The Robbins Lectures

The International Financial System: Crises and Reform

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It is an honor indeed to be invited to deliver these lectures dedicated to the memory of Lord Robbins. And it is an especial honor and a pleasure for me to deliver these lectures at the LSE, where I spent four very happy years from 1962-1966, first as an undergraduate, and then taking the M.Sc. (Econ). At that time Lord Robbins taught a course in the History of Economic Thought. The economics students all read An Essay on the Nature and Significance of Economic Science, and we followed with keen interest the recommendations of the Robbins Committee on Higher Education, on which Richard Layard was a Senior Research Officer. And those of us taking Monetary Economics were aware that in the fifties, far ahead of the consensus, Lord Robbins had made the case for the effectiveness of monetary policy, a point that was then much debated but is not now in doubt.

The last paragraph of Robbins’ famous Essay on the Nature and Significance of Economic Science bears testimony to his belief in the value of our field:

… in the last analysis Economics does depend …on … the affirmation that rationality and ability to choose with knowledge is desirable. … [T]hat branch of knowledge which, above all others, is the symbol and safeguard of rationality in social arrangements, must, in the anxious days which are to come … possess a peculiar and heightened significance.

Lionel Robbins was deeply involved in the discussions and the meetings that led to the creation of the IMF and the World Bank, and attended the Bretton Woods conference. So I feel sure that for that reason alone the topic for this year’s Robbins Lectures would have interested him.

While a student, I had the pleasure of attending a seminar at which Robbins read extracts from his wartime diaries. I remember him on that occasion reading in his sonorous voice a striking paragraph that has subsequently appeared in print. It is the entry for June 24,

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1 Lectures prepared for delivery at the London School of Economics, October 29-31, 2001. I am grateful to my IMF colleagues for discussion of these topics over the last seven years, and to Ratna Sahay, Robert Chote, and Prachi Mishra of the IMF for their assistance in the preparation of these lectures. I have drawn extensively on material presented in the Kuznets Lectures at Yale University in October 2000. Views expressed are those of the author, and not necessarily of the International Monetary Fund.

2 The reference to “anxious days … to come” appears to refer to the Depression, not World War II, since the quoted words are in the first (1932) edition.
1944, about a meeting in Atlantic City with the American delegation, a week before the start of the Bretton Woods conference:\(^3\)

… Keynes was in his most lucid and persuasive mood; and the effect was irresistible. At such moments, I often find myself thinking that Keynes must be one of the most remarkable men that have ever lived – the quick logic, the birdlike swoop of intuition, the vivid fancy, the wide vision, above all the incomparable sense of the fitness of words, all combine to make something several degrees beyond the limit of ordinary human achievement. Certainly, in our own age, only the Prime Minister [Churchill] is of comparable stature. He, of course, surpasses him. But the greatness of the Prime Minister is something much easier to understand than the genius of Keynes. For in the last analysis, the special qualities of the Prime Minister are the traditional qualities of our race raised to the scale of grandeur. Whereas the special qualities of Keynes are something outside all that. He uses the classical style of our life and language, it is true, but it is shot through with something that is not traditional, a unique unearthly quality of which one can only say that it is pure genius. The Americans sat entranced as the God-like visitor sang and the golden light played around. When it was all over there was very little discussion. …

In quoting Robbins on Keynes, I am highlighting not only his own superb style, but also his generosity to a great economist, Keynes, with whom he had earlier substantially disagreed – and it is striking also that in his public activities, including his association with the National Gallery and the Royal Opera House, and his involvement in public policy issues, he had so much in common with Keynes.

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Chapter 1: The First Financial Crises of the Twenty-First Century

Between December 1994 and March 1999, Mexico, Thailand, Indonesia, Korea, Malaysia, Russia, and Brazil experienced major financial crises, which were associated with massive recessions and extreme movements of exchange rates. Their effects spread to other emerging market countries, and in the fall of 1998 seemed to threaten the stability of United States financial markets.4

The course of the crisis can be followed in Figure 1, which shows the EMBI (Emerging Market Bond Index) spreads for the period 1994 to mid-2001. Here we see the Mexican crisis – described by Michel Camdessus, then Managing Director of the IMF, as the first financial crisis of the twenty-first century – which produced the highest spreads of the decade, followed by a slow decline of spreads until early 1996. The Thai devaluation produced only a small ripple; the starting date for the Asian crisis, as reflected in the spreads, was rather the devaluation by Taiwan on October 17, and the attack on Hong Kong a few days later.

By mid-1998 there were clear signs of the beginning of a recovery in the Asian crisis countries, and spreads were beginning to decline again. Then came the Russian crisis of August 1998, which raised the average EMBI spread to 1600 basis points, higher than at any time since the Mexican crisis. Ominously, emerging market financing virtually dried up in that period, particularly following the LTCM crisis in September (Figure 2). Very rapidly, Russian contagion spread not only to Russia’s neighbors but also to Latin America.

With the near-failure of LTCM, the emerging market financial crisis began to impact the financial markets of the industrialized countries. Speaking at the Council of Foreign Relations in New York on September 14, 1998, President Clinton said: “this is the biggest financial challenge facing the world in a half-century”. Despite an interest rate cut by the Fed on September 29, the gloom lay heavy during the IMF-World Bank meetings in early October 1998, as negotiations continued to put in place an IMF-supported program with Brazil. At the same time, the IMF was running out of money, and it was not clear if the Congress would approve the quota increase that had been agreed in Hong Kong a year earlier.

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Figure 1: Emerging Market Spreads, 1994-2001

- 9-Mar-95 - Mexico unveils fiscal austerity package
- 13-Nov-95 - Mexican jitters
- 20-Dec-94 - Mexico devalues
- 5-Nov-97 - Indonesia package
- 2-Jul-97 - Thai devaluation
- 23-Oct-97 - Attack on Hong Kong
- 29-Sep-98 - Fed rate cut
- 17-Aug-98 - Russian devaluation
- 13-Jan-99 - Brazilian devaluation
Figure 2. Private Market Financing for Emerging Markets (1994-2001, quarterly)

Source: Capital Data Ltd
# Table 1a: Official Financing Packages

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of approval of the original package</th>
<th>Original Package (in billions of US dollars)</th>
<th>IMF (in billions of US dollars)</th>
<th>WB and regional development bank (in billions of US dollars)</th>
<th>Bilateral Sources (in billions of US dollars)</th>
<th>Financing Package in percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>Feb 1, 1995</td>
<td>48.8</td>
<td>17.8</td>
<td>0.0</td>
<td>31.0</td>
<td>12.3</td>
</tr>
<tr>
<td>Thailand</td>
<td>August 20, 1997</td>
<td>17.2</td>
<td>4.0</td>
<td>2.7</td>
<td>10.5</td>
<td>9.4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>November 5, 1997</td>
<td>36.1</td>
<td>10.1</td>
<td>8.0</td>
<td>18.0</td>
<td>15.9</td>
</tr>
<tr>
<td>Korea</td>
<td>December 4, 1997</td>
<td>58.4</td>
<td>21.1</td>
<td>14.2</td>
<td>23.1</td>
<td>11.2</td>
</tr>
<tr>
<td>Russia</td>
<td>July 20, 1998</td>
<td>16.5</td>
<td>11.2</td>
<td>3.8</td>
<td>1.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Brazil</td>
<td>December 2, 1998</td>
<td>41.7</td>
<td>18.2</td>
<td>9.0</td>
<td>14.5</td>
<td>5.2</td>
</tr>
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# Table 1b: Fund Financing Packages

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of arrangement</th>
<th>Fund package in percent of quota</th>
<th>Disbursements within first three months (in percent of original package)</th>
<th>Disbursements within first twelve months (in percent of original package)</th>
<th>Maximum disbursements (in percent of original package)</th>
<th>Repayments (on schedule/early)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>Feb-95</td>
<td>688</td>
<td>43.6</td>
<td>72.6</td>
<td>72.6</td>
<td>Early</td>
</tr>
<tr>
<td>Thailand</td>
<td>August-97</td>
<td>505</td>
<td>41.4</td>
<td>72.4</td>
<td>86.2</td>
<td>On schedule</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Nov-97</td>
<td>490</td>
<td>26.4</td>
<td>44.0</td>
<td>44.0</td>
<td>On schedule</td>
</tr>
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<td>Korea</td>
<td>Dec-97</td>
<td>1938</td>
<td>72.6</td>
<td>90.1</td>
<td>93.0</td>
<td>Early</td>
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<td>Russia</td>
<td>July-98</td>
<td>142</td>
<td>42.9</td>
<td>42.9</td>
<td>42.9</td>
<td>Early</td>
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<td>Brazil</td>
<td>Dec-98</td>
<td>600</td>
<td>26.2</td>
<td>60.4</td>
<td>72.7</td>
<td>Early</td>
</tr>
</tbody>
</table>

Source: IMF
In October, the Congress finally agreed to the quota increase. The Brazilian program, which made available a total of $41.7 billion to Brazil,5 was approved by the Board of the IMF on December 2, 1998. By that date the Fed had cut rates twice more, and on December 3 the European central banks followed suit.

Nonetheless, in the face of mounting pressures on the reserves, Brazil on January 13, 1999 was forced to institute a crawling band exchange rate regime, and – as had others who had sought the half-way house of an exchange rate band after sustained attacks on the currency – two days later was forced to float. By March 1999 the revised Brazilian program, this time with a floating exchange rate, was agreed to by the Board of the IMF.

Up to that point, it had seemed that almost everything that could go wrong had gone wrong, except for one overwhelmingly important factor – the United States economy continued to perform as the engine of world stability and growth.6 After March 1999, things began to go right as the expected Brazilian recession failed to materialize, and growth resumed. At that point the pall that had been hanging over the emerging markets and the concerns that had beset me since October 1997 began to lift. After that, spreads trended downwards until close to the end of 2000, although they remained above their levels during the Asian crisis.7

The emerging market crisis took its toll on world growth, which in 1998 at 2.8 percent8 was lower than in any year between 1994 and 2000. But growth increased in 1999 and 2000, with the year 2000 seeing the highest global growth in over a decade.

During the period from the Mexican devaluation to the revised Brazilian program – from the end of 1994 to March 1999 – the IMF helped assemble loan packages amounting to almost $218.7 billion (Table 1). Despite the scale of the 1990s crisis programs, most of the countries that experienced capital account crises also suffered massive recessions.

In this lecture, I shall focus on six of the crises: Mexico, Thailand, Indonesia, Korea, Russia, and Brazil. They were twenty first century crises because they were in large part capital account crises, in which capital flows reversed with a virulence that intensified underlying macroeconomic or microeconomic problems in the affected economies. Although these are the best-known of the 1990s crises, they were not the only ones during the period, for Turkey in 1994, Argentina in 1995, and Malaysia and the Philippines in 1997-98, experienced similar difficulties, and I shall from time to time refer to events in some of those countries.9

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5 $18.2 billion from the IMF, including the use of the GAB and NAB; $14.5 billion in direct support from 20 countries, through the BIS; and $4.5 billion each from the World Bank and Inter-American Development Bank.
6 India and China’s ability to sustain high growth and China’s ability to maintain its exchange rate were important stabilizing factors in Asia during this period.
7 To avoid having to comment on current events, I will not in these lectures discuss the IMF’s programs with Turkey and Argentina in 2000-2001.
8 This measure uses the IMF system of weighting growth rates by the share of the country in PPP-adjusted global income. Since the weights for low income high-growth countries, including China and India, are higher than they are in dollar-weighted income, the IMF measures of global growth typically exceeds other measures.
9 See Lane et al (2001), which examines eight capital account crises – of the six studied in this lecture, it omits Russia and includes the Turkish crisis of 1994, as well as that in Argentina in 1995, and the Philippines in 1997.
The controversies that erupted during and following these crises included, serious questioning of the economics and political economy of stabilization and reform programs for countries that turned to the IMF for assistance; an intense debate over the role of international capital flows and capital market liberalization; and an associated and protracted discussion of the reform of the international financial system, centered largely on the role of the IMF.

I shall take up these topics in turn, starting with a summary of the origins and outcomes of the crises, and the IMF-supported programs that were put in place to deal with them. I will then discuss the reform of the international financial system, with the focus on the IMF.

I. The Crises: Origins and Macroeconomic Outcomes

Mexico’s devaluation\(^\text{10}\) on December 20, 1994 (followed two days later by a forced decision to float) came as a surprise to many, in both the markets and the official sector, despite the famous warning by Rudi Dornbusch and Alejandro Werner at the Spring 1994 Brookings Panel meeting that a "sad ending lies ahead unless the currency is devalued." (p.287).\(^\text{11}\)

[In a speech at the fiftieth anniversary meetings of the IMF and World Bank in Madrid in September 1994, the widely and rightly respected dinner speaker, Pedro Aspe, then Mexico’s Finance Minister, laid out in detail what Mexico had achieved during the previous six years.\(^\text{12}\) It was in large part because Mexico’s structural policies had been so impressive, because budget deficits and debt – both internal and external – had been small relative to GDP, and because Mexico’s relations with its creditors were good, that the devaluation came as such a shock to so many.\(^\text{13}\)]

In retrospect, the Mexican crisis was generally attributed to the unsustainability of the current account deficit, which had averaged more than seven percent of GDP for the three years 1992-94. In addition, the Mexican budget presented just before the devaluation assumed that the current account deficit in 1995 would be 8 percent of GDP. Mexican government officials tended to attribute the crisis to a series of adverse shocks, including the assassination of presidential candidate Colosio in March 1994, when the reserves declined by about $10 billion (out of a total of $30 billion), and then the Chiapas crisis, which produced another reserve decline in November of about $10 billion.

Let me note three other important policy lessons drawn from the Mexican crisis at the time. First, there were actually two Mexican adjustment programs. The first, produced very

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10 Mexico broadened its exchange rate band on December 20, and the exchange rate promptly moved to its upper limit, as capital outflows intensified.
13 For an early account of the Mexican crisis, see Annex I of World Economic Outlook, IMF, May 1995, pp. 90-97.
soon after the devaluation, assumed that the external deficit would decline from 8 percent of GDP to 4 percent, and that growth would be 1.5 percent, these results to be obtained by the devaluation supported by a tightening of fiscal policy. When it became clear that the markets were in no mood to support any current account deficit, the program was reformulated in March 1995. Fiscal policy was tightened further by around 1.7% of GDP, and growth for 1995 was assumed to be minus 2 percent. In the event, growth in 1995 was minus 6 percent. But the confidence of the markets began to be regained with the strengthening of the program in March. This reinforced the view that the markets draw confidence from fiscal tightening.

Second, at several stages during the crisis, when the peso weakened, the Mexican authorities tightened monetary policy by raising interest rates. This reinforced the view that such monetary tightening worked. Nominal and real interest rates in Mexico during the course of 1995 are shown in Figure 5.

Third, it took a long time for the Mexican authorities to regain market confidence. As late as November 1995, nearly a year after the devaluation, there was another bout of market nervousness, which perplexed the authorities. Market participants said that monetary policy was difficult to understand, and insufficiently tight. In addition, as the Wall Street Journal explained following the announcement of the government’s economic assumptions – including 3 percent growth – for 1996, “The trouble is that markets are questioning Mexico’s ‘ability to generate economic growth’”. 14 But by then, the V-shaped Mexican recovery was already under way, and GDP grew over 5 percent in 1996.

In addition, we should recall that the Mexican crisis produced serious contagion effects. As the Mexican situation worsened, so did capital market conditions for other Latin American countries. Latin American spreads moved almost in lockstep over this period (Figure 3 shows spreads for Argentina, Mexico, Brazil), and the slowdown in Mexico spread in 1995 to Argentina, which experienced negative growth (-2.8 percent) as a result of the tequila crisis. 15 For a few days in mid-January 1995, the Philippine peso and Hong Kong dollar came under pressure – a reaction that at the time seemed almost impossible to understand. The power of contagion became fully evident; what to do about it was less evident.

At the start, the Thai crisis looked very much like a reprise of the Mexican crisis: Thailand was defending a pegged exchange rate, in the face of a very large current account deficit (nearly 8 percent of GDP in both 1995 and 1996), a weak stock market, and weakening external confidence. Although this crisis was foreseen by the IMF and others, the Thai authorities ignored many warnings and did not take action until their international reserves were virtually exhausted.

Eventually, on July 2, Thailand allowed the baht to float; it depreciated immediately by about 10 percent, but then as no other action was taken along with the float, the currency continued to depreciate. At the end of July, Thailand requested an IMF program. The

15 The data show very little slowdown in Brazilian growth in 1995, shortly after the real plan stabilization.
Figure 3: Latin America: EMBI Subindex Spreads (1994-2000)

Basis Points

Argentina
Brazil
Mexico
program, which included measures to deal with serious weaknesses in the financial sector, was
approved by the Executive Board of the IMF on August 20. After the program had been
agreed, on August 12, the Japanese Ministry of Finance called together the main Japanese
creditor banks of Thailand, who in a meeting with the Thai authorities, agreed to maintain their
credit lines in Thailand.

One of the most controversial aspects of the Thai program, and one that badly
colored relations with the authorities, was the requirement that the Thais publish full data on
the reserves and on forward foreign exchange commitments at the start of the program. This
was insisted on by the Fund’s largest shareholder, and at the time I had some sympathy for the
Thai position. I subsequently decided I was wrong, and that to have let the program go ahead
with incorrect data on the reserves, leaving the truth as a sword of Damocles hanging over
market confidence and trust in the information it was receiving, would have been a big
mistake. If I had this to do all over again, the only change would have been to insist that the
data be made public well before the start of the program, so that the bad news was out of the
way before the program started, rather than coming out simultaneously with the start of the
program.

The devaluation of the baht raised questions about exchange rate arrangements in
neighboring countries. The Philippine peso was allowed to float on July 11 – the Philippines
was at that time in an IMF program, and the decision was taken in consultation with the Fund.
Acting preemptively, Indonesia almost immediately broadened its intervention band from 8 to
12 percent. On July 14, the Malaysian ringgit was allowed to float. Nonetheless, the pressures
on the currencies continued, and on August 14 the Indonesian rupiah was also floated. The
currencies were in each case defended by raising interest rates, though to a lesser extent in
Malaysia and Korea (Figure 4).

Despite the program with Thailand, and the continuing pressures on other Asian
currencies in the third quarter of 1997, there was little public indication, and there were
probably few premonitions among policymakers, of the storm that was about to hit these
economies in just a few months. Thailand seemed to be struggling, but that was explicable as a
result of the failure of the government to act firmly to implement its IMF-supported program.
The Philippines was in some difficulty but managing in its own way, with the veteran
Governor Singson in charge of the currency, to control the situation.

Indonesia, with its strong fiscal position, and its preemptive actions on the currency,
was regarded as taking the right measures to deal with pressures. The Indonesian policymakers
themselves were deeply aware of the weaknesses in their financial sector, and were looking to
the IMF for a program to help them strengthen the sector.\textsuperscript{16} \textsuperscript{17}

\textsuperscript{16} See “Causes and Implications of the Asian Crisis: An Indonesian View”, by Soedradjad Djiwandono, then
Governor of Bank Indonesia, in William C. Hunter, George G. Kaufman, and Thomas H. Krueger (editors), \textit{The

\textsuperscript{17} In September, en route to the Annual Meetings in Hong Kong, together with Bijan Aghevli, Deputy Director of
the Asia Department of the Fund, I visited Indonesia, and discussed the possibility of a precautionary program,
that would focus on the financial sector. As evidenced by the fact that the discussions were about a precautionary
program, there was no sense at that time of a generalized crisis.
Figure 4: Nominal and Real Overnight Interest Rates: 1996-2000 (monthly, in percent per year)

Source: IMF

The rates used are monthly. Real Rates are obtained by deflating nominal interest rates by the 3-month centered moving average of the CPI.
Figure 5. Nominal and Real Overnight Interest Rates (monthly, in percent per year)

Source: IMF

Real Rates are obtained by deflating nominal interest rates by the 3-month centered moving average of the CPI
There had been signs of difficulty in the Korean economy since the start of the year: the stock market kept declining, and several chaebols had gone bankrupt. Nonetheless, Korea was regarded as in a different league from the ASEAN countries, especially since becoming an OECD member. I had noticed a brief news report on August 26 saying that the Korean government had “promised to ensure the payment of foreign debts held by Korean lenders”, and had wondered why such a guarantee was necessary, but had failed to follow up. I had kept on my desk a *Wall Street Journal* article of August 18, 1997, quoting the head of foreign exchange for Asia at a leading investment bank:

‘After the [Thai] baht, the [Malaysian] ringgit and the [Indonesian] rupiah, we feel that maybe we’ve been neglecting the Hong Kong dollar. … We might succeed, you never know. At least we’ll see how much the HKMA is willing to spend in its defense’

The 1997 Annual Meetings of the IMF and the World Bank took place from September 23-25 in Hong Kong, following its return to Chinese sovereignty. Aside from the difficulties in South East Asia, the world economy seemed to be in good shape. But there was considerable unease among Asian delegates, particularly those from ASEAN countries.

