg, and Franz Aschinger (Rome).

1965 *The Balance Between Monetary Policy and Other Instruments of Economic Policy in a Modern Society*. Lectures by C.D. Deshmukh and Robert V. Roosa.

1964 *Economic Growth and Monetary Stability*. Lectures by Maurice Frère and Rodrigo Gómez (Basel).

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