After the Hong Kong meetings the crisis worsened, following Taiwan’s devaluation on October 17. This was different, because Taiwan had such large reserves (over $90 billion). Then, in the week starting October 20, the pressure on Hong Kong mounted, with hedge funds reportedly pursuing a fail-safe strategy of shorting both the Hong Kong dollar and the Hong Kong stock market: the pressure on the currency would cause interest rates to rise, which would cause the stock market to fall. The stock market fell over 25 percent in that week.

As Figure 1 suggests, the attack on Hong Kong started a second, and the more serious phase of the crisis. Although we did not know it at the time, Korean reserves were under strong pressure.

Discussions between the IMF and Indonesia for a possible precautionary program, focused on restructuring the financial sector, had begun in September, with no special sense of urgency. But as the regional crisis worsened, the nature and scope of the program changed. A mission to negotiate a regular standby arrangement arrived in Jakarta on October 11, 1997. Agreement on an economic program was reached (a Letter of Intent was signed) on October 31; the program was agreed to by the Executive Board of the IMF on November 5.

Market pressures on Korea were mounting during November. On November 17, the trading band for the Korean won was widened, and the delicate dance that would lead at the end of the month to negotiations between Korea and the IMF for a program began. During this dance, we began to discover that Korea’s reserves were rapidly becoming exhausted. The official request for a program came on November 21, a Friday. Negotiations began in Seoul on

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19 The same *Wall Street Journal* article of August 18, 1997 noted above, quotes the manager of one large hedge fund who said “he is convinced the Hong Kong dollar is vulnerable because the Hong Kong stock market is vulnerable”.
November 26, and concluded on December 3, by which date Korea was virtually out of reserves. That was the most intense week of negotiations during the entire crisis period. On December 4, the IMF Board approved an approximately $21 (SDR15.5) billion loan for Korea, of which $5.5 billion became available immediately.

At the start, the Indonesian and Korean crises were ascribed – particularly by policymakers in the two countries – to speculative attacks caused by contagion. The normal macroeconomic indicators were healthy in both countries. Although Korean exports, like those of Thailand, had been hit hard by the slowdown in electronics exports at the end of 1996, and the current account deficit that year had been above 4 percent of GDP, current account prospects for 1997 looked better. Both countries, though, had been defending pegged exchange rates, both had large external – largely private sector – debts, and financial sectors in both countries were believed to be very weak.

Corporate leverage ratios varied widely among Asian countries. In a comparison for 1988-96 among 45 countries, including most of the OECD, leverage – defined as the ratio of total debt to equity – was by far the highest in Korea, with Japan next. The average leverage ratios in Thailand, Indonesia, and Hong Kong were among the top ten, while Taiwan was among the lowest, with the Philippines, Singapore and Malaysia also below average.

Indonesia and Thailand were highly vulnerable to a speculative attack, and each suffered one. There has been some discussion in the literature about the nature of the contagion that led to the speculative attacks: the notion that the Thai crisis was a “wake-up call”, which drew attention to similar difficulties in other countries is persuasive, so long as one recalls that the difficulties in the Korean economy had been manifesting themselves from the start of 1997, even if they had not been recognized as implying a likely financial crisis.

Both the Russian and Brazilian crises of 1998 were more traditional in nature, for both countries had serious macroeconomic problems at the time of the crisis. Russia had performed very well under an IMF standby agreement in 1995, when it succeeded in sharply reducing inflation through the use of a crawling peg exchange rate anchor. Agreement was reached on an Extended Fund Facility loan in March 1996. With the poor health of President Yeltsin, performance under the EFF was fitful. The budget deficit for 1996 and 1997 exceeded 7 percent of GDP. Although government debt was less than 35 percent of GDP, with GDP declining, fiscal sustainability was in doubt; and interest rates rose accordingly, adding to the doubts on fiscal sustainability. As oil prices declined in 1998, both the fiscal situation and the balance of payments worsened, market confidence in Russia declined further, and the pressures on the exchange rate and interest rates intensified.

Negotiations to augment Russia’s financing from the IMF began in June 1998, and agreement was reached on a set of measures and a large-scale financing package in July. The package was described in the press as worth $22.6 billion, of which $15.1 billion was from the IMF and $6 billion from the World Bank. These figures included undisbursed amounts already committed under existing facilities. The new conditionality was primarily fiscal, with the

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intent being both to ensure the collection of taxes, and to restore to the center some of the
revenues that had been lost to the regions. With the government lacking a majority in the
Duma, much of economic policy during the nineties had been implemented – highly
imperfectly – by decree. This time the IMF took the view that Duma support for the program
was essential, and the program included ten measures that would have to be approved by the
Duma as prior conditions for the tranche of $5.6 billion. In addition, an attempt was made by
the Russians, with the assistance of western advisers, to restructure part of the debt, to increase
its maturity (thereby reducing needed rollovers) and reduce its interest cost.

In the event, the government succeeded in passing 8 of the 10 measures through the
Duma, which was a considerable achievement relative to its previous record. But given the
failure to pass all ten measures, the Fund reduced the tranche to $4.8 billion. Relatively little
debt was exchanged, and the enhanced program was therefore off to a poor start. Market
pressures soon intensified, and the Russians requested more financing. To the surprise of those
who had relied on the so-called moral hazard play, the request was refused, and on the
weekend of August 14-16, Russia decided both to devalue and to default on its debt.

The Russians had discussed the possibilities of trying either to devalue or to restructure
the debt, without doing the other, but concluded that either action would quickly lead to the
other. Hence they decided to do both. The anguished outrage and the massive contagion that
resulted suggested that these actions had been a surprise to many. However it is difficult to
believe that investors receiving triple digit dollar returns on their GKO’s did not regard the
situation as highly risky – even taking into account the fact that those left holding GKO’s at the
end must have been the market participants who most firmly believed that Russia would be
able to hold on.

Brazil had carried out an impressively successful inflation stabilization with the plan
real in 1994, which transited into a pegged exchange rate against the dollar. Brazil appeared
virtually untouched by the Tequila crisis in 1995, but the real exchange rate was appreciating,
and fiscal policy was becoming more expansionary even as post-stabilization plan growth
continued at only a modest rate. Pressures on the currency were beaten back through a high-
interest rate defense in 1997 (Figure 5), but the pressures intensified following the Russian
crisis in 1998, and interest rates rose again. As the negotiations for a Brazilian program
intensified in September 1998, many voices called for a devaluation, but the authorities argued
vehemently that letting go of the exchange rate would revive inflation, and that the exchange
rate was at most overvalued by only 10 percent.

Given the delicate state of the emerging markets in the fall of 1998, and Brazilian
opposition to devaluation, the program agreed with the IMF on November 13 1998 supported
the pegged exchange rate. It did, though, include an agreement that the rate of crawl would be
stepped up, to allow for a real devaluation of about 10 percent over the coming twelve months.
On the Brazilian side, the budget was to be tightened by 2.5% of GDP.

Note the increase in the number of program conditions resulting from a desire to specify the necessary measures
precisely.
The Executive Board approved the program on December 2, despite considerable misgivings expressed by several Executive Directors. In the event, the peg did not hold for long, and Brazil was forced to devalue on January 13, and to begin to float shortly thereafter. The broad outlines of a new framework for macroeconomic policy, including inflation targeting, were agreed early in February, and on March 30 the revised program was approved by the Executive Board.

To summarize on the origins of the crises: the Mexican, Thai, Russian, and Brazilian crises all looked more or less like conventional old-fashioned crises, in which an unsustainable current account combined with a pegged exchange rate to lead to a crisis. However neither in Mexico nor in Thailand was there a serious fiscal problem. Financial sector weaknesses appeared especially important in Thailand, not least because its financial sector was much larger than that in the three non-Asian crisis countries. The crises in Indonesia and Korea looked different from the beginning, because both the current account and the fiscal deficits were small, and contagion seemed to play the dominant role. But the contagion hit economies with serious financial and corporate sector weaknesses, whose impact was magnified as market pressures increased.

Of the six crises, the IMF was called in to four of them – Mexico and the three Asian cases – after the pegged exchange rate had been abandoned. In the two other cases, the IMF was lending to help defend a pegged exchange rate, but neither defense ultimately succeeded. In each of the Brazilian and Russian cases, the exchange rate had originally been pegged as part of a successful disinflation program, but in neither case did the country succeed in moving out of the pegged regime in time. It should be noted though that during this period there was a successful defense of a (hard) pegged exchange rate regime: in April 1995, with Argentina in crisis as a result of contagion from Mexico, an IMF program that helped to maintain convertibility and restore growth was negotiated with that country.

Effects of the Crises

The effects of the crises on the affected economies were, for the most part, dramatic (Table 2 and Appendix Table 1). As can be seen in Figure 6, GDP in Mexico declined by 6.2 percent in 1995; in Thailand output fell nearly 11 percent in 1998; in Indonesia the decline in 1998 was 13 percent; in Korea the 1998 decline was nearly 7 percent. However the decline in output following the Russian devaluation and default was relatively short-lived, and with the combined effects of both the devaluation and higher oil prices, output in 1999 rose for the first time in a decade, by over 3 percent, to be followed in 2000 by spectacular growth of over 7 percent. In Brazil, the revised program of March 1999 assumed an output decline of nearly 4 percent; in fact output in 1999 increased, by just under 1 percent.

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22 The losses in output should be measured relative to some estimate of trend growth. See World Economic Outlook, (May 1999) for estimates of output losses in the Asian crisis countries.
Table 2: Selected Macroeconomic Indicators For Capital Account Crisis Countries

<table>
<thead>
<tr>
<th></th>
<th>t-1</th>
<th>t</th>
<th>t+1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth (in percent per year)</td>
<td>4.4</td>
<td>1.3</td>
<td>-5.5</td>
</tr>
<tr>
<td>Consumer Price Index (in percent per year)</td>
<td>8.4</td>
<td>9.0</td>
<td>33.2</td>
</tr>
<tr>
<td>Fiscal Balance (General Government Balance in percent of GDP)</td>
<td>-1.4</td>
<td>-3.0</td>
<td>-3.2</td>
</tr>
<tr>
<td>Current Account (in percent of GDP)</td>
<td>-4.2</td>
<td>-2.9</td>
<td>6.1</td>
</tr>
<tr>
<td>External Debt (in percent of GDP)</td>
<td>37.3</td>
<td>47.2</td>
<td>78.4</td>
</tr>
</tbody>
</table>

Figure 6: Real GDP Growth (in percent per year)

Source: IMF

t = 1994 for Mexico, 1997 for Thailand, Indonesia and Korea, 1998 for Russia, 1998 for Brazil
Figure 7: Current Account (percent of GDP)

Source: IMF

t = 1994 for Mexico, 1997 for Thailand, Indonesia and Korea, 1998 for Russia, 1998 for Brazil
Figure 8: Daily Nominal Exchange Rates (Value of the national currency in terms of US dollar, normalized)

Source: IMF, the exchange rate a day before the devaluation is normalized equal to 100, $t = 12/19/94$ for Mexico, $7/1/97$ for Thailand, $8/13/97$ for Indonesia, $11/16/97$ for Korea, $8/16/98$ for Russia and $1/12/99$ for Brazil.
Figure 9: Real effective Exchange Rate *(monthly, normalized)*

Source: IMF

Normalization: The exchange rates for the month before the devaluation are normalized to be 100.
Figure 10: Inflation Rates (in percent per year)

Corresponding to the recessions in Mexico, Thailand, Indonesia, and Korea were massive turnarounds in the current account (figure 7): from a 7 percent of GDP deficit in 1994 to near-balance in 1995 in Mexico; from an 8 percent deficit in 1996 to a nearly 13 percent surplus in 1998 in Thailand – an incredible turnaround of over 20 percent of GDP; from a 3 percent deficit in 1996 in Indonesia to a 4 percent surplus in 1998; and from a 4 percent deficit in 1996 to a 13 percent surplus in 1998 in Korea. The current account turnaround of 13 percent of GDP in Russia between 1998 and 1999 was also impressive, but that owed much to the change in the price of oil. In the Brazilian case, the current account was essentially unchanged following the crisis – the result of a small improvement in the trade account, combined with a worsening of the services balance, due to higher debt payments. The failure of the Brazilian current account to strengthen significantly despite an over 50 percent devaluation stands in marked contrast to what happened in Mexico – which benefited from NAFTA and United States growth – and in the Asian economies.

The crises had dramatic impacts on both nominal and real exchange rates (Figures 8 and 9). On average, the nominal exchange rate depreciated by 45 percent over the six months following the devaluation, and the real exchange rate by 31 percent. The extent of these devaluations is especially remarkable given that pre-devaluation estimates of overvaluation rarely exceeded 25 percent, and more typically were in the 10-15 percent range. These large exchange rate movements reflect the massive capital flow reversals that took place during the crises. Later the real exchange rate appreciated from its crisis levels, with real devaluations after two years being about 20 - 25 percent.

The impacts of the crises on inflation varied greatly (Figure 10). In Mexico, Indonesia, and Russia, the devaluation fed through in large measure to inflation; in Thailand, Korea, and Brazil, the inflation rate increased very little despite the large nominal devaluations. Considering that the fear of inflation – a result of Brazil’s long inflationary history – was an important factor underlying the Brazilian reluctance to devalue, the Brazilian result is particularly interesting. The reasons for the different rates of passthrough are not obvious; one factor in Brazil is that monetary policy was restrictive both before and after the devaluation.

The financial sector impacts of the crises also varied. In Mexico, the government undertook many measures to shore up the financial system in the wake of the crisis, including mechanisms to allow households to roll over mortgages, support for banks to borrow to strengthen capital, and assistance in the rollover of foreign debts of the banks. But financial sector restructuring was not central to the program – indeed there was no financial sector conditionality in the IMF program. The impacts in the Asian crisis countries, as well as in Malaysia, but not in the Philippines, were heavy. (The financial sector actions taken in Thailand, Indonesia and Korea are summarized in Appendix Tables 3-5.). By contrast, the Brazilian devaluation had very little impact on the banking system, for two reasons: first, the financial system was both smaller (as a result of past inflations and lower savings rates) and stronger (as a result of government policies in the years leading up to the crisis); and second, the devaluation was widely and long anticipated, giving time for market participants to adjust in advance – with the government providing the means to adjust by running down reserves and
selling exchange rate linked instruments. In Russia, the debt default hit the banks hard; however the real effects of the banking sector crisis were limited because the banking system had not played any serious role in financing investment.

III. IMF Programs

The crises – particularly the Asian crisis – generated an extraordinary storm of criticism about the IMF-supported programs put in place to deal with them. Appendix Tables 2-7 contain brief descriptions of the programs. As is well known, the controversies relate to (i) fiscal policy, (ii) monetary and exchange rate policies – particularly interest rate defenses of the currency, (iii) structural policies – particularly those relating to the financial sector, as well as the question of whether the programs had excessive conditionality, (iv) the interrelated questions of private sector involvement and capital controls, (v) the size of the financing packages, in relation to the nature of the crisis, with some arguing that the crises were liquidity crises that demanded larger financing, and (vi) the overall question of why the programs did not rapidly restore confidence.

I will take up these issues in turn.

Fiscal policy

One of the standard jibes at the IMF is that the initials stand for “It’s mostly fiscal”. That belief does tend to permeate the Fund, and with good reason. Often a current account problem, generally associated with domestic overheating, seems related to fiscal excess. But even if a current account problem was not caused by fiscal excess, fiscal tightening is typically the best macroeconomic policy tool to reduce the external deficit in a state of domestic excess demand, for monetary tightening (with a flexible exchange rate) tends to produce an appreciation. And, according to the Mundell-Fleming model, if the exchange rate is fixed, monetary contraction tends in the short run to produce a widening of the current account deficit, followed by capital inflows that have to be monetized – not what is needed to reduce the current account deficit.

In the Mexican crisis, a fiscal tightening was instrumental in the recovery of confidence that followed the introduction of the March 9, 1995 revised program. There was also a tendency following the Mexican devaluation to hunt for a hidden deficit, with the quarry soon being located in quasi-fiscal activities, including development bank lending. This led to the conclusion that there had, after all, been excessive fiscal spending in the runup to the Mexican crisis.

Table 3 shows the fiscal adjustments included at different stages of the IMF-supported programs in Asia, Russia, and Brazil. Relative to the previous year, the initial (August 1997) Thai program called for an increase in the central government surplus of 2.1 percent of GDP, which would correspond to a larger negative fiscal impulse. The request for such a fiscal tightening despite the budget being close to balance initially, was justified by two factors: the
### Table 3: Evolution of Fiscal Performance Criteria and Indicative Targets (in percent of GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>Fiscal Performance Criteria</th>
<th>Previous year</th>
<th>Original Program</th>
<th>First Review</th>
<th>Second Review</th>
<th>Third Review</th>
<th>Fourth Review</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Overall central government balance</td>
<td>0.8</td>
<td>1.0</td>
<td>-3.2</td>
<td>-8.5</td>
<td>-8.5</td>
<td>-8.5</td>
<td>-2.1</td>
</tr>
<tr>
<td>Korea (1998)</td>
<td>Central Government Balance</td>
<td>-0.5</td>
<td>1.0</td>
<td>-0.7</td>
<td>-0.9</td>
<td>-3.3</td>
<td>-4.2</td>
<td>-3.9</td>
</tr>
<tr>
<td>Thailand (FY97/98)</td>
<td>Central Government Balance</td>
<td>-1.1</td>
<td>1.1</td>
<td>1.0</td>
<td>-1.6</td>
<td>-2.4</td>
<td>-2.7</td>
<td>-2.6</td>
</tr>
<tr>
<td>Mexico (1995)</td>
<td>Overall Balance of NFPS (Non-financial public sector)</td>
<td>0</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Brazil (1999)</td>
<td>PSBR (Private Sector Borrowing Requirement - deficit)</td>
<td>-8.1</td>
<td>-4.7</td>
<td>-10.4</td>
<td>-10.4</td>
<td>-9.0</td>
<td>-10.8</td>
<td>-9.5</td>
</tr>
<tr>
<td>Russia (1998)</td>
<td>Primary Balance</td>
<td>0.1</td>
<td>2.6</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
<td>-3</td>
</tr>
</tbody>
</table>

Source: IMF
need to reduce the large current account deficit of 1996; and the anticipation that there would be substantial costs of cleaning up the financial system.

It became clear during September and October that the crisis was taking a much larger toll on aggregate demand in Thailand than had previously been expected; in addition the exchange rate had depreciated more than expected. There was a lively debate within the staff of the IMF, and also with the Board, on how fiscal policy should be adjusted. It was recognized that fiscal easing was appropriate from the cyclical viewpoint, but there was a concern that the markets would view fiscal easing as inappropriate at a time of rapid capital outflows, when the priority was to stop those outflows.

The mission that was sent to Thailand at the end of October to conduct the first review of the program was told to allow the automatic stabilizers to work, i.e. to allow the budget deficit to widen. Instead it came back with an essentially unchanged deficit, which implied a negative fiscal impulse. The reason? Problems in the timing of an expected change of government combined with the authorities’ natural conservatism – a virtue in normal times – made it difficult to negotiate a larger deficit at that point.

The initial agreement with Indonesia also included a small planned increase in the budget surplus. This was justified internally mainly as a down payment on the likely costs of financial sector restructuring. The complexities of judging market reactions to fiscal policy changes became clear on January 6, 1998, when President Suharto personally presented the budget for 1998. In light of changed economic conditions, especially the greater than anticipated depreciation of the currency, the proposed deficit of 1% exceeded that in the program by 2% of GDP. My personal reaction was that the budget was entirely reasonable. Nonetheless, the market reaction was extremely adverse – whether it was due to the view that the budget violated the IMF agreement, or because the larger deficit was viewed as inappropriate to the economic situation, is difficult to say.

The initial agreement with Korea, also included a fiscal tightening, partly because it had had an over 4 percent of GDP current account deficit in 1996, partly to deal with financial sector restructuring costs, which were anticipated to be large.

The internal debate over appropriate fiscal policy, both within the staff and with the Board, intensified as the crisis worsened, and as outside criticisms increased. By early 1998,

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23 Generally, the staff took the view that, ceteris paribus, the budget should be strengthened on this account by an amount equal to the anticipated real interest costs of servicing the debt associated with financial sector restructuring.

24 At the time, there was a newspaper report out of Washington saying that official circles were upset by the budget. At least one Asian source attributed this reaction to the IMF; I do not believe the IMF was the source of that report.

25 Policy debates within the Fund are often vigorous, with a range of views being expressed. However, once a decision on a particular course of action has been taken, IMF discipline generally operates to present a united front. I believe this is the best way to operate for an agency that has to give policy advice and negotiate, but some believe the debates should continue in public.
budget targets began to be eased, and through most of the rest of the crisis the Fund found itself in the unaccustomed position of criticizing the failure of the governments concerned to make deficits as large as targeted.

Fiscal contraction was seen as necessary to ensure debt sustainability in both the Russian and Brazilian programs. The March 1999 Brazilian program targeted a primary surplus such that, under reasonably cautious interest rate assumptions, the debt to GDP ratio would gradually decline. One criticism heard in the Russian case was that since the main problem was not the size of the debt, but rather the extremely high interest rates, the IMF would have done better in reassuring markets in July 98 by providing financing without conditionality on the passage of fiscal measures by the Duma. The Fund’s view was that the Russian failure to deal with the fiscal deficit over a period of years had raised the debt and spreads to the point where markets no longer believed the debt was sustainable, and that increased lending to Russia would not be justified unless it took measures to deal with the underlying fiscal problem.

What lessons have been drawn from these episodes? Certainly, that fiscal contraction may not be necessary in all balance of payments crises. If debt sustainability is not an issue, and if the contraction of domestic demand – for instance because of a decline in investment – combined with devaluation will produce a sustainable current account, then fiscal policy can be used countercyclically. But we should recognize also that it has been rare for countries with a strong fiscal situation to get into an external financing crisis, and that there have been valid concerns about debt sustainability in the other major capital account crises of recent years.

One more point: given the rapidity with which fiscal contractions were reversed in the Asian crisis countries, I do not believe much damage was done by the initial fiscal policy targets. Within less than a year of the start of the crisis in Thailand and Korea, sharp growth recoveries were under way.

**Monetary and exchange rate policies**

No aspect of the IMF-supported programs in Asia was more controversial than the interest rate policies. In all programs, interest rates were raised at the start, to try to limit the extent of currency depreciation. Nominal interest rates were also very high during the Mexican crises, and in defending the currency in both Brazil and Russia.\footnote{I draw extensively in this section on Boorman \textit{et al} (2000), pp 31-49, and Lane \textit{et al} (2001), pp. 84-111.} Overnight nominal and real rates in the six crisis countries, as well as in Malaysia, are shown in Figures 4 and 5.

I will discuss three monetary and exchange rate policy issues: the use of high interest rates to defend a currency peg; whether interest rates were generally too high at the early stages of programs, particularly in the Asian crisis countries; and exchange rate policy following a devaluation.
Raising interest rates is the traditional way of defending a currency. If capital is flowing out of a country, it does not make sense to make the currency less attractive to hold by reducing the rate of return for doing so.

Maintenance of a policy of easy money that fuels a capital outflow under a pegged exchange rate likewise does not make sense. Provided the peg is still reasonably credible, money should tighten as capital flows out. This was done to only a limited extent in the Asian crisis countries before the decision was taken to widen bands or float. And permitting the disappearance of essentially all the nation’s currency reserves without taking any serious policy action, as happened in both Thailand and Korea in 1997, simply defies understanding.27

Interest rates were also used after the Asian devaluations in an effort to slow and reduce the extent of currency collapses. Programs typically included quantitative targets for some monetary magnitudes, be it the usual IMF pair of an upper bound on net domestic asset creation and a lower bound on net international reserves, or on net international reserves and the monetary base.28 These targets were usually set for a particular review date, which meant that day-to-day monetary policy tactics were not tied down. There were accordingly understandings in some cases at some times that nominal interest rates would not be reduced if the currency was depreciating.

Underlying these monetary policy specifications was the belief that inflation could become a serious problem in the context of a currency crisis, and that tightening monetary policy in the face of depreciation would help stabilize the currency and prevent high inflation. Critics argued that higher interest rates greatly exacerbated the recessions, particularly given the high levels of indebtedness and leverage in the Asian countries, and either that allowing more depreciation would have been less costly than raising interest rates, and/or that higher interest rates in any case weakened the currency by so reducing growth prospects as to lead to a capital outflow.29

IMF recommendations were based on the view that both currency depreciation and high interest rates were damaging to business and consumers, and thus the financial sector, when so much borrowing had taken place in dollars. Further, and this point was emphasized at the time, interest rates would have to be raised only temporarily to stem the currency decline, and could then be reduced, whereas allowing the exchange rate to depreciate would permanently raise the local currency value of dollar-denominated debts.30 We were also concerned about the impact of currency declines in one country on the currency of its neighbors.

These arguments require an evaluation of the costs and benefits of alternative interest rate policies, with the costs of temporarily higher interest rates and less depreciation being compared to the costs of more depreciation and higher inflation. Given the extent of the

27 I also find persuasive an argument of Michael Mussa’s, that a country that fails to defend a pegged exchange rate will lose credibility for whatever monetary policy it pursues, including following a devaluation if that occurs.
28 For details, see Table 5.5, p. 89, in Lane et al (2001).
29 The arguments are reviewed in both Boorman et al (2000) and Lane et al (2001).
30 This argument holds only to the extent that the real, as opposed to the nominal, exchange rate depreciated.
depreciations that took place at the early stages of the crises, we believed that interest rates should be raised. Were they raised too much? Initially, real interest rates were negative in each of the three crisis countries that had IMF programs. In both Thailand and Korea, the overnight nominal rate never exceeded 30 percent. There was a short period in Korea (March 1998) when the overnight real rate was probably around 25 percent, but that was the highest level reached in either of those countries.

Indonesia was different: there it seemed, after the currency collapse in November 1997 through January 1998, that inflation could be taking root, as the central bank lost control over credit creation as it tried to deal with a banking panic. While the nominal overnight rate reached 80 percent, real interest rates stayed negative through the first half of 1998. It was essential to regain monetary control in order to stabilize the exchange rate and prevent high inflation from becoming institutionalized. It was necessary to establish a basis for monetary policy, and also introduce instruments through which monetary policy could operate, and that was gradually achieved in the first half of 1998.

Nominal interest rates peaked in Korea in January 1998 and were below 10 percent by midyear; rates in Thailand also came down to very low levels soon after mid-year, while Indonesian rates stayed high through the end of 1998. High nominal interest rates were temporary in each case, the more so the less inflation occurred – and the very low passthrough of inflation in Korea and Thailand was indeed remarkable. It was almost certainly in significant part due to maintaining monetary control following the devaluations.

Interest rates in Malaysia were kept much lower than they were in the countries with IMF programs, even well before capital controls were imposed in August 1998. The extent of exchange rate depreciation in Malaysia was not very different from that in Korea and Thailand. Given Malaysia’s better initial conditions than in the other crisis countries (particularly, less leverage, and less foreign currency debt), maintenance of lower interest rates combined with about the same rate of depreciation is consistent with the view that there was a tradeoff between the extent to which interest rates were raised and the currency depreciated. Interest rate patterns in the Philippines, which was in an IMF program throughout the crisis, were similar to those in Korea, with a similar extent of currency depreciation.

The conventional monetary policy prescriptions are inappropriate if raising interest rates leads to more depreciation, a Laffer curve of the exchange rate with respect to monetary policy. While there must be levels of nominal and real interest rates so high that the currency would be strengthened by cutting them, it is hard to believe that point was reached during the Asian crisis. Several studies have examined the short-run relationship between interest rates and the exchange rate during the Asian and other crises, but “the results of these studies are inconclusive and indeed quite mixed” – they do not find strong evidence for the traditional effect in which tightening monetary policy strengthens the exchange rate, but they do not find consistent evidence for the perverse effect either.31

Should short-term interest rates have been lower at the beginning of the programs? I believe rates were not too high in the Asian program countries, except perhaps briefly in

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31 See Lane et al (2001), Box 5.2, for a summary of the evidence.
Korea, and that monetary policy should have been tightened earlier in Indonesia, which would have helped prevent the disorganization that followed on the collapse of the exchange rate in December 1997 and January 1998.

In both the Brazilian and Russian programs, interest rates were high pre-devaluation, and ultimately the defenses failed. In both cases though, there were earlier, successful, high-interest rate defenses of the currency. In Russia rates were extremely high during the presidential election in mid-1996, and they subsequently declined; in Brazil the currency was defended with high rates at the end of 1998. Interestingly, although the example of Sweden in 1992 is often cited as evidence against high interest rate defenses, the initial defense in September 1992, in which the overnight interest rate was raised to 500 percent, did succeed; the devaluation came with a second attack, in November 1992. Similarly, the high interest rates in Argentina in April 1995 helped maintain the peg. Thus high interest rate defenses of a currency can succeed for a while – but there has to be light at the end of the tunnel. In the Russian case, the light was the Yeltsin election victory; in Brazil at end-1998, interest rates came down as the global economic crisis dissipated.

A high-interest rate defense cannot succeed if the underlying macroeconomic situation does not appear sustainable – for high interest rates of course worsen the fiscal situation. Further, exceptionally high interest rates, if they last for any time, will produce a recession that will render the policy politically non-sustainable even if it is still fiscally sustainable. And exceptionally high interest rates, sustained for any length of time, can do great damage to the banking system, as was seen in Turkey following periods of four-digit overnight rates in both December 2000 and February 2001.

The monetary and exchange rate policy controversies during the Asian crisis have heightened awareness that responses to higher interest rates depend on their impact on market expectations, and that raising already high interest rates may be counterproductive. This awareness was evident in Brazil in the first quarter of 1999, when the new monetary policy team delayed raising interest rates until early March when the revised program was in place, and has also been evident in the conduct of monetary policy in Turkey in recent months.

Turning next to exchange rate management: countries that have depended on a pegged rate find it almost impossible to contemplate life without the peg, and thus seek intermediate exchange rate regimes after being forced to devalue. Mexico, Brazil, and Russia each attempted to move to a band following their devaluations; Indonesia widened its band in July 1997, following the Thai devaluation. The bands lasted only a few days following the forced devaluations, and the currencies were then in principle allowed to float.

The central banks then faced the problem of how to manage the exchange market. Following a shift from a pegged rate regime, foreign exchange markets become extremely thin, a result of both the lack of market infrastructure, for example the absence of futures markets, and of uncertainty over where the currency will settle. In most cases when currencies were

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32 Even among the major currencies, there have been several occasions recently when the exchange rate has depreciated on the announcement of an interest rate increase; the explanation usually has been that the higher interest rate reduces growth prospects and thus capital inflows.
believed to be overvalued, estimates of overvaluation were around 10-15 percent. But in every one of the six cases, the nominal and real devaluations far exceeded that range. As the currency depreciates, and given the low volume of transactions, the central bank is tempted to intervene, believing that small supplies of foreign exchange will have a big effect on the market. This generally turns out to be an illusion, and one that may use up a considerable amount of the reserves. The central bank then typically scales back its intervention, but nonetheless intervenes from time to time, when the exchange rate moves a lot.

The purist position is for the central bank to stay out of the market entirely, to allow the exchange rate to find its own level. Such a position could make sense if there were a well-defined and credible monetary policy in place. But, following a principle I have generally found to be a good one – namely, do not ask a policymaker to do something you would not be willing to do in his or her place – I believe such advice is sometimes too difficult, especially during a period when monetary and exchange rate policies are in flux and the exchange rate may be fluctuating excessively.

In practice, the floats in all six cases were managed to some extent, least so in Mexico. During the crises, I often felt we did not have sufficiently good advice to offer on how to operate a floating rate regime, though we did arrange in several cases for experts from foreign central banks to assist central banks in the program countries in the day-to-day operation of the foreign exchange market, and in intervention. This is an area where it would be very useful to study and attempt to codify best practices and the circumstances in which they apply.

After the demise of a pegged exchange rate regime, the central bank needs a new basis for monetary policy. As previously noted, the IMF practice has long been to include quantitative targets for some nominal magnitudes, generally an upper bound on net domestic asset creation and a lower bound on net international reserves. Increasingly, and with good reason, countries with floating exchange rates have been putting in place inflation targeting regimes. This is a major innovation for emerging market countries, one that is working well. The shift to inflation targeting has required a change in the design of IMF programs, towards agreement on inflation targets and consultation on and reviews of monetary policy decisions, including a lower bound on net international reserves. This approach is being used successfully in the Brazilian IMF-supported program, and in other programs too.

**Structural policies**

Figure 11 shows the number of structural conditions in the six programs. There was no structural conditionality in the Mexican program. The great bulk of structural conditionality in both the Thai and Korean programs was in the financial sector. There was somewhat more conditionality in the Brazilian program than in the Thai and Korean programs, but the two cases that stand out are Indonesia and Russia.

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33 The chart shows the total number of structural prior actions, performance criteria, and structural benchmarks, actions on which there is formal conditionality. In addition, programs may include indicative targets, actions that the government intends to carry out and that are the subject of monitoring and reporting to the Board when the program is reviewed.
Figure 11: Structural Conditionality in Capital Account Crises Countries (Structural measures per year of the program)

Source: IMF (MONA Database and Program Documents)
The Russian program of March 1996 was a three-year Extended Fund Facility. This program followed the 1995 standby that had successfully reduced inflation to the 20 percent range. It was intended to support an extensive program of structural reforms that our Russian counterparts hoped to implement in driving forward the faltering Russian reform process, intended to change the entire economic system. Many of these structural conditions remained in the program as it was augmented with more financing in July 1998.

The Indonesian program had more financial sector conditionality than the other Asian programs, and also included elements not present in the other programs, particularly those parts that show in Figure 11 as “other”. This included most of the features that have rarely appeared in IMF programs, including for instance ending the clove and plywood monopolies. Most of these non-traditional structural conditions were governance-related, that is to say corruption related, and were included in the belief that investor confidence in Indonesia would not be restored unless there was a change in the way of doing business in the country. Some of these conditions had been on the World Bank’s wish-list of reforms in Indonesia for some time.

Controversies over structural conditionality in the Asian programs centered on, first, whether any structural conditionality should have been included in the programs; second, the nature of the financial sector conditionality; third, the view that the programs neglected the social consequences of the macroeconomic and financial sector policies they contained; and fourth, the view that there was altogether too much conditionality.

The argument that there should not have been any structural conditionality derives in part from the view that the Asian crises were pure liquidity crises, which could have been resolved by providing enough financing. Probably there was some amount of financing that, if provided for example to Korea on IMF terms, would have resolved the crisis at lower output cost than it was. That would probably have taken about $100 billion, much of it up front, and it was not a realistic possibility. Further, given the widespread view among both market participants and officials before the crisis broke out, that there were fundamental financial sector and corporate financing problems in the crisis countries, the program had to attempt to deal with these difficulties if it was to succeed.

A closely related but different view is that there should not have been any financial sector conditionality because dealing with the financial sector inevitably worsens the recession, since it requires recognizing losses, writing down assets, and perhaps closing financial institutions. This is the argument for regulatory forbearance. This approach has been taken in Japan, and has not succeeded, and given the view in the Asian crisis that financial sector weaknesses were at the heart of the problem, it would not have succeeded in the Asian crisis countries either. Further, as a matter of political economy, if the financial sector difficulties had not been dealt with up front, they would almost certainly have lingered even longer than they are lingering now, given the extreme reluctance of the governments in the crisis countries to deal with these issues – a reluctance that remains evident today.
It is true that there was no financial sector (indeed no structural) conditionality in the Mexican program, and that the government did nonetheless move to deal with financial sector weaknesses during the course of the program. It is doubtful that as much would have been achieved in reforming financial sectors in Asia without the program conditionality, in part because the scale of the problem was much larger in Asia, where financial systems are bigger relative to GDP. Further, several Mexican officials with whom I have spoken believe that financial sector reform was too slow in Mexico, and should have been included in the program with the IMF.

As the IMF has moved to narrow the scope of conditionality, it has adopted the view that structural conditions should be included only if they are essential to achieving the macroeconomic goals of the program. The financial sector and corporate financial conditionality in the Asian program meets this condition.

Financial sector conditionality generally related to recapitalizing or closing bankrupt institutions, ensuring that equity holders took their losses, marking down assets and in some cases transferring those claims to other institutions, and deciding what to do with deposit claims. In Indonesia, 16 banks were closed in the initial program and deposits in those banks were guaranteed up to an amount that covered small-scale depositors. The 16 banks were what remained of an original list of 38, some of which were for one reason or another – including political reasons – excluded. But some of the 16 were also politically sensitive, and it should be emphasized that the Governor of the central bank and others involved in the program acted courageously in supporting their closing. The closings initially went smoothly. Then a bank in which the President’s son was a major shareholder was in effect allowed to reopen. Gradually a panic developed, and deposits were shifted from banks regarded as unsafe – among them some of the 22 that had escaped in the first round – to safe banks, particularly public banks.

The question of the extent of the initial guarantee was debated within the IMF, with the desire to prevent panic being balanced against the moral hazard and fiscal costs that a blanket guarantee would create. In retrospect I believe that moral hazard should have been given less weight and a blanket guarantee accepted. It would also have been better to close the dubious banks at the start of the program, rather than leave them to be dealt with later. In the end, of course, a blanket guarantee of bank deposits was provided in Indonesia as well as in the other Asian crisis countries – and I believe that should generally be done up front in similar circumstances.

Third, each program included social safety net measures. In Indonesia, the price of rice and cooking oil continued to be subsidized. In Thailand there was provision for spending on public works that would employ the poor. In Korea there was provision to develop an unemployment insurance scheme; in addition, Managing Director Camdessus helped broker the tripartite agreement among labor, business, and the government to cooperate in dealing with the crisis. The Fund was criticized from both sides on these issues: those who accused it of neglecting social consequences did not notice that these measures were included; others criticized the Fund for trying to usurp the World Bank by including social safety net measures

in the initial programs. In fact, the measures were included, but the intention was that they would be implemented with the assistance of the World Bank and/or the Asian Development Bank.

Fourth, was there too much structural conditionality? The arguments for limiting conditionality are that doing so encourages program ownership; that the more conditions there are, the less focused the program; that no country can carry out a program with as much conditionality as there was in Indonesia and Russia; and that the Fund lacks the expertise to deal with structural conditionality and should stick to its last.

Taking up some of these arguments briefly: the link between the extent of conditionality and program ownership is not straightforward, for sometimes particular conditions are included at the request of governments seeking to commit themselves to undertake those actions. A further complication is that sometimes a particular group within the government – generally they are called reformers – are seeking to use the IMF program as a way of committing their colleagues to the policies. As to the Fund lacking the expertise to deal with structural conditionality, that may sometimes be true; it is also true though that conditionality in Fund programs can relate to actions undertaken under the auspices of the World Bank or some other institution.

One other point: an increase in the number of conditions is sometimes a result of attempting to spell out precisely what measures are needed to achieve a specific goal. For instance, a condition that the banking system be strengthened – which may well be necessary for the success of the program – is too general; but then spelling out the necessary measures leads to an increase in the number of conditions, the more so, the more precisely the conditions are specified. Similarly, a condition such as “reducing corruption” cannot be seriously monitored, and specifying measures to achieve that end will lead to an increase in the number of conditions.

The conditionality in the Russian EFF program was, I believe, broadly appropriate. However I do believe that the Indonesian program included too much conditionality that the government was reluctant to implement, and that accordingly some of the conditions in that program could with benefit have been omitted. Note, however, that despite all the noise about excessive conditionality, conditionality in the other crisis countries does not seem to have been excessive – the impression that it was almost certainly is a result of the Letter of Intent having been used as the vehicle for the government to spell out details of its economic program, many of which were not the subject of IMF conditionality.

The IMF is now appropriately seeking to keep conditionality focused. However, the Fund faces a serious problem in dealing with governance problems in program countries: the IMF should not, and cannot in any case afford, to lend money to governments that will waste it or use it corruptly. Thus many programs will include governance-related conditions that will inevitably seem intrusive and quite possibly excessive in number.
Private sector involvement and capital controls

There were elements of private sector involvement – which is to say, efforts to persuade private investors to maintain their exposure to the crisis country – in five of the six programs, with Mexico the exception.

In Thailand the Japanese banks – Thailand’s major external creditors – were asked in August 1997 to maintain their exposure to the country. This arrangement was not monitored on a daily basis, as was done in some subsequent cases. The exposure of the Japanese banks declined gradually in the months that followed, from $37.7 billion in June 1997, to $26.1 billion a year later, and $18.3 billion in June 1999.35

The Korean program started on December 4. The capital outflow nonetheless continued almost unabated.36 Although the possibility of seeking to coordinate the commercial bank creditors of Korea was discussed inside the IMF around the time the program went into effect, no attempt in this direction was made until Christmas Eve. At that point the G-7 and the IMF decided to approach the commercial banks and inform them that Korea faced default unless the banks agreed to roll over interbank lines of credit. The banks agreed to cooperate, with William Rhodes of Citibank playing a coordinating role on the private sector side – as he had done in the 1980s debt crisis. By late January an agreement had been reached between Korea and the commercial banks to restructure and roll over the interbank lines. The new obligations were one to three year bonds, with a Korean government guarantee, at an interest rate of 250 to 275 basis points above LIBOR, a rate that was below market spreads at the time of the agreement, and above spreads a few months later. During the period in which the agreement was being negotiated, a reporting system was put in place with the assistance of the IMF that enabled the Bank of Korea to monitor interbank lines daily.

The Korean panic stopped soon after the banks were approached. Why were they not approached sooner? The fear was that approaching Korea’s creditors could lead to withdrawals of funds from other emerging market countries, and thus severely worsen contagion. In addition, some G7 regulators argued that there was a conflict between their role as bank supervisors and any attempt to put pressure on banks to hold lines they would rather have withdrawn. The counter to this argument was that there was a collective action problem that could only be solved by the public sector, and that the banks, acting cooperatively, would each do better than they would acting atomistically. While the logic is impeccable, the authorities have to be virtually certain in such cases that the collective action will succeed.

The Korean situation was unusual in that commercial banks were the main short-term creditors. This made it easier to stop the capital outflows with a 1980s style agreement with the banks.

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35 Data are from the BIS.
36 During this period, the Bank of Korea was lending dollars to the commercial banks at interest rates of about 200 basis points above LIBOR. The banks’ external lines of credit were being pulled, and it was little wonder that they were willing to borrow dollars from the central bank at low interest rates rather than try to borrow dollars in the market. Under pressure, the lending rate was raised to LIBOR plus 800 basis points, and then to LIBOR plus 1200, and the outflow ceased.
In Indonesia, capital outflows were driven not only by external creditors, but also in large part by domestic residents seeking safety abroad. When the program was renegotiated in mid-January 1998, it was clear that some scheme needed to be found to deal with the corporate debt problem. Discussions began in late January with bank creditors on rolling over interbank lines, and later with Indonesian private sector participants and government officials on how to deal with the corporate debt problem. In June 1998 an agreement was reached in Frankfurt on restructuring interbank debt and rolling over of interbank lines, as well as on a voluntary scheme for restructuring corporate debt.

In Russia, an attempt was made to restructure the debt in July 1998. This was voluntary and market-based, and did not succeed. On August 17 1998, at the same time as they devalued, the authorities announced a suspension of payments on GKOs maturing before the end of 1998, and their conversion to longer-term paper. They also imposed capital controls in the form of a 90-day standstill on servicing external debt, including payments by Russian banks to nonresidents on forward contracts that had been written to hedge exposure to Russian government debt.

When the program with Brazil was reformulated in the first quarter of 1999, the Brazilian authorities approached the commercial banks to roll over interbank lines on a voluntary basis. A monitoring system was already in place. The Finance Minister and central bank Governor between them visited the leading financial centers and secured agreements from the banks, so that this form of voluntary private sector involvement was in place by the time the Executive Board approved the revised program. The regulatory authorities in the creditor countries generally indicated that they approved of the approach being taken by the Brazilians, but applied very little moral suasion beyond that to their banks. The Brazilian authorities themselves were unenthusiastic about the approach, for fear that it would set off the run they were trying to prevent. In the event, the voluntary agreement and the program worked – though the direction of causation between those two results is complicated.

In none of these cases, except Russia, were losses imposed on the holders of interbank claims and dollar-denominated short-term government debt. Holders of longer-term bonds, equity, and other claims on corporations, generally did suffer losses during the crisis. Further, only in Russia and Malaysia – in the latter case a year after the start of the crisis – were serious capital controls imposed. Some capital controls were imposed in other cases, including Thailand, in an effort to prevent the operation of an offshore market in the local currency, and thus create some leeway for the operation of domestic monetary policy.

Program size

The financing packages announced for Mexico, Indonesia, Korea, and Brazil were extremely large, and those for Thailand and Russia were also large. Relative to quota, IMF

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37 Domestic residents are often major sources of hot capital flows in both directions.
38 However in the Korean case, the interest rate agreed on the restructured debt was below the market rate at the time.
financing for Korea was the largest ever, while financing for Mexico and Brazil was also extremely large relative to quota (Table 1).

In the case of current account crises, where financing is needed essentially to finance imports and maturing debt, but not to deal with capital outflows, it is relatively simple to calculate a country’s financing gap – though even these calculations are bound to be inaccurate. In the case of a capital account crisis, a financing gap can be calculated by starting from the current account, and adding an estimate of capital flows. The estimate of net capital flows is calculated component by component of the capital account, assuming rollover rates for the different components of the external debt. However, the calculation of the needed size of a financing package in the case of a capital account crisis is much harder, for confidence in the program is key to its success, and rollover rates of different types of debt will depend on the size of the package as well as an assessment of the strength of the economic policies put in place to deal with the crisis.

In thinking about this issue within the Fund, we sometimes used a diagram like Figure 12, where, with the program having been agreed, the logistic curve (A) shows the probability of the program succeeding as a function of the size of the financing package. The probability of success reaches close to one when there is enough financing to cover all potential outflows over a reasonable horizon, say one to three years, and provided the problem the country faces is one of liquidity, not solvency (where that distinction remains to be discussed). Underlying curve A is a view that desired private capital outflows will tend to decline as the official financing package increases (B).

In practice we thought of the probability curve as being very steep, more like A’ than A – that if the financing was too small, the program was almost certain to fail, but that once it reached a critical size, it was very likely to succeed.\(^{39}\) The critical size was approximately equal to the calculated total financing gap.

Why not provide as much financing as possible in each case? Moral hazard is one obvious reason – the solution to one crisis could plant the seeds of others. Another is that the IMF’s resources are finite – and further, that the likelihood of the IMF’s being repaid declines with the size of its financing.

Two types of moral hazard can be envisaged: on the part of policymakers in developing countries who take risks they would not otherwise have taken, secure in the knowledge that the IMF will bail them out; and second, on the part of investors, who take

\(^{39}\) The two curves in Figure 12 assume that the views of capital market participants differ and are not known to the authorities or the IMF; if they were uniform and known, then the probability curve would be vertical, or -- in light of uncertainties about current account financing needs – at least very steep.
FIGURE 12: PROBABILITY OF SUCCESS – SIZE OF THE PACKAGE
risks by investing in a country because the IMF safety net is there. I do not believe the first type of moral hazard is a serious concern – I have yet to meet a policymaker who having failed in his risky strategy, welcomes the need to call on the IMF. And indeed, in the six crises discussed in these lectures, 10 out of 12 of the finance ministers and central bank governors had lost their jobs within a few weeks of the outbreak of the crisis.

With regard to the second type of moral hazard, it was sometimes suggested that the Mexican crisis begat the Asian crisis. The evidence is against this hypothesis. The one case where reliance on Fund financing seems to have played a large role was in Russia – but there those who bet on the moral hazard play were in the end disappointed. Nor do the facts give much support to the view that Fund involvement safeguards investors against loss: in every crisis all investors except those who lent very short term have taken losses.

Nonetheless, the potential moral hazard implied by large Fund packages needs to be borne in mind when deciding on the scale of Fund lending. This is an issue to which I will return in the last lecture.

An attempt was made in each case to supplement IMF financing with other funds, bilateral and multilateral. The sources of the other funding varied in amount and nature. In the case of Mexico, the U.S. provided financing from the Exchange Stabilization Fund, and the total Mexican package was asadvertized at the time and specified in Table 1, equal to $48.8 billion. This amount was calculated as being more than enough to cover the refinancing of the famous tesobonos. However the uproar created by the use of the ESF in the Mexican case affected the ability of the United States to contribute bilaterally to future financing packages.

In the Thai case, the IMF provided only about a quarter of the total financing. The rest came from other Asian countries, with Japan in the lead, and the United States absent – an absence that was noticed in Thailand. In Thailand, the bilateral financing was provided in parallel with that of the IMF, and was again real.

In both Indonesia and Korea, the bilateral funding was provided as a second line of defense (SLOD), which would be available if the multilateral financing appeared inadequate, provided the programs were on track. At the time the banks were approached in the Korean case, use of the SLOD to reinforce the program if needed, was held out as an explicit incentive to them to cooperate. In the event, the SLOD was not needed in Korea. In Indonesia, although the program got into severe difficulties, especially in December 1997 to March 1998, SLOD financing was not provided, despite requests from some Indonesian policymakers. The program was clearly not on track, so the failure to disburse the SLOD was not inconsistent with the agreement. But it left the Indonesians, market participants, and some in the IMF wondering under what circumstances any SLOD would be available.

By the time of the Brazilian program, the IMF staff and management had concluded that SLOD financing should not be used again, a conclusion that the U.S. and other industrialized country treasuries were willing to accept. Bilateral financing in that case was provided in parallel to IMF funding, and was coordinated through the BIS.
In Russia, in July 1998, the announced package included only $1.5 billion of bilateral financing (from Japan).

Why use bilateral financing at all? Up to the time of the revised Brazil program in March 1999, the IMF simply did not have enough money to cover likely financing needs. That situation changed after the quota increase went into effect. Despite the Fund’s safe liquidity situation at present, it is still sometimes argued that bilateral as opposed to IFI financing of the same amount gains the country extra market credibility. There are two arguments to support this view: first, it indicates that the success of the program is of direct concern to the major industrialized countries; and second, therefore, that those countries will be more closely involved in the monitoring and enforcement of the program, which will therefore be more likely to be implemented. I believe there is something to these arguments – but there shouldn’t be, for the money the Fund lends belongs to its shareholders. If there is a case for bilateral, in addition to IFI, financing, it would be that the financing needs of a program are too large for the Fund to take them entirely on its balance sheet. But such cases should be rare, for the IMF was set up to deal with financial crises, and it should generally be in a position to take that responsibility.

All these packages were tranched, that is to say, intended to be paid out over time, dependent on meeting conditionality. Although these programs were more front-loaded than had been typical of previous IMF programs, in no case was the first tranche more than 50 percent of the total.\footnote{Box 3.3 in Lane et al. (2001), pp 37-38 presents data on the size and phasing of the programs.} Further, a large part of the financing for Indonesia and Korea did not materialize, and questions eventually began to be raised about whether it was actually available.

Were these programs too large, too small, or about right? As we will discuss later, that question has to be discussed relative to the extent of PSI. But the view has often been expressed that the Mexican program was too large and led to moral hazard and the Asian crises. That contention has not been supported by subsequent research. However there is some evidence that the Russian default and the Paris Club-imposed Pakistani restructuring in 1999 led to increases in spreads.\footnote{Lane et al. (2001), Box 3.4, p. 41, review the literature.} While this may establish that spreads are affected by the availability of official financing, it does not establish whether programs were too large, since the creation of moral hazard has to be weighed against the benefits of lending to a country in a potential crisis.

Another view would be that at least four of the financing packages were too small, because they failed to prevent massive recessions. But of course, the size of a package is not the only factor affecting its success.

Lane et al. (2001, p. 37) measure the size of programs against potential capital outflows, calculated as the sum over the previous three years of all private net capital inflows excluding foreign direct investment and errors and omissions. By this criterion, the Thai program was less than half the size of the others, and may well have been too small. The “for want of a nail”
view could then be taken that the Thai package was too small to stop the capital outflow, that
this sapped confidence in the willingness and/or ability of the public sector to deal with such
crises, and contributed to the subsequent crises.

Whatever the difficulties of determining the right size of a program, two things are
clear. First, the use of the SLOD was not helpful in Indonesia and Korea. Second, the IMF
paid a price for trumpeting the large size of the programs. The private sector understood
exactly that the financing was tranched and conditional, and also gradually understood that
some of the bilateral financing was not readily available. But the headline writers and IMF
critics continued to use the very large headline figures to emphasize the new role the IMF was
playing in these crises.

It comes as a considerable surprise, not least to me, to discover that the amount the IMF
lent in the seven years from 1994 to 2000, SDR 80 billion, was slightly smaller, relative to the
global economy, than the SDR 50 billion it lent in the seven years starting 1981, i.e. during the
Latin debt crisis.42 The impression that the Fund was playing a much larger role in the 1990s
than a decade earlier must owe much to the drama of the individual crises and the attendant
publicity, to the fact that crises visited countries that had until recently been regarded as
miracles, and to the publicity given to the size of financing packages.

IV. Concluding Comments

Let me conclude with a few comments, first on some of the questions that are most often
asked about the crises and IMF-supported programs, and then with some more personal
reflections.

The length of the crisis: We kept being asked during the Asian crisis why it was taking so long
to stabilize the situation, compared with Mexico. The first answer was that memory is faulty:
confidence was not immediately restored in Mexico. More fundamentally, these were not long
recessions. A typical recession in the United States lasts about a year, and in each of these
crises, except in Indonesia, growth was restored within a year. The speed with which countries
got back to the financial markets was also impressive relative to previous international
financial crises, particularly the 1980s debt crisis. Of course, we were lucky that these crises
took place during a period in which the United States economy was so strong, providing a
ready market for Mexican and Asian products. By the same token, the weakness of the
Japanese economy and financial system contributed to the Asian crisis.

42 Some of the Fund’s big borrowers in the 1990s, Russia and Ukraine, were not members in the 1980s.
The depth of the crises: Why were the recessions in Mexico and Asia so deep? During the Asian crisis, critics pointed to underfinancing of the programs and excessively detailed conditionality, which undermined confidence. But the Mexican program was not underfinanced, nor did it have detailed conditionality – and still Mexico suffered a very deep recession. While underfinancing was an issue in the Thai case, the real reason for the depth of those four crises was the virulence of capital flow reversals, in turn a result of a profound loss of confidence in the policy framework of the economy. The loss of the exchange rate anchor was one element; the realization that Asian growth rates of 7-10 percent might not be permanent was another; and a third was the loss of confidence in policymakers and by the policymakers themselves. And this was not a loss of confidence of foreign investors alone. It is not an accident that the Asian programs began to turn only when there was a change in government: in Thailand in November 1997, in Korea following the presidential election in December 1997, and in Indonesia following the resignation of President Suharto in May 1998.

Policy mistakes leading up to the Thai and Korean crises should not be underestimated. Both countries essentially used up all their foreign exchange reserves in defending the currency, and both had major weaknesses in the financial system. This made recovery much more difficult. The Indonesian crisis was different: it was the crisis of the end of regime, with great uncertainty about what would come next, in a situation of ethnic tension.

Did the IMF make things worse? No. Some mistakes were made, particularly in fiscal policy at the very early stages of the Asian programs. But the basic design of programs was correct, and it was essential to make a start on dealing with problems in the financial system and in corporate financing.

Malaysia did not perform better than the other Asian economies in the first year of the crisis, when account is taken of its stronger starting point, with little external debt. The Philippines, another member of ASEAN, did perform better, and that is partly because it was in an IMF-supported program at the time the crisis struck. Among these six countries, Brazil and Russia, also in IMF programs when they devalued, did best post-crisis. In the Brazilian case, not only was the financial sector stronger than in the other five countries, it also turned to the IMF early. The defense of the currency, during which the private sector was able to hedge against an expected devaluation, also helped ensure that the devaluation did not lead to a collapse. In Russia, the rapid recovery owed much to the price of oil, but the strengthening of the fiscal position in 1998 and 1999 was also a result of the measures put in place in the July 1998 program.

The Catch-22 question: What would you do differently if you had it to do all over again?43

• Before the crisis, we should have pushed even harder for exchange rate flexibility, and for more action by countries on strengthening their financial sector – for these weaknesses were known and had been reported on. But I am not confident we would

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43 To repeat, in this section, as elsewhere in these lectures, I speak only for myself and not necessarily for the IMF.
have succeeded, for such advice was strongly resisted when it was given – and policymakers doing extremely well are not inclined to change the status quo.

- I have already spoken about fiscal policy in the Asian crisis; other macroeconomic policy recommendations would not have changed.

- On structural conditionality, I would have emphasized even more financial sector and corporate debt restructuring. But I would have applied the current macroeconomic relevance test more strictly, particularly in the Indonesian program. Further, a complete deposit guarantee is almost unavoidable in a serious crisis in which doubts arise about the banking system.

- On program financing, once the necessary size of a program has been calculated, it is essential that the financing is real, and available when needed; this means no second lines of defense or other financing the conditions of whose delivery is unclear, and careful attention to the phasing of financing. Earlier efforts to ensure private sector involvement would have been useful in the Asian crisis countries.

- It would be desirable if countries took more ownership of their programs. But I do not hold out much hope of that. The rule is: when a program is going badly, it is called an IMF program; when it is going well, it is owned by the country.

- And no doubt we could have done a better job explaining programs to the public.

Personal reflections on the crises: Finally a few more personal, less cosmic, reflections:

- It is hard to describe the state of shock of policymakers beset by a crisis that has destroyed their entire policy framework. They start by blaming everything and everyone but themselves, they resent the need to call on outside help, and find it very difficult to think realistically. A bit later the serious policymakers get down to work.

- As a result of the confusion of policymakers and reluctance to accept what has happened, it is often difficult to get realistic growth assumptions or forecasts into a program. This greatly complicates the task of the IMF, because on this as on all other issues the formulation of a program requires as much cooperation as possible, not conflict on every issue.

- Restoring confidence is a difficult and time-consuming process, not least because at the start of a crisis, the country regards itself as the victim, and everyone else tends to blame it for what has happened. I have several times seen the representative of a country in crisis explaining to a skeptical Executive Board of the IMF that its policies had been close to perfect, and that it was asking for a large loan only as a result of a series of unfortunate accidents.

- This creates a real problem for the management and staff of the IMF. We are trying to help the country recover from the crisis, and thus cannot often criticize it in public. It is
easy in those circumstances to become an apologist, a temptation that should be avoided, difficult as that is.

- It is difficult to fight the markets. I have often thought the markets were wrong in their appraisals of countries; indeed I think that now. I have often thought as a country struggled with skeptical markets, that multiple equilibria exist, and that the country would not be in a crisis if the markets were not skeptical. But no amount of railing at this issue will change the fact that the markets are there, and that their verdict has to be dealt with.

- The benefits of having an IMF: It is far more acceptable for a country to have to deal with an organization of which it is a member, and in which it has rights and privileges, and which represents the entire international community, than with an individual country.

- Finally, in each crisis, I remembered the words of Michel Camdessus when he met with us early in the morning after the United States’ $40 billion support package for Mexico failed to receive Congressional support: “Gentlemen, this is a crisis, and in a crisis, you keep calm.”
### Appendix Table 1: Macroeconomic Indicators in Capital Account Crisis Programs

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<td><strong>1. Brazil (1998)</strong></td>
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<tr>
<td>Real GDP (growth, in percent per year)</td>
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<td>0.2</td>
<td>0.8</td>
<td>4.2</td>
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<tr>
<td>Consumer Price Index (growth, in percent per year)</td>
<td>15.8</td>
<td>6.9</td>
<td>3.2</td>
<td>4.9</td>
<td>7.0</td>
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<tr>
<td>Real exchange rate (growth, in percent per year)</td>
<td>5.9</td>
<td>4.2</td>
<td>-2.3</td>
<td>-33.6</td>
<td>9.1</td>
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<tr>
<td>Private Savings (in percent of GDP)</td>
<td>21.4</td>
<td>21.0</td>
<td>21.8</td>
<td>24.1</td>
<td>19.5</td>
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<td>Public Savings (in percent of GDP)</td>
<td>-3.4</td>
<td>-3.4</td>
<td>-4.9</td>
<td>-8.3</td>
<td>-3.1</td>
<td>..</td>
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<tr>
<td>Investment (in percent of GDP)</td>
<td>20.9</td>
<td>21.5</td>
<td>21.2</td>
<td>20.4</td>
<td>20.5</td>
<td>..</td>
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<tr>
<td>Current Account (in percent of GDP)</td>
<td>-3.0</td>
<td>-3.8</td>
<td>-4.3</td>
<td>-4.7</td>
<td>-4.2</td>
<td>..</td>
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<tr>
<td>Capital and financial account (in percent of GDP)</td>
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<td>4.2</td>
<td>4.9</td>
<td>4.6</td>
<td>4.1</td>
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<tr>
<td>Private capital flows, net (in percent of GDP)</td>
<td>4.5</td>
<td>3.1</td>
<td>2.4</td>
<td>2.2</td>
<td>4.8</td>
<td>..</td>
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<tr>
<td>General government balance (in percent of GDP)</td>
<td>-5.9</td>
<td>-6.1</td>
<td>-7.9</td>
<td>-10.0</td>
<td>-4.6</td>
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<tr>
<td>External debt (in percent of GDP)</td>
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<td>30.7</td>
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<td>39.7</td>
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### Mexico (1994)

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<td>2.0</td>
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<td>15.5</td>
<td>9.8</td>
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<td>Private Savings (in percent of GDP)</td>
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<td>10.3</td>
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<td>Public Savings (in percent of GDP)</td>
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### Thailand (1997)

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<td>-16.3</td>
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### 6. Russia (1998)

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<td>Public Savings (in percent of GDP)</td>
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<td>Investment (in percent of GDP)</td>
<td>24.6</td>
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<td>General government balance (in percent of GDP)</td>
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<td>-0.2</td>
<td>4.5</td>
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</tr>
<tr>
<td>Primary balance (in percent of GDP)</td>
<td>-3.0</td>
<td>-2.8</td>
<td>-3.0</td>
<td>3.4</td>
<td>7.0</td>
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</tr>
<tr>
<td>External debt (in percent of GDP)</td>
<td>32.5</td>
<td>30.9</td>
<td>54.8</td>
<td>79.9</td>
<td>61.5</td>
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### Appendix Table 2: Details of the IMF Program for Mexico

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Tight fiscal policy; Improvement of overall fiscal balance by about 1-1.5% of GDP; decline in current account deficit to about 4% of GDP in 1995</strong></td>
<td><strong>Further consolidation of public finances; fiscal effort equivalent to about 1.7% of the GDP (e.g. through increase in VAT rate and restricting claims for VAT refunds only to registered taxpayers)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Monetary Policy</strong></td>
<td><strong>Tight; quantitative ceilings e.g. on change in net domestic assets (NDA); these were however not respected, there was significant overrun of Central Bank NDA at end 1995</strong></td>
<td><strong>Further tightening, monetary control would continue to be exercised through open market operations with interest rates being allowed to adjust through market conditions.</strong></td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>Floating exchange rate; peso was allowed to float on December 22, 1994</td>
<td>Maintain floating exchange rate regime</td>
</tr>
<tr>
<td>Financial Sector</td>
<td>Measures by government allowing households to roll over mortgages, support for banks to borrow to strengthen capital and assistance in rollover of foreign debts of banks; financial sector restructuring however not central to program</td>
<td>Government commitment to protect all depositors, provision of peso liquidity by Bank of Mexico to the Banking system, temporary bank recapitalization program, program of dollar loans to help banks meet their external short-term obligations administered by Bank of Mexico, and strengthening of banking supervision and relaxation of limits on foreign participation in Mexican Banks.</td>
</tr>
<tr>
<td>Corporate Debt</td>
<td>The famous tesobono problem; during second quarter of 1995, maturing tesobonos estimated at US$4.1 bn</td>
<td>Resources to be made available in the Exchange Stabilization Fund to amortize the maturing tesobonos.</td>
</tr>
<tr>
<td>Social Safety Net</td>
<td>Transfers conditional on human capital investment. Examples include PROGRESA which is conditional on children’s school attendance and regular health care visits; PET, a program of small scale public works providing up to 3-months employment at 90% of minimum wage.</td>
<td>Improve the targeting of social expenditures, introduce a food stamp program, children’s grants and subsidies for tortillas and milk</td>
</tr>
<tr>
<td>Other structural changes</td>
<td>No structural conditionality in the Mexican program crisis was viewed as mostly macroeconomic with overvalued exchange rate and unsustainable current account deficit.</td>
<td>Introduction of trade restrictions e.g. increase in import tariffs on textiles and footwear.</td>
</tr>
</tbody>
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### Appendix Table 3: Details of the Thai IMF Program (1997)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Fiscal Policy</td>
<td>Tight; fiscal adjustment equivalent to around 3% of GDP</td>
<td>Fiscal Policy more accommodative, fiscal target loosened from a surplus of 1% in the original program to a deficit of around 2% of GDP in the 2nd review.</td>
</tr>
<tr>
<td>Monetary Policy</td>
<td>Indicative targets for interest rates</td>
<td>Indicative targets for interest rates raised in the first review; monetary policy to be focused on exchange rate in 2nd review.</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>Floating exchange rate regime</td>
<td>Floating exchange rate regime.</td>
</tr>
<tr>
<td>Financial Sector</td>
<td>Closure of insolvent financial institutions, issuing a blanket deposit guarantee to calm markets, and eventual restructuring and rehabilitating of Thai financial institutions with the establishment of the Financial Sector Restructuring Agency. Several structural performance criteria including one preventing deposit rate competition by insolvent banks; provision for taking over of non-viable institutions; and one on closing insolvent, and fully recapitalizing undercapitalized institutions.</td>
<td>By the second review, it was clear that the original ambitious timetable was not achievable and a specific timetable for restructuring of the financial sector announced. Financial system having difficulty raising capital and legal system incapable of speedy treatment of bankrupt cases. Two new performance criteria: on introduction of new loan classification and provisioning guidelines, and on signing of Memorandum of Understandings with all financial institutions regarding their capitalization plans.</td>
</tr>
<tr>
<td>Corporate Debt</td>
<td>Establishing of frameworks for debt workouts</td>
<td>Remove obstacles to corporate debt restructuring and to support the market-based voluntary process already under way.</td>
</tr>
<tr>
<td>Social Safety Net</td>
<td>Decentralized social safety net; cash transfers to families, subsidized health cares and public health programs.</td>
<td>Strengthening the social safety net.</td>
</tr>
<tr>
<td>Other structural changes</td>
<td>Privatization, foreign ownership (mainly focused on by the end of 1998)</td>
<td>Program broadened to include strengthening of the legal and judicial system.</td>
</tr>
</tbody>
</table>

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44 Most of these programs were expanded in 1998-1999 after the second quarterly review in March 1998.
**Appendix Table 4: Details of the Indonesian IMF Program (1997)**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Tight; targeting of around 1% of fiscal surplus to be achieved through an increase in taxes on tobacco and alcohol, removal of exemption on VAT, removal of subsidy on energy prices and through spending cuts.</td>
<td>More accommodative; target fiscal deficit of around 3% of GDP</td>
</tr>
</tbody>
</table>

| **Monetary Policy** | Tight; ceiling on base money instead of Central Bank NDA. | Tight; Ceilings on Net Domestic Assets introduced as performance criteria. |

<table>
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<tr>
<th><strong>Exchange Rate</strong></th>
<th>Flexible</th>
<th>Flexible</th>
</tr>
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</table>

| **Financial Sector** | 16 banks were closed and 34 others said to be in trouble; Broad brush approach mainly as a precaution against contagion, the program sought to reform the financial sector and deregulate the economy more generally; program measures included transparent bank rehabilitation through the budget, revision of the prudential regulations, and elimination of restrictions on bank lending | Focus sharpened, a 3-tier approach to banking crisis was adopted: blanket deposit insurance for two years; establishment of the Indonesian Bank Restructuring Agency; and the proposal for a framework of corporate restructuring |

| **Corporate Debt** | Restructuring of corporate debt | Creation of a framework for voluntary restructuring of corporate debt involving a government exchange guarantee scheme (INDRA scheme) |

| **Social Safety Net** | Targeted subsidy on lower quality rice and combinations of public work programs and cash assistance. Microcredit programs and stay-in-school campaign providing block grants to school lunches to eligible children. | Strengthening of social safety net; introduce community based work programs to sustain purchasing power of poor in both rural and urban areas, increase subsidies for food and essential items. |

| **Other structural changes** | Eliminating import and marketing monopolies and expansion of activities open to foreign participation. | Establish monitoring system for structural reforms, prepare regulations for establishing procedures for mergers, acquisitions and exit, submit to Parliament draft law on competition policy etc. |
### Appendix table 5: Details of the Korean IMF Program (December 1997)

<table>
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<tbody>
<tr>
<td>Fiscal Policy</td>
<td>Tight; fiscal adjustment of about 1.5% of GDP, revenue measures comprised mainly increases in tax rate on mineral oil products and broadening of VAT and direct tax bases.</td>
<td>Tight; more accommodative, fiscal surplus target in the original program changed to fiscal deficit target at around 0.7% in the 1st review and around 1% in the 2nd review</td>
</tr>
<tr>
<td>Monetary Policy</td>
<td>Tight; ceiling on NDA and floor on NIR, indicative targets on reserve money and broad money</td>
<td>Tight; monetary policy to be conducted flexibly with the aim of maintaining stability in foreign exchange market.</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>Flexible</td>
<td>Flexible</td>
</tr>
<tr>
<td>Financial Sector</td>
<td>Suspension of 9 insolvent merchant banks, remaining merchant banks required to meet at least a 4% capital requirement ratio; Special session of the National Assembly to be called to pass three financial reform bills, and the schedule of foreign entry into the financial sector to be accelerated; liberalization of restrictions on foreign access to domestic money market instruments and the corporate bond market.</td>
<td>Allow foreign banks and brokerage houses to establish subsidiaries by March 31st 1998; complete assessment of the recapitalization plans of the commercial banks, introduce legislation to allow a full write-down of existing shareholder equity, eliminating the current minimum bank capital floor for this purpose, establish a unit for bank restructuring under the Financial Supervisory Board with powers and resources for bank restructuring (structural performance criteria through June 30th 1998)</td>
</tr>
<tr>
<td>Corporate Debt</td>
<td>Corporate financial statements to be prepared on a consolidated basis; eliminate restriction on foreign borrowing by corporation.</td>
<td>Corporate restructuring to be voluntary and based on market principles and public funds not to be used to bail out corporations; banks to play a central role in restructuring corporate debt and strengthening corporate balance sheets.</td>
</tr>
<tr>
<td>Social Safety Net</td>
<td>Livelihood Protection Program (LPP) was expanded to include cash benefits, tuition fee waivers, lunch subsidies for students with eligibility based on minimum income and asset tests.</td>
<td>Budget allocation for employment insurance fund to be increased, unemployment benefit scheme to be extended.</td>
</tr>
<tr>
<td>Other structural changes</td>
<td>Labor market reforms and trade liberalization. Reductions of restrictions on foreign direct investment through simplification of approval procedures.</td>
<td>Assistance to small and medium size enterprises. Further reforms to bring about labor market flexibility.</td>
</tr>
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### Appendix Table 6: Details of the Russian IMF Program (July 1998)

<table>
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<th>Category</th>
<th>Description</th>
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<tr>
<td>Fiscal Policy</td>
<td>Reduction in federal government budget deficit to about 5% of GDP; improved revenue collection and explicit expenditure cuts.</td>
</tr>
<tr>
<td>Monetary Policy</td>
<td>Tight; geared towards reducing inflation and promoting a sound BOP position.</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>Market exchange system; neither the government nor the CBR to impose restrictions on payments and transfers for current international transactions or introduce multiple currency practices or bilateral agreements inconsistent with Article VIII of IMF’s articles</td>
</tr>
<tr>
<td>Financial Sector</td>
<td>Continue development of financial markets and consolidation of banking system through strengthened supervision and improvements in the prudential and supervisory framework</td>
</tr>
<tr>
<td>Corporate Debt</td>
<td>Lengthening of debt maturity to reduce the vulnerability arising from short term structure of domestic debt; Ministry of Finance to offer holders of GKO’s (short-term zero coupon bonds) the opportunity to exchange them for foreign currency Eurobonds with long maturities at market rates; government to undertake a policy of not issuing new debt of maturity of less than one year.</td>
</tr>
<tr>
<td>Social Safety Net</td>
<td>Pension reforms; restructuring of the Pay-as-you-go social security system; improve delivery of health services and enhance quality of education</td>
</tr>
<tr>
<td>Other structural changes</td>
<td>Measures to address non-payments problem, labor market reform, private sector development</td>
</tr>
</tbody>
</table>
### Appendix Table 7: Details of the IMF Program for Brazil

<table>
<thead>
<tr>
<th>Category</th>
<th>Original Package (December 2, 1998)</th>
<th>First &amp; Second Reviews completed on March 30, 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fiscal Policy</strong></td>
<td>Tight; primary balance to strengthen by about 2.5% of GDP</td>
<td>Further tightening; primary balance to strengthen by about 3% of the GDP</td>
</tr>
<tr>
<td><strong>Monetary Policy</strong></td>
<td>Tight: Net Domestic Asset (NDA) ceilings specified on the basis of a specific sterilization rule; floor on Net International Reserves (NIR) = US $20 bn</td>
<td>Tight: NDA ceilings were retained, no explicit NIR floor; performance criterion introduced on net sales of FX futures; intention to move as soon as feasible to a formal inflation targeting framework. (Clauses on implementation of the Inflation Targeting framework introduced in the 3rd Review in July 1999)</td>
</tr>
<tr>
<td><strong>Exchange Rate</strong></td>
<td>Notion that fixed exchange rate regime could be maintained.</td>
<td>Flexible exchange rate; attempt to devaluation on Jan 13, 1999 and real was floated on Jan 15, 1999</td>
</tr>
<tr>
<td><strong>Financial Sector</strong></td>
<td>Private banks largely unaffected, larger damage to state owned financial institutions and outstanding bonds financing their restructuring – cost amounted to 6% of GDP in mid-2000</td>
<td>Intention to reduce and streamline the role of public banks in the economy; high level commission asked to review the roles of federal banks and make suggestions regarding mergers, privatization, sales of strategic shares and/or transformation into development agencies; issuance of new regulation on the foreign exchange exposure of the banks</td>
</tr>
<tr>
<td><strong>Corporate Debt</strong></td>
<td>Priority on lengthening of maturity.</td>
<td>Rolling over of maturing credit lines on a voluntary basis by the commercial banks</td>
</tr>
<tr>
<td><strong>Social Safety Net</strong></td>
<td>Social security benefits and labor protection programs, mainly at national level and some at local levels. Examples of local level programs are Bolsa Escola: targeting cash transfers to low income families on condition of school attendance and child labor eradication programs.</td>
<td>22 assistance programs chosen in collaboration with the World bank and IDB protected from fiscal adjustment in 1999 and 2000.</td>
</tr>
<tr>
<td><strong>Other structural changes</strong></td>
<td>Improving long-term public finances, especially those of the provinces; introduction of a nationwide VAT and budgetary process to be guided by Fiscal Responsibility Act; progressive trade liberalization.</td>
<td>Intention of the government to accelerate and broaden the scope of privatization through privatization or leasing of utilities, of toll roads; the sale of remaining shares of previously privatized companies, of the non controlling shares of Petrobras and the sale of redundant real estate properties; government to continue with its policy of trade liberalization both within and outside MERCOSUR; new nationwide VAT to be complemented by selective excises at the federal level</td>
</tr>
</tbody>
</table>


Chapter 2: Reform of the Fund and the International Financial System

The financial crises of the 1990s, especially in Mexico and Asia, led to a flood of suggestions for strengthening the international financial system to make crises less frequent and less intense.45 The diagnoses of the problem placed the blame for these capital account crises in three areas: weaknesses in domestic policies and institutions in the crisis countries; inadequacies in the methods of operation of the international financial institutions, particularly the IMF; and characteristics of the international capital markets that produce excessive volatility in international capital flows.

Much reform has taken place already, in two waves. In the first wave, following the Mexican crisis, the emphasis was on improving the information available to the markets and strengthening surveillance. The issue of private sector involvement was also put on the agenda, notably in a report by the G10 Deputies that recommended including collective action clauses in emerging market bond contracts to make it easier to restructure payments.46 The second wave began during the Asian crisis and has continued since then. However, the reforms remain seriously incomplete in a key area.

I will first discuss reforms directed at crisis prevention, and then those intended to improve the responses to crises. I will conclude by discussing what has been done to make capital account crises less likely in future, and the priorities for action.

I. Crisis Prevention47

Country policies and institutions

Most crisis-prevention measures require improvements in policies and the strengthening of institutions by countries seeking to participate in the international capital markets.48 High on the list are fiscal policy, and the choice of exchange rate system; I shall also take up reserve and debt management, and capital account liberalization. I shall touch briefly on the need for a strong financial system and less briefly on the adoption of international codes and standards.

45 The real goal should be to make the international economy work as well as possible. As an analytic matter, a system that operates with more frequent crises could perform better on average than a system that experiences fewer crises. For instance, in stabilizing from high inflation, it may be that use of a pegged exchange rate is a better strategy than a float, even though the peg is crisis-prone.


47 I draw in this lecture on the “Draft Report of the Managing Director to the International Monetary and Financial Committee on the Fund’s Crisis Prevention Initiatives”, IMF, October 18, 2001, which is expected to be published shortly.

48 Of course, these measures would be desirable in any case.
Fiscal policy: As discussed in Lecture 2, the IMF’s emphasis on the key role of fiscal policy in the macroeconomic policy mix is well-known to the point of notoriety. The discussion usually turns on the need for fiscal contraction in the face of a variety of external shocks. And sometimes, the IMF has recommended fiscal expansions, for instance in Japan in recent years, and after a short while, during the Asian crisis.

In several programs, for instance those in Brazil, Argentina, and Turkey in recent years, the agreed fiscal stance has been guided by the need to ensure that the debt to GDP ratio is put on a declining path. The well-known equation for debt dynamics is

\[ d = -x + (r - g)d \]

where \( d \) is the debt-to-GDP ratio, \( x \) is the primary surplus (relative to GDP), \( r \) is the interest rate, and \( g \) the growth rate of GDP.

Unless the debt to GDP ratio is expected to decline – and at the time an IMF-supported program is put together, it is likely the real interest rate will be high because the country is in a crisis, and the growth rate will be low for the same reason – the debt burden would become unsustainable, particularly as the cost of borrowing would likely rise along with the debt ratio.

But theory has not provided a great deal of guidance about an optimal debt to GDP ratio. The issue was discussed in the United States during the period, not so long ago, when it was believed the government debt was about to disappear. The Maastricht upper limit of 60 percent of GDP seems to have gradually gained status as a norm. Whatever theory ultimately emerges, it is likely that if an optimal government debt to GDP ratio can be defined, it would be related to the private sector’s saving behavior. It would also be related to the terms on which the government can borrow, and the variability of those terms, as well as the average rate of growth and its variability.

Interest rates paid by emerging market governments are not only higher but also vary a great deal more than those paid by industrialized country governments. For instance, over the period 1995 to 2000, during which the real interest rate paid by the United States and United Kingdom governments had a standard deviation of 0.86 percent per annum, the standard deviation for Korea was more than double that, and that for Mexico and Brazil – which averaged 4.2 percent per annum – greater by a factor of five. If a country that is otherwise managing itself reasonably faces a change in its borrowing cost of 400 basis points within a year, than it will suffer a very large fiscal shock if its debt to GDP ratio is around 60 percent. Further, the costs of borrowing are likely to be highly non-linear as a function of the debt-to-GDP ratio. We have also seen in recent years, in both Russia and Argentina, just how quickly a debt ratio can rise if the budget deficit is large and growth is slow or negative.

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49 The focus here is on the macroeconomic aspects of fiscal policy.
50 The underlying data for standard deviations of real interest rates (quarterly data) are 0.88 for the US, 0.92 for the UK, 1.88 for Korea, 3.66 for Mexico, and 4.71 for Brazil.
The conclusion is that if there is an optimal debt-to-GDP ratio, it must be smaller for an emerging market country than for an industrialized country – equivalently, that emerging market countries that become too dependent on the international capital markets, court great danger. Even if it is not possible to define an optimal debt-to-GDP ratio, it can safely be concluded that a 60 percent ratio for an emerging market country is too high, and that ratios nearer 30 percent are much safer.

Exchange rate systems: Before the crisis, each of the six countries discussed here had some form of pegged exchange rate. The pegs were formal in the cases of Mexico, Brazil, and Russia, and each was put in place as part of a successful policy package to reduce inflation. The pegs were informal in the three Asian countries, and were not the remnant of an inflation stabilization.

These crises – as well as the later Turkish crisis – reinforced the conclusion that the impossible trinity makes a softly pegged exchange rate non-viable when the capital account is open. The normal statement of the impossible trinity is that an open capital account, a pegged exchange rate, and an independent monetary policy are not consistent. If the peg is hard, such as a currency board, then monetary policy is automatically dedicated to maintenance of the peg. But that still may not be enough, for if fiscal policy goes off track, and/or the financial system is weak, monetary policy alone may well not be sufficient to hold the peg.

Of course, a country may succeed for some time in living with the impossible trinity, as did all six crisis countries. The real problem is that the peg is vulnerable to a speculative attack, possibly producing a second generation crisis, in which the measures necessary to defend the peg are not politically viable.

Following a float, a country has to decide what nominal anchor to adopt, and what exchange rate policy to pursue. For a country with a reasonable rate of inflation – one in the low double digits – experience increasingly supports the use of inflation targeting as the basis for monetary policy. Such a regime has been successfully introduced in Brazil, Korea, South Africa and several other emerging market countries – not all of them recent crisis countries.

The alternative is to target a nominal monetary aggregate. This had been the practice in IMF-supported programs. The choice between inflation and monetary targeting involves a tradeoff between the greater ability of the central bank to achieve a monetary than an inflation target, and thus the greater credibility of the monetary target, against the lesser direct relevance of the monetary target to private sector economic decisions. For the IMF, it is easier to monitor monetary policy under monetary than under inflation targeting.

The emerging IMF practice is to recommend monetary targeting when the inflation rate is high, and inflation targeting when it is low – with low being no higher than 20-25 percent. Even so, I believe it very useful to set out an inflation target even at moderate rates of inflation, and to adjust monetary policy on that basis – in other words, to recommend informal inflation targeting even at moderate rates of inflation, as high as 40 percent.

In discussing the choice of nominal anchor inside the IMF, there has been a tendency to define inflation targeting very rigorously, in essence to say that if it’s not up to Bank of England standards – colored fan charts and all – it’s not inflation targeting and it’s not worth doing. I prefer to use a less rigorous definition, to say that inflation targeting is being used when there is a target inflation rate and monetary policy is adjusted on that basis.

Turning to exchange rate behavior: Most of the countries forced to float have been very unhappy about the subsequent behavior of the exchange rate, and policymakers and private sector participants in several countries – among them the Asian crisis countries, and Turkey in recent months – are searching for a middle way, that provides more predictability for the exchange rate. It is hard not to sympathize with this desire, for exchange rates moved far more after the crises than had been expected. Recent exchange rate movements in Brazil – largely capital account driven – have also been very large.

There are good reasons for a country to be concerned about the behavior of both nominal and the real exchange rates. Changes in the nominal exchange rate are likely to affect the inflation rate. Changes in the real exchange rate may have a powerful effect on the allocation of resources, and – especially in countries that are to some extent dollarized – also on the health of the financial system and the distribution of wealth between debtors and creditors.

Thus monetary policy in countries with floating exchange rate systems is likely to respond to movements of the exchange rate. While this is rarely if ever the case for the United States, it is more so among other G-7 countries, and for smaller emerging market economies. In Canada, the use in the past of a monetary conditions index to guide monetary policy, based on movements in both the exchange rate and the interest rate, formalized the impact of exchange rate movements on monetary policy. In countries that pursue an inflation targeting approach to monetary policy, changes in the exchange rate will be taken into account in setting monetary policy, because the exchange rate affects price behavior.

In the reverse direction, there is an unresolved issue about whether monetary policy in a flexible rate system should be used in the short run to try to affect the exchange rate. In many respects, the issue is similar to that of how monetary policy in an inflation targeting framework should respond to movements in output and unemployment. Although it has not received much empirical attention, there is almost certainly a short-run tradeoff between the real exchange rate and inflation, analogous to the Phillips curve. This is an issue that deserves serious attention, for just as answers have been developed to how to deal with the short-run Phillips curve in an inflation-targeting framework, so it remains necessary to answer the question of how in such a framework to deal with the short-run tradeoff between the real exchange rate and inflation.

52 Although the idea behind the monetary conditions index (MCI), that both the exchange rate and the interest rate affect aggregate demand, is correct, the MCI needs to be used with great caution, not least because the cause of any change in the exchange rate needs to be taken into account.

53 Cushman and Zha (1997) contain VARs from which the implied tradeoff can be calculated in the Canadian case.
Beyond the use of interest rates, some floaters intervene directly from time to time in the foreign exchange markets to try to stabilize the exchange rate. I discussed in the second lecture the temptation to intervene to which central banks often fall prey following the collapse of a peg. Interventions from time to time can be useful, so long as they are not perceived as trying to defend a particular rate. This is one of the remaining areas in which central bankers place considerable emphasis on the touch and feel of the market, and where systematic policy rules are not yet common. But I believe they are needed. The Banco de Mexico developed a method of more or less automatic intervention designed to reduce day to day movements in exchange rates, and used it for some years; that and other experiences, including that of the central bank of Colombia, could be studied to draw lessons in this area.

Everything I have said so far reflects my belief that there is little room for the monetary authority in an emerging market country to peg the exchange rate, despite the understandable desire of so many to do so. Recognizing the difficulty for an emerging market country of defending a narrow range of exchange rates, John Williamson (2000) proposes alternative regimes. Rudi Dornbusch has named these BBC arrangements: basket, band, and crawl. Williamson also recommends that countries if necessary allow the exchange rate to move temporarily outside the band, so that they do not provide speculators with one-way bets that lead to excessive reserve losses. In these circumstances, the band is serving as a weak nominal anchor for the exchange rate, but it is not at all clear why such a system is preferable to an inflation targeting framework. Possibly the band could be thought of as a supplement to an inflation targeting framework, but it would need to be demonstrated what if any benefits that brings. Williamson himself believes that specifying a target exchange rate range may prevent markets heading off on an errant exchange rate path. Another possibility is that by committing weakly to some range of exchange rates, the authorities make it more likely that fiscal policy will be brought into play if the real exchange rate moves too far from equilibrium.

Although I do not see how to make these intermediate regimes work for emerging market countries, it is clear that floating exchange rates do fluctuate a great deal, and that it would be useful if it were possible to reduce the range of fluctuations. The Asian countries are trying to work towards some such arrangement. It is also true that it would be desirable to reduce the range of fluctuations of exchange rates among the major currencies, but that does not seem on the cards at present.

Much as I wish the world were otherwise, I remain bipolar – at least on exchange rates – which is part of the reason I believe we will gradually see the world moving towards fewer currencies.

Outside the transition economies, countries have not succeeded in stabilizing from high (triple digit) inflation without the use of an exchange rate anchor. But doing so, without an exit mechanism, is very risky. And it is risky even if an exit mechanism is specified, as the recent Turkish case shows. So I conclude that while an exchange rate peg could be used in future to disinflaate, the commitment would have to be quite short-lived.

54 There is of course also controversy over whether intervention works at all – and even if it does, whether it is wise to use it.
I believe that of all the changes in the international financial system that have taken place since 1994, the shift towards flexible exchange rates by emerging market countries is the one that has most reduced the risk of future crises. However, while a flexible exchange rate regime precludes some types of crises, we need to remind ourselves that external financing crises can still occur in a flexible exchange rate regime, particularly a crisis that arises from the market’s conclusion that a country’s debt situation is not sustainable.

Reserve management: In the Asian crisis, countries with larger reserves did better in avoiding crises than those with smaller reserves. This lesson was taken to heart by Korea, which very rapidly built up its reserves after the crisis to over $90 billion, three times the pre-crisis level.

Work on vulnerability indicators shows the reserves to short-term (less than one year) debt ratio to be the single best predictor of a crisis. In the wake of the capital account crises, the IMF has begun to use the ratio of reserves to short-term debt as an indicator of reserve adequacy, along with the traditional measure, the amount of reserves measured in terms of months of imports. The key ratio is about 100 percent, that is, reserves should cover debt maturing in the coming year.

It is not obvious why reserves should play such an important role in a flexible exchange rate system. Indeed, the Reserve Bank of New Zealand at one time discussed getting rid of its reserves entirely. But reserves can be used by the central bank to feed the foreign exchange market at a time when outflows are increasing or inflows are declining – which is what the Brazilian central bank is doing at present, in light of the decline in foreign direct investment inflows.

The direct costs of adding to reserves are high for many emerging market countries. If the spread on a country’s debt is 400 basis points, it is paying 4 percent per annum to hold reserves. However, the indirect benefits of holding higher reserves may well justify the cost: for instance, since high reserves reduce the probability of crisis, in deciding how much reserves to hold, a country needs to take into account the benefit of fewer expected crises.55

The high cost of holding reserves is one good reason for countries to seek contingent credit lines. I will shortly discuss the IMF’s Contingent Credit Line facility. Both Mexico and Argentina have arranged private sector contingent lines of credit, and drawn on them, but there are doubts about whether these lines on net provide resources to a country in difficulties – for the providers of such lines may either have hedged them, or may withdraw other sources of credit when the lines are drawn on. Thus private sector contingent credit lines are a possible source of contagion.

The SDR was established in part to enable the IMF to provide reserves to its members at low or zero cost. If an issue of SDRs took place and all of them were added permanently to

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55 If countries were optimizing in their holding of reserves, we could deduce that the marginal benefit of holding them is equal to the marginal cost; this would imply as an equilibrium condition that the spread is equal to the return on holdings of reserves (approximately LIBOR) plus the marginal reduction in the total cost of borrowing resulting from a unit increase in reserves.
the reserves of the countries that received them, there would be no cost to any country of an SDR issue. Rather the real value of global reserves would rise. At another extreme, every country could try to spend the SDRs, producing a rise in the global price level and no change in real reserves. If, as is more likely, some countries would be willing to hold more reserves, and others would want to spend them, the global price level would rise, and there would be a transfer of resources to the countries that run down their reserves from those that build them up. It is this latter prospect that causes the creditor countries in the IMF normally to be unenthusiastic about an SDR issue, despite its theoretical attractiveness as a way of building up reserves. Of course, many support an SDR issue precisely because they believe it would be a way of transferring resources to the developing countries. This could be done more effectively if it were possible for those countries willing to do so to assign the SDRs they receive to the intended recipients of the SDR issue.56

Debt management: Following the crises, some attention was given to the importance of debt – including external debt – management.57 The concern here is not only government debt, but also private debt, for in several of the crises, most notably Indonesia, but also Korea, it was not sovereign but private debt that created major problems.58

The maturity composition of the debt matters, since the shorter the debt the greater the rollovers, and the greater the difficulties that could be created by a temporary disruption in financing. Both the investor and the official communities have emphasized the importance of investor relations programs,59 in which countries undertake to stay in touch with their main financiers, particularly to provide them with rapid and complete information about economic and debt developments. The outstanding example of such a program is that of Mexico; for smaller countries, which are not in the markets so frequently, less ambitious investor relations programs – but still with complete and speedy information provision – is likely to be adequate.

However, no amount of clever maturity management, and no amount of excellent investor relations, will compensate for a government debt that becomes too large and that puts debt sustainability in doubt.

In the absence of capital controls, the ability of government to control the volume of external private borrowing is limited. In these circumstances, it is necessary to rely on the market – on the due diligence exercised by lenders and the caution of borrowers – to ensure individual firms and the economy as a whole do not become excessively indebted. This caution would be enhanced by a strong domestic legal framework including a bankruptcy

56 The Articles of Agreement at present permit the Executive Board of the IMF to authorize a general issue of SDRs (if there is a global need) that goes to members in proportion to their quotas. This would mean that the bulk of any issue would go to countries that do not particularly need or want them. A special issue of SDRs was agreed in 1998, in order to supply SDRs to countries that had not been members of the Fund when earlier issues were made. This amendment of the Articles of Agreement requires an 85 percent majority; it has been ratified by countries holding 71 percent of the votes, and would go into effect if ratified by the United States.


58 In some crisis countries, a few private companies, e.g. oil companies, were able to borrow more cheaply than the sovereign.

mechanism, and by a belief that in the event of a crisis, individual firms would not be bailed out by the sovereign. Government schemes have been introduced to deal with the problems of individual firms in a crisis; the question is whether these schemes, such as those in Mexico and Indonesia, and earlier in Chile, operate as bailouts or to fill a gap in the legal or market mechanism.

Capital controls: The debate over capital controls has taken on an ideological cast that seems to have intensified during the most recent discussions. In principle capital controls can enable a country to have the benefits of both a pegged exchange rate and an independent monetary policy, and also to control both capital outflows (and thus the extent of private sector borrowing) and inflows. 60

As is well known, the founders of the Bretton Woods system, reflecting the prevailing interpretation of inter-war experience, 61 regarded short-term capital flows as being frequently destabilizing. The Articles of Agreement of the IMF do not make capital account liberalization a purpose of the Fund, and Article VI permits the Fund to ask a member to exercise capital controls to prevent the general resources of the Fund being used “to meet a large or sustained outflow of capital”.

Most industrialized countries kept capital controls in place for most of the post-World War II period; even in the United Kingdom the last capital account restrictions were removed only in the late 1970s. China and India, both countries with capital controls, successfully avoided the Asian crisis, thereby providing an important element of stability in the regional and global economies at the time. Malaysia’s imposition of capital controls and pegging of the exchange rate in September 1998 has attracted much attention, though evaluation of the effects of the controls has been difficult, since they were imposed after most of the turbulence of the first part of the Asian crisis was over, that is after most of the capital that wanted to leave had done so, and when regional exchange rates were beginning to appreciate. 62

Nonetheless, support for capital controls is often seen as inconsistent with the Washington Consensus, 63 and a belief in free markets. In discussing capital controls, I shall assume that countries will in the course of their development want to liberalize the capital account and integrate into global capital markets. This view is based in part on the fact that the most advanced economies all have open capital accounts; it is also based on the conclusion that the potential benefits of well-phased integration into the global capital markets – and this includes the benefits obtained by allowing foreign competition in the financial sector – outweigh the costs. 64

62 See Kaplan and Rodrik (2000) for a relatively positive appraisal of the Malaysian controls.
63 The original Washington Consensus list (Williamson, 1990) did not include capital account liberalization, except for foreign direct investment.
64 The argument is developed at greater length in Fischer (1998). The point has been much disputed, including by Jagdish Bhagwati (1998). With regard to empirical evidence on the benefits of capital account liberalization, I
It is necessary to distinguish between controls on outflows and controls on inflows. For controls on capital outflows to succeed, they need to be quite extensive. As a country develops, these controls are likely to become both more distorting and less effective. They also cannot prevent a devaluation if domestic policies are fundamentally inconsistent with maintenance of the exchange rate.

When a country intends to liberalize capital controls on outflows, they should preferably be removed gradually, at a time when the exchange rate is not under pressure, and as the necessary infrastructure – in the form of strong and efficient domestic financial institutions and markets, a market-based monetary policy, an effective foreign exchange market, and the information base necessary for the markets to operate efficiently – is put in place. Unless the country intends to move to a hard peg, it would be desirable to begin allowing some flexibility of exchange rates as the controls are gradually eased. Prudential controls that have a similar effect to some capital controls, for instance limits on the open foreign exchange positions that domestic institutions can take, should also be put in place as direct controls are removed.

Some countries have attempted to impose controls on outflows once a foreign exchange crisis is already under way. This use of controls has generally been ineffective. It has also to be considered that the imposition of controls for this purpose in a crisis is likely to have a longer-term effect on the country’s access to international capital.

Several countries, among them Singapore, the three Asian crisis countries, and Malaysia have taken steps to limit the offshore use of their currencies. In principle this makes it possible to break the link between onshore and offshore interest rates, particularly by restricting the convertibility of the currency for nonresidents – who need access to the domestic banking system to complete their transactions. Ishii et al (2001) conclude that such restrictions have been more successful the more comprehensive they have been, and that they could provide the authorities with a breathing space in which to implement policy changes. But as with other capital controls, their effectiveness tends to erode over time. Further, the longer the measures are implemented, and the stronger they are, the higher their associated costs in terms of the efficiency of the financial system are likely to be.

Excessive indebtedness of domestic financial and non-financial institutions arises not from capital outflows, but from inflows, especially short-term inflows. The IMF has cautiously supported the use of market-based capital inflow controls, Chilean style. These could be helpful for a country seeking to avoid the difficulties posed for domestic policy by...
capital inflows. The typical instance occurs when a country is trying to reduce inflation using an exchange rate anchor, and for anti-inflationary purposes needs interest rates higher than those implied by the sum of the foreign interest rate and the expected rate of currency depreciation. A tax on capital inflows can help maintain a wedge between the two interest rates. In addition, by taxing short-term capital inflows more than longer-term inflows, capital inflow controls can also in principle influence the composition of inflows.

Evidence from the Chilean experience suggests that controls were for some time successful in allowing some monetary policy independence, and also in shifting the composition of capital inflows towards the long end. Empirical evidence presented by Edwards (2000) suggests that the Chilean controls lost their effectiveness after 1998. They have recently been removed.

Thus, controls can be used to help limit capital outflows and maintain a pegged exchange rate, given domestic policies consistent with maintenance of the exchange rate. However such controls tend to lose their effectiveness and efficiency over time. Capital inflow controls may for a time be useful in enabling a country to run an independent monetary policy when the exchange rate is softly pegged, and may influence the composition of capital inflows, but their long-term effectiveness to those ends is doubtful. In a nutshell: capital controls may be useful, need to be exercised with care, are likely to be transitional – albeit possibly in use for a long time – and caution is necessary in removing them.

A capital account amendment to the articles of agreement of the IMF was on the agenda at the annual meetings of the IMF in Hong Kong in 1997. Given recent controversies about capital flows, it is no longer on the agenda. But it should be. The Fund should have the orderly liberalization of the capital account as one of its purposes. Just as is the case with current account liberalization, countries could elect to maintain capital account restrictions (the equivalent of Article XIV of the articles), and, when ready and willing, could accept the obligations of an open capital account (the equivalent of Article VIII).

What benefits would this bring? For countries, it would provide a framework in which to think about their present capital controls, possibly to rationalize them, and eventually to undertake capital account liberalization. For the Fund, it would put center-stage a set of issues that is critical to the operation of the international capital markets and the frequency of crises. And for the Fund and the economics profession, it would make it necessary to develop a body of knowledge about capital account restrictions and how best to remove them. It is striking that while accepted principles exist for current account liberalization – for instance, first replace quantitative restrictions by tariffs, then gradually reduce tariffs and their dispersion – we have few established principles about the removal of capital account restrictions. While many – myself included – believe that the capital account should be liberalized at the long end first, that there should be few restrictions on foreign direct investment, and that Chilean-style inflow controls can be useful, these views do not cover all capital account issues, and in any case need further substantiation and refinement.

68 The Interim Committee agreed in April 1997 that there would be benefits to amending the Articles of Agreement to make capital account liberalization a purpose of the Fund, and to extend the Fund’s jurisdiction to capital movements.
Financial sector weaknesses exacerbated the output declines in the Asian crisis countries, and a great deal of effort has subsequently gone into international efforts to help countries strengthen their financial systems. I will not in this lecture go into any detail on how to strengthen financial systems.

Under the Financial Sector Assessment Program (FSAP) of the IMF and the World Bank, a team of experts from the Fund, Bank, central banks and regulatory agencies undertakes a comprehensive examination of a country’s financial system, reports it to the authorities, and recommends changes. A summary of the report is provided to the Boards of the two institutions, in a way that does not identify individual institutions that may be in difficulty. Although countries have often been reluctant to request a financial sector assessment, most that have had them have pronounced them very useful.

While reporting on financial sector weaknesses is useful, implementing changes is more difficult, both technically and politically.

The adoption of codes and standards: In considering systemic reforms after the Mexican crisis, the initial reaction was to emphasize the need to provide better information to the markets. The Special Data Dissemination Standard (SDDS), introduced in 1996, was developed in response. It describes a set of data, and information on procedures for their release, that subscribing countries have to meet.69 At present 48 countries have subscribed, including most emerging market countries. The General Data Dissemination System (GDDS) was developed subsequently for countries that do not yet aspire to meet the SDDS; it sets out procedures by which participating countries can gradually improve the quality of their data, with the assistance of the IMF.

Probably the most important improvement made under the SDDS is to bring uniformity to the release of information on reserves. The reserves template requires countries to make data on reserves available at least monthly, with no more than a one-month lag.70 Data on forward commitments have to be revealed. The requirement to provide external debt data is also extremely important – one of the main tasks the IMF found itself undertaking in its meetings with the private sector immediately following the outbreak of a crisis was trying to reconcile different external debt estimates.

If Thailand and Korea had been meeting the conditions on the release of reserve data before their crises, the markets would have known about the declining reserves much sooner, and Thailand would have been forced to reveal its forward interventions in the foreign exchange market. Each country would almost certainly have had to allow the exchange rate to

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69 In 2001, the Executive Board of the IMF approved a framework for the assessment of data quality.
70 The IMF staff would have preferred weekly data, but some leading central banks objected. They argued that unless private sector participants were required to provide information on their positions, the central banks would be at a disadvantage if required to provide frequent and up-to-date information on their reserves.
71 Many countries do better than this, including Turkey whose reserves data are available in real time.
move earlier, well before exhausting their reserves.\textsuperscript{72} It is also possible that if this information had been generally available, the political system in each country would have forced a policy adjustment on the central bank sooner.\textsuperscript{73}

As this discussion suggests, transparency is important not only because it provides more information to the markets, but even more because it puts constraints on what policymakers can do. Subsequently the IMF developed Codes of Good Practices on Transparency in Monetary and Financial Policies, and on Fiscal Transparency, respectively. These set out standards against which countries can measure their own practices, and where necessary, seek to improve them. The Fund helps countries appraise their practices.

Countries’ performance in meeting four standards in other areas – the Basel Committee’s Core Principles for Effective Banking Supervision, and standards for securities regulation, insurance supervision, and payments systems – are assessed as part of the FSAP. The World Bank is taking the lead in assessing standards in four other areas: corporate governance (standard developed by the OECD); accounting (IASC); auditing (International Federation of Accountants), and insolvency and creditor rights (principles developed by the World Bank).

Each standard provides a yardstick by which a country can appraise its performance in the relevant area, and seek to meet international standards. The key questions then are what are the incentives and obstacles to meeting the standards. The answers depend in part on how these systems are appraised, how and to whom the information is made public, what assistance is provided to help countries upgrade their performance, and how investors take country performance in these areas into account in making their investment decisions. Among the incentives should be the desire of policymakers to strengthen the economy and reduce the probability of crisis – an incentive that should always be present. Each country’s performance in meeting a specific standard is monitored by the relevant body, and the results are summarized in a ROSC – report on the observance of standards and codes – that is posted on the internet.\textsuperscript{74}

Nothing would help improve standards more than if countries that met higher standards were rewarded with lower borrowing costs. One such incentive is provided by the fact that to qualify for the Contingent Credit Line facility, a country has to be making satisfactory progress towards meeting international standards, particularly the SDDS, the Basle Committee’s Core Principles for Banking Supervision, and the Codes on Fiscal Transparency, and on Transparency in Monetary and Financial Policies, respectively.

It is early yet to tell whether spreads are lower for countries that meet relevant standards. However, anecdotal evidence and discussions with some market participants suggest that awareness of the contents of ROSCs is growing. If this awareness translates into

\textsuperscript{72} The Mexican case is more complicated, since their reserves declined in two steps, first following the Colosio assassination in April and then in November. It is thus not obvious that adherence to the present reserve template would have produced an earlier exchange rate adjustment.

\textsuperscript{73} The report of the Nukul Commission on the Thai crisis (The Nation, Bangkok, March 31, 1998) states that information on reserves was very tightly held within the Bank of Thailand.

\textsuperscript{74} By the end of September 2001, 169 ROSC modules had been completed for 57 countries.
lower spreads, the standards initiative will begin to pay off not only for individual countries, but also for the system as a whole.

**Actions by the Fund**

Much of what the IMF needs to do to prevent crises – the FSAP, the work on standards and codes, and the possibility of a capital account amendment to the Articles of Agreement – has already been discussed. In this section I will discuss improving surveillance, transparency, and the possibility of prequalification for loans.

**Improving surveillance:** The Mexican crisis took the IMF by surprise, and it was easy to conclude that better surveillance would have helped prevent the crisis – particularly because at that time the IMF did not make much effort to monitor market and economic developments in real time. It was only after the Mexican crisis that news and financial data screens were widely installed in the Fund.

It is hard to quarrel with the notion that improved surveillance should help reduce the frequency of crises, and that Fund surveillance through the annual Article IV report, along with more frequent interim interactions with member countries, should contribute to this end.\(^75\) Fund surveillance has improved greatly since 1994.\(^76\) The private dialog between the management and staff of the IMF and the officials of a country that we believe to be heading for trouble can be very frank indeed. Reporting to the Board is also typically very frank.\(^77\)

A key question is whether the Fund should issue public warnings – a system of yellow and red cards – when it believes a country is heading for a crisis. In issuing warnings of potential trouble, whether in private or in public, the IMF has to be mindful of two types of error: the type 1 error of crises that were not predicted; and the type 2 error of a crisis that was predicted but did not happen. It has particularly to be concerned that its warnings may be self-justifying – and this is a difficult problem to deal with, one that member countries tend to emphasize. Members of the Executive Board often repeat that they do not want the Fund to become a rating agency.\(^78\)

The Fund has rarely issued a clear public warning of an impending crisis, but does express concerns that make the point. How would it have done if it had issued public warnings? Of the six crises on which these lectures focus, three were on the Fund’s radar screen well before they happened – Thailand, Russia, and Brazil – and three were not, despite

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\(^75\) Given the quantity of private sector research on industrialized and emerging market countries, the question arises whether the Fund has any advantage in undertaking surveillance of these countries. Part of the answer should be the quality of the Fund staff; in addition, Fund staff and management are likely to have a closer dialog with country officials, and may well have access to better information about policies and policy intentions.


\(^77\) I discuss below how such concerns are reflected in published reports.

\(^78\) The Fund publishes each quarter a list of the about 40 countries whose currencies are usable for Fund lending; since the criterion for being on the list is to have a strong balance of payments and reserve position, this is a rating, albeit it a not very refined one.
concerns having been expressed about some weaknesses in each of the Mexican, Indonesian, and Korean economies. During the crisis period, I predicted, within official circles, at least one crisis that didn’t happen. Type 2 errors of this sort that are especially worrisome.79

In addition to self-justifying predictions, it is necessary to consider warnings that may be self-negating – warnings of a potential crisis that induce a country to take action that averts the crisis. I have seen policy actions taken in some economies that in my view prevented crises. In such cases, success has many parents, and since it is the authorities within the country who have responsibility for policy decisions, they rightly tend to take the credit for averting the crisis.80

While I can envisage circumstances in which the Fund should issue public warnings – and in essence we did that a few weeks before the Thai devaluation, the quiet approach should be the norm. Public warnings are especially difficult when a country is in a program. If the Fund sees a problem coming, it warns the country, increasingly vigorously, that the program is in danger. If the country does not respond, the Fund can cut off financing, or issue a public warning. But in these circumstances, the public warning is especially likely to be self-justifying. This dilemma is very real, and has arisen quite often in recent years.

Why do countries fail to take action when warned? For one thing, as the late Herb Stein used to say, economists are very good at predicting that something cannot go on forever, but are less good at saying when it will end. (Stein’s corollary is that if something cannot go on forever, it will end.) When warning a finance minister about the non-sustainability of the current situation, I have sometimes been told that I or someone else said the same thing a year or more ago, and we were wrong. The response is to tell the story of the person on the way down after jumping out of a fortieth floor window, but it usually does not work – for it is rarely the case that those being warned are unaware of the dangers they run; rather there are usually reasons, good or bad (often political), for what they are doing. For another thing, policymakers embarked on a dangerous policy path tend to argue that there is something special about their economy that makes it immune to the normal rules of economics. Sometimes the officials concerned may believe that the trouble will come later, on someone else’s watch. And sometimes they are right to ignore a warning, for it is wrong – but much less frequently than believed by those being warned.

It has sometimes been suggested that the Fund should refuse to lend to countries that get into a crisis after ignoring warnings. The idea of providing incentives to heed warnings is attractive, but this punishment may be too draconian. For not only are some warnings wrong, but also, in refusing to help a country that is willing to implement the needed policies, the IMF would be punishing the entire population because of the actions of a few policymakers who failed to respond to warnings – and who have probably been fired in the meantime. There is however a case for developing a procedure in which the terms of lending are adjusted depending on the country’s previous behavior – though there is a delicate balance to be struck

79 If Fund warnings were self-justifying, there would not be any type 2 errors.
80 I once took an informal poll inside the IMF asking for examples of crises averted; there were more than I expected, even after adjusting for multiple parentage. I am not aware of more scientific results on this issue.
between providing incentives to heed warnings and providing disincentives to come to the Fund when trouble looms.

Beyond the standard traditional human intelligence aspects of surveillance, the Fund has invested in the statistical analysis of vulnerability indicators, as predictors of the probability of a crisis. 81 Similar exercises are undertaken in the private sector, and are published. While these efforts are interesting and the results worth close scrutiny, their forecasting record is not very good; further, to the extent that any one of these equations fits well and is used successfully to avert some crises, it may carry the seeds of its own destruction, in Goodhart’s law or Lucas critique fashion. 82

In seeking to improve surveillance, the Fund has established the International Capital Markets department, which is charged with daily monitoring of the capital markets. The Fund is strengthening the vulnerability analyses it carries out for internal purposes: these bring together the statistical analyses with detailed country-by-country reports in seeking to identify countries that are vulnerable, and to recommend appropriate policy measures. While we have to continue striving to make surveillance ever better, we need also to keep reminding ourselves that no early warning system will be infallible.

Transparency: At the time of the Mexican crisis, the Fund published very little about its programs, its policy deliberations, and its surveillance activities – except for the World Economic Outlook and the International Capital Markets Report. If the Board agreed to support a program, an announcement of the amounts involved would be made. Program documents were not published. Nor were Article IV reports.

Now the great majority of our members publish their Article IV conclusions (in the PINs – Public Information Notices) and more important, the Article IV reports themselves. 83 Most borrowers release the Letters of Intent that describe their IMF-supported programs. In addition, since the start of this year, countries have been allowed to publish the staff reports on programs, and about half have been published since then. Staff papers on general policy issues are almost all published, sometimes also in preliminary form to solicit public comment. In addition, an Independent Evaluation Office, reporting to the Board, has been established and is beginning to operate.

All this marks a revolution in transparency, and a revolution within the Fund. At the time the changes were being debated within the Fund, some Board members feared that greater transparency would inhibit the frankness of the policy dialog between the Fund and its members, and the frankness of reporting to the Board. The objection was a serious one, even if it sometimes came from members with whom the policy dialog was not particularly frank. It was dealt with in part by allowing members to request the removal of market-sensitive

83 Publication rates of Article IV’s are highest for the advanced, Central and Eastern Europe, and Western Hemisphere members.
information from reports that were later to be published. On balance I do not believe the fears have turned out to be valid, though from time to time in clearing a report, I was mindful of the fact that the report would be made public.

The main argument for transparency put forward a few years ago was that it helps make markets more efficient. That it does, despite the difficulties skeptical markets frequently create for member countries and for the Fund. But transparency has many other benefits. As already mentioned, it improves policy, because policymakers operating in the light of day cannot do some of the things they can do in the dark of secrecy. It also improves the quality of the Fund’s work, for we are bound to be even more careful to get it right when we are subject to scrutiny – and here the Independent Evaluation Office will also make an important difference.

But transparency does even more than that, in two regards. First, it promotes interactions with the outside world, for as the Fund puts information out, it has also to interact with the outside, listening to what outsiders are saying, and taking information in. This happens in a variety of ways: the posting of papers for comment on the web; the setting up of the Capital Markets Consultative Group, a group of private sector capital market participants with whom general issues – but not the details of individual country cases – are discussed; and increased interactions with NGOs in both the industrialized and developing countries. And here in the LSE, I should emphasize that the depth and the quality of the interactions with the academic community are much improved. Of course the Fund has to be careful in all these interactions not to betray the trust of its members by revealing privileged information, or by giving anyone favored access – and doing so requires real skill and tact.

Second, transparency strengthens the potential effectiveness of Fund surveillance over non-borrowing countries. In that regard, consider the United States. The US government used to ignore the annual Article IV report, and hardly anyone outside official circles got to see it. The Article IV report for the United States for 2001 was certainly not ignored: it was the subject of many news reports and of several op-ed columns in leading newspapers. And all the attention it received ensures the next Article-IV consultation with the U.S. will be treated more seriously by the United States authorities than in the past. Of course there is also a risk – namely that Fund surveillance fails to establish a track record. Which is to say, transparency strengthens the incentives for the Fund to do top-class work.

Let me confess also to a third argument that was sometimes on my mind – that transparency probably contributes a bit to democracy.

Looking back, I regard the transparency revolution as the most important change in the IMF during the last seven years. This is not simply a bureaucratic change; it is a culture change. It has some costs – but it is overwhelmingly a positive development.

Prequalification for loans: The Meltzer Commission recommended that the Fund move over five years towards a system in which countries would have to prequalify for loans, particularly

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84 All changes made between Board presentation and publication of a report have to be reported in complete detail to the Board – this serves as a safeguard against changes that do not meet the market-sensitive test.
by meeting strong standards for the health of the banking system. Loans would be disbursed automatically if triggered. Other countries would not receive loans, except in cases of systemic risk.

Relying solely on prequalification for loans would set up the right incentives to meet the qualification conditions. However, automatic disbursement, independent of the country’s macroeconomic policies, would not make sense, even if the country’s overall policies had been good at the time the line of credit was negotiated. While there should be incentives for prequalification, I do not believe the Fund should refuse to lend to non-prequalifying crisis countries – provided such countries are willing to adjust their policies to deal with the crisis. The discussion here parallels that about the suggestion that the Fund not lend to countries that ignore warnings provided by the Fund – and we should note also that the Meltzer Commission’s systemic risk contingency is one that discriminates against smaller countries.

Nonetheless, the notion of prequalifying for lending is an important one, which is embodied in the conditions for the CCL – Contingent Credit Line facility. The basic idea is straightforward: the IMF offers a precautionary line of credit to countries that have demonstrably sound policies, but which nonetheless believe they may be vulnerable to contagion from crises elsewhere. In effect, it allows countries that have met certain preconditions to augment – at low cost – the foreign exchange reserves they can draw on in a crisis. The knowledge that these resources are available may in itself deter a speculative attack. By offering qualifying countries a seal of approval for their policies, it should also reduce contagion, by giving less reason for investors and creditors to pull their money out because of crises elsewhere.

The CCL marks an important departure from the Fund’s traditional lending activities. Rather than waiting to pick up the pieces after an accident has happened, the CCL means that the Fund’s lending capacity can be used for crisis prevention, as well as crisis resolution. This obviously creates a risk of moral hazard. Countries have an incentive – in theory at least – to run weaker policies if they have an extra financial cushion in place. Perhaps more importantly, investors have an incentive to lend to countries with weaker policies if they believe that the presence of the credit line increases the chances that they will be repaid if things go wrong.

To counter this problem, the CCL is aimed explicitly at members with first-class policies, who face a potential loss of access to international capital markets because of contagion rather than domestic policy weaknesses. But we do not live in a Manichaean world in which we can divide countries neatly between the righteous and the ungodly. So “first-class” should not be taken to mean “perfect”. The eligibility criteria are demanding, but not so much so that they would disqualify any country that might benefit from signing up.

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86 The key conditions are (i) at the time the credit line is agreed, the country is not expected to need to borrow from the Fund; (ii) the country’s economy is in good shape, and it is making progress towards meeting relevant international standards; and (iii) the country must enjoy constructive relations with its private creditors, and be taking appropriate steps to limit its external vulnerability.
Qualifying countries would typically be eligible for a line of credit of 300 – 500 percent of quota, with a third available on activation, following a brief review of the state of the economy; the Fund could request policy adjustments for subsequent disbursements. The charge for using the CCL would be 150 basis points below that for the Supplemental Reserve Facility, thus providing a serious incentive for countries to prequalify.

So far the CCL has had no takers. In its 1999 version, it offered no financial incentives to join. It was reformulated in 2000 to deal with some of those difficulties. There was also a Groucho Marx-like concern that no country that was eligible would want to join the club. However there are now serious expressions of interest from countries that could join and want to – and I expect the CCL will soon begin to be used. In making the Fund’s financial resources available for crisis prevention, this would be a very important innovation for the Fund and the international system.

**Actions by others**

Almost every suggestion for change identified so far relates to the behavior of the emerging market economies or the IMF. But the capital flows to and from an emerging market country are typically from and to the industrialized countries – even though often the funds that flow out first will include those of domestic residents.

The behavior of the suppliers of international capital in the industrialized countries, particularly the financial institutions, also contributes to the excessive volatility of international capital flows, and thus to financial crises. This is the theme of Dobson and Hufbauer (2001), who argue (p.129) that “Changing the rules of the game in industrial countries is at least as important as strengthening the regulators and financial institutions in the emerging markets.” This view was shared by the authorities in some Asian countries, who attributed the crises to the behavior of hedge funds.

Dobson and Hufbauer trace many of the capital flow reversals during crises to the behavior of short-term flows, intermediated in some way by banks (including, for instance, providing credit to hedge funds), subject to moral hazard caused by explicit and implicit insurance in the host countries. Their solution is a set of measures for strengthening the new Basel Capital Accord, improving financial system regulation in part through increasing the accountability of supervisors, tightening the frameworks governing G-10 deposit insurance, and undertaking a reviewing the behavior of large portfolio investors with the goal of designing “disclosure rules and other incentives that would forestall large portfolio swings from becoming a future financial problem” (p.165). They also recommend creating a clear ex-ante framework for private sector involvement in the resolution of international financial crises, a topic to which I will turn later.

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87 When the CCL was originally created in 1999, the interest rate was the same as that for the Supplemental Reserve Facility, thus providing no price incentive to use the facility. It was amended in 2000.

The issue here is not the goals, which are admirable, but whether better rules and regulations can be designed. After all, the revised Basel Accord took a considerable amount of work and time, and is only now going into effect. With regard to hedge funds, an IMF study found that a wide range of financial institutions, including banks, had engaged in the same behavior as the hedge funds. That conclusion could point two ways, but policymakers in the leading countries whose institutions supply funds took the view that the type of systemic risk that emerged in the LTCM case could best be handled by greater diligence by the lenders to hedge funds. These conclusions left the authorities in some Asian and some European countries unconvinced, but a subsequent Financial Stability Forum study was not able to push towards any consensus on the need for or possibility of greater disclosure of position-taking by financial institutions participating in emerging markets. Although it is doubtful that a different consensus will emerge anytime soon, this issue should remain on the agenda.

Dobson and Hufbauer also call for better coordination among G-10 supervisors and regulators. The Financial Stability Forum was set up in 1999 to bring financial supervisors from the G-7 together with their finance ministry and central bank deputies, along with representatives of the major international regulatory agencies, and IFI officials. As a forum, the FSF has a very small bureaucracy, but is able to draw on the institutions associated with it, and others, to prepare reports on major financial issues – and it has been active in this regard, producing several good reports. Its biannual meetings start with a surveillance discussion seeking to identify vulnerabilities in the international financial system, and in financial systems in individual countries. It is not clear yet to what extent the FSF has contributed to strengthening supervision in the international financial system.

The G-20 was also set up in the aftermath of the Asian crisis. Its membership is very similar to that of the IMFC – the International Monetary and Financial Committee – the ministerial level body that in effect governs the IMF. Given competing demands on the time of officials, rationalization of the proliferation of institutions in the international system would be desirable.

During the debate over reform of the system, several proposals were made for setting up other institutions, including George Soros’s suggestion for an institution to guarantee specified amounts of lending to each emerging market country. Whether or not the suggested functions make sense, we should be very leery of setting up new institutions rather than reforming existing ones: although I am not aware of formal work on the issue, experience suggests that the amount of resources devoted to inter-institution co-ordination is proportional to 2^n, where n is the number of institutions, suggesting that the more institutions we have, the less we should want more of them.

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91 Of course, this is only one element in the calculation of whether to set up a new institution.
II. Crisis Response and Private Sector Involvement (PSI)

While it is convenient to draw a distinction between crisis prevention and crisis response, the line cannot be clearcut, for the way the Fund and the international system respond to crises also helps determine behavior before a crisis. The design of IMF programs, and the scale of financing, two important aspects of crisis response, have already been discussed. In this section we discuss private sector involvement.

No issue in the debate over the reform of the system has generated more heat than that of PSI. The term is used in several senses. The literal meaning is the contribution of the private sector to meeting a country’s financing needs. In the debate over how the IMF should ensure PSI, the term is often used to mean non-business-as-usual ways to persuade the private sector to reduce net capital outflows from a country facing a capital account crisis. Some mean by PSI the losses or pain borne by foreign private investors during a crisis.

These different conceptions of PSI are relevant to distinct but related concerns about IMF lending. The first recognizes that given the scale of capital flows to emerging market countries, the public sector is unlikely to be able fully to offset swings in private capital flows, and that the private sector one way (voluntarily) or another (involuntarily) needs to provide some of the needed financing. This leads to the second sense of PSI – that the IMF may on occasion need to find ways of helping ensure the private sector provides some of the financing.

The third – pain – sense is relevant to the efficiency of the operation of the capital markets, and to moral hazard. If markets are to operate efficiently, investors need to bear the real risks associated with their investments, and IMF programs should not shield them from that. Otherwise moral hazard will lead investors to make decisions based on beliefs about extraordinary rescue packages rather than a careful appraisal of the real value of the investment. And if that happens, a successful rescue could contain the seeds of a future crisis.

Some emphasize fairness as much as efficiency, arguing that investors should not be bailed out by loans financed by advanced country taxpayers. In fact, IMF crisis loans have always been repaid – often early – and the industrialized country taxpayers do not bear a burden. Rather the loans are repaid by the taxpayers of the borrowing country – and accordingly many argue that investors are being bailed out by imposing a burden on domestic taxpayers.

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92 The question of the optimal size of the IMF and of individual programs could be analyzed using a cost-benefit analysis, in which at the margin the benefit to the global economy of an extra dollar provided to the IMF is equal to its marginal cost. There are of course formidable difficulties in quantifying the benefit to the global economy, including the need to weight the gains to different groups in the global system.

93 A great deal lies behind this sentence: in particular, if optimal IMF operations can sustainably (in the stochastic equilibrium of the system) reduce the variability of output in emerging market economies, then the real risks facing investors are those in the equilibrium in which the IMF is acting optimally.

94 A few countries (among them Sudan, Democratic Republic of the Congo, Liberia) are in arrears to the IMF, but these are not countries that suffered capital account crises – rather they suffered from conflict and civil wars.

95 I leave aside here the issue of whether the subsidy implicit in lending to crisis countries at IMF rates is a burden on the providers of funds.
residents. To clinch this argument, it would be necessary to spell out what the alternative course of action for the crisis country would have been. There would surely have been substantial costs associated with any other course of action, such as defaulting on the debt.

For all three reasons—particularly because it does not have and should not have enough money to do otherwise—the IMF has to be concerned with private sector involvement in the resolution of financial crises. However, the issue has to be approached carefully, lest proposed solutions increase the frequency of crises. For instance, the formalization of a requirement that the banks, or any other set of creditors, always be forced to share in the financing of IMF programs, would be destabilizing for the international system. If such a condition were insisted on, the creditors would have a greater incentive to rush for the exits at the mere hint of a crisis. This is a real dilemma, one that suggests the need for a differentiated approach to involving the private sector, one that depends on the circumstances of each country: sometimes a formal approach may be necessary, as in Korea at Christmas in 1997; at other times, as in the case of Brazil in March 1999, when the commercial banks voluntarily agreed to maintain their lines of credit, less formal discussions could serve better; when financing needs are small, there may not be a need to approach the creditors; and in extreme and infrequent cases, an involuntary restructuring of the debt may be necessary.

The efforts at coordination during some of the crises discussed in Lectures 1 and 2 as well as experiences with Ecuador, Pakistan and Romania were drawn on in formulating an agreed framework for PSI at the Prague annual meetings in September 2000. The approach emphasizes the need to rely as much as possible on market-oriented and voluntary solutions.

The basic principles of the framework are that official financing is limited; that debtors and their creditors should take responsibility for their decisions to borrow and lend; and that contracts should be honored, except in extremis. The approach taken in individual cases should be based on an assessment by the Fund of a member's underlying payment capacity and its prospects of regaining market access. Cases are expected to fall broadly into four categories:

- Those where policy adjustment and official financing should allow the member to regain full market access reasonably quickly. This is essentially the traditional catalytic approach. The framework specifies that extraordinary access to Fund resources should be exceptional, and that high levels of access to Fund resources require substantial justification, both in terms of its likely effectiveness and of the risks of alternative approaches;

- Those where official financing and policy adjustment needs to be combined with encouragement to creditors to reach voluntary arrangements to overcome their coordination problems;

- Those where the early restoration of full market access on terms consistent with medium-term external sustainability is judged to be unrealistic, and further action by private creditors, possibly including comprehensive debt restructuring, may be needed.

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96 See the Annex for a full statement of the relevant paragraphs. I am grateful to Mark Allen for allowing me to draw on material he has provided.
in the context of a Fund-supported program to provide for an adequately financed program and a viable medium-term balance of payments; and

- The extreme cases where the member may have to resort to a temporary payments suspension or standstill pending action by its creditors to support the restoration of viability. In such cases, the Fund would be prepared to lend into arrears to private creditors, provided the country is seeking to work cooperatively and in good faith with those creditors and is meeting other program requirements.

There are recent examples of programs in each category. The Brazilian program in March 2000 fell into the second category, and it was judged in the fall of 2000 that Turkey fell into that category too. The Argentine debt restructuring in the spring of 2001 was perhaps consistent with the third category, though full market access was not in the end restored. And Ecuador in 1998-99, in which the IMF did lend into arrears to private creditors, fell into the fourth category.

Note that the framework does not use the words “liquidity” and “solvency” to categorize different cases. If the distinction were being used, cases 1 and 2 would be liquidity cases, and 4 would be a solvency case, with 3 not clear. The distinction is not used because, although analytically helpful, it is difficult to apply to sovereign debtors. For them, the distinction is largely political, for solvency depends on the extent to which a government can or wants to reduce domestic demand in order to continue to service its debt. For instance, following the exchange rate crisis in February 2001, the Turkish government faced the choice of undertaking a massive fiscal adjustment in order to continue servicing its debt, or attempting a debt restructuring, which would probably have had to be involuntary. It chose the fiscal adjustment.

Nonetheless four serious difficulties arise in applying this framework. The first became clear following the revised Turkey program in December 2000, after a voluntary agreement on a rollover of interbank lines had been reached with Turkey’s commercial bank creditors. At that point the program looked likely to succeed, and the voluntary agreement by the banks could be seen as the solution to a collective action problem. But then during the next few months the markets’ confidence in the Turkish program began to weaken, and the banks began to pull out their lines. Given that the program was not going perfectly, it was difficult for the official sector to insist as strongly as before on the banks rolling over their lines.

The second difficulty lies in the enforcement of these voluntary agreements. In the 1980s, the authorities in the creditor countries exerted pressure on their banks, doing so to solve the collective action problem – namely, that if the banks agreed to provide the required amount of funding, each bank individually would be better off than it would have been if it had done what seemed best for it, acting alone, which was to attempt to withdraw its funds. Bank regulators have been much less enthusiastic about exerting such pressure in recent years, for they see a conflict between their regulatory role, and their pressuring the banks to maintain portfolio positions against their will. Some industrial country regulators argued that it was up to the authorities in the crisis country to persuade the banks to hold their lines. But typically

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97 Part of the decline in interbank lines was a result of a decline in demand by Turkish banks.
the crisis country has very little leverage in this situation. It is similarly difficult for the IMF to exert any leverage if the industrial country regulators are not also doing so. The key issue is whether by exerting pressure the industrial country regulators are indeed helping the banks reach a better equilibrium – and a judgment on that issue should be made case by case.

The third difficulty is in the notion of voluntary market-based restructurings of the debt. To a first approximation, a purely voluntary market-based restructuring cannot reduce the present value of a country’s debts, for the country will simply be trading the debt up and down the term structure.\(^98\) Thus not much should be expected from purely voluntary debt restructurings, though changes in the profile of debt payments – for instance pushing them out into later years – could be useful if the country has a temporary liquidity problem. The country could achieve a reduction in the debt burden by reducing the seniority and thus the value of existing claims in some way. And perhaps it could achieve some reduction in the debt burden by enhancing some new claims with the aid of financing or guarantees from the official sector, where the reduction in the value of the debt will be approximately equal to the reduction in the present value of interest payments implied by the substitution of lower interest official debt for higher interest market debt.

The fourth, most profound, difficulty occurs in the “extreme cases where the member may have to resort to a temporary payments suspension or standstill pending action by its creditors to support the restoration of viability.” The problem is that we have no accepted framework in which a country in extremis can impose a payments suspension or standstill pending agreement with its creditors to support the restoration of viability – and that accordingly any country contemplating a standstill faces enormous uncertainties about what will happen to the economy if it does so. Those uncertainties are compounded by the absence of an accepted legal framework in which the debtor and its creditors can work to seek to restore viability.

Indeed it is striking that when governments face the decision on whether to seek to impose a standstill and/or restructure the debt in a non-voluntary way, they are generally willing to go very far to avoid a default – especially so the countries that have adopted drastic solutions in the past, such as default, deposit freezes, and exchange controls.

A standstill could be appropriate and sufficient in a pure liquidity crisis, as a way of stopping a self-justifying run. However, a standstill might be the prelude to a restructuring. There is no way of knowing until after the dust has settled. Why are countries so reluctant to go down this road, especially given the frequency with which critics of IMF rescues argue that a default would be better for the international system and the country? The reasons are: that a debt restructuring will almost certainly involve a restructuring of the domestic financial system, where financial institutions – including banks and pension funds – hold government bonds as important parts of their portfolios; that it is impossible to know what interruptions there will be to the payments mechanism and to trade credit; that costly legal actions are likely; and that it is impossible to know when domestic and foreign confidence in the government’s ability to meet its promises will be restored, and for how long the country will be punished by the markets for having defaulted. Rightly or wrongly, probably rightly, debtor governments

\(^{98}\) The present value of the debt could change as a result of changes in the term structure of interest.
see the costs of a debt default as extremely large – and recent legal developments, including the Elliot Associates case in the Peruvian debt restructuring, have raised the likely costs.

The desire of countries to avoid default raises difficult issues for the official sector: the official sector should be on the side of those who want to honor contracts, and should not force default on countries that are willing to undertake the policies needed to avoid it – provided the country has a reasonable probability of doing so successfully. But there will be occasions when the probability of finding a way out of a crisis without a debt restructuring and writedown is low, and it is then that the official sector should not provide further assistance. It is the judgment of how far to go to help a country that seeks to avoid a default, what probability of success to require, that lies behind the controversies over recent IMF support for Argentina and Turkey.

What can be done?99 We have already discussed the provision of private sector precautionary lines of credit to countries, but the suppliers’ ability to hedge these lines reduces their likely effectiveness. The G-10 deputies’ proposal for collective action clauses in bond contracts, which should make them easier to restructure, is another possibility.100 Emerging market countries resisted the suggestion, arguing it would raise spreads. This argument became less persuasive when it was realized that such clauses already existed in so-called British trust-deed bonds, and that no-one had noticed. Subsequent empirical research by Barry Eichengreen and Ashoka Mody101 suggested that the inclusion of such clauses reduces spreads for high quality borrowers and raises them for less sound borrowers – an appealing result, though one that is the subject of ongoing research.

The most important suggested innovation is the creation of a legal procedure for sovereign bankruptcy, which would require finding legal mechanisms both to approve payments standstills by sovereigns, and for the restructuring and if necessary writing down of sovereign debts.102 It is often argued that Article VIII-2b of the IMF Articles of Agreement could serve as the basis for international approval of a payments standstill imposed by a member of the Fund.103 However this judgment is not shared by the IMF’s lawyers, who point out that VIII-2b applies to exchange controls on exchange contracts, not to payments on debt contracts.

100 This proposal led to an Alphonse and Gaston act in which emerging country bond issuers announced they would be willing to follow industrialized countries in including such clauses, while the industrialized countries generally explained that they had no need for them. In 2000, the United Kingdom did include such a clause in a Euro issue, in the hope that other countries would follow.
102 National bankruptcy laws should apply to private sector debtors who cannot make payments; if debtors can pay in local currency, the stay could permit a delay in converting these payments into foreign currency.
103 Article VIII.2 (b) states: Exchange contracts which involve the currency of any member and which are contrary to the exchange control regulations of that member maintained or imposed consistently with this Agreement shall be unenforceable in the territories of any member. In addition, members may, by mutual accord, cooperate in measures for the purpose of making the exchange control regulations of either member more effective, provided that such measures and regulations are consistent with this Agreement.
There would be many advantages in having the IMF administer such a mechanism, which would require an amendment of the Articles of Agreement. The possibility appeared remote until recently, when Treasury Secretary Paul O’Neill agreed with the Managing Director to work towards the creation of an international bankruptcy procedure. However any such mechanism is likely to take a long time to come to fruition.

Should we make improvement in standstill and/or bankruptcy procedures for sovereigns a high priority? The costs of resorting to such measures have to be high if the credit mechanism is to work well. If creditors believe emerging market debtors will too easily use legal provisions to restructure debts, spreads will rise and capital flows to those countries will decline. That is why policymakers from emerging market countries generally oppose proposals to make it easier for them to restructure their payments, be it through collective action clauses or the creation of a sovereign bankruptcy procedure.

Nonetheless, the absence of procedures for dealing with situations where debts have a very high probability of becoming unsustainable, distorts the behavior of the international system. Under present circumstances, when a country’s debt burden is unsustainable, the international community – operating through the IMF – faces the choice of lending to it, or forcing it into a potentially extremely costly restructuring, whose outcome is unknown. I believe the official sector should go very far to help countries that are willing to take the necessary measures to avoid debt defaults, but debts will sometimes have to be written down. That should be costly for the country concerned, but not as costly as it is now.

Such a change in the international system would inevitably affect the nature and direction of capital flows, and we can be sure that if legal changes are made, the creditors will seek ways of restructuring debt contracts to minimize the impact of the new framework. But we could also reasonably hope that such provisions would lead to more differentiation among countries, with flows increasing to those countries unlikely to need to use the bankruptcy mechanism, and relative spreads rising for those more likely to have to use it, thereby providing important incentives to strengthen the structure of the economy and economic policies.

So we should get on with work on this topic, but we should recognize that it is likely to take many years to change the legal framework.

Earlier this year the Bank of Canada and Bank of England prepared a paper proposing that stricter presumptions should be put in place about the maximum amount of Fund lending to a country, a view that has more recently been eloquently analyzed by Mervyn King. If a country’s debts were not sustainable given that amount of lending, then it would have to draw the consequences, presumably by restructuring its debts, including if necessary by writing them down.

Such presumptions about the maximum scale of loans exist, though they are very weak in the case of the SRF – the Fund’s Supplemental Reserve Facility, designed to deal with liquidity crises. Whatever presumptions there are, they would be much easier to meet if it were less costly to restructure the debt – in other words, the approach suggested in the BC/BE paper is more likely to be carried out if a sovereign bankruptcy procedure is introduced.

There is one other difficulty with the BC/BE proposal. The proposed BC/BE rules rely on access relative to quota. However the actual quotas are a result of a series of political compromises over the years, and vary greatly relative to any reasonable measure of how much each country should be allowed to borrow. This difficulty could to some extent be dealt with by tying access to calculated rather than actual quotas. However even the calculated quotas leave a great deal to be desired as measures of justifiable access to Fund resources. Until and if the Fund quotas are reformed, or until credit limits are no longer tied to quotas, there will have to be reasonable discretion about the size of Fund loans relative to quota.

III. The Operation of the International Capital Markets

As the Mexican crisis developed, and as the Asian crisis intensified, it was easy to conclude that the capital markets were too powerful and too volatile, that contagion was excessive, and that they failed to discriminate appropriately among different levels of performance. And there were certainly occasions during the crisis when I felt that each of these charges was justified. It was less obvious what to do about them.

One response would have been for countries to close themselves off from the international capital markets. It is striking that despite the blandishments of events and some well-known economists, no country – including Malaysia, which removed almost all its controls within less than two years after imposing them – did that. Emerging market country policymakers must have thought it useful to remain within the international financial system despite the problems that had caused for them.

105 The calculated quota is calculated using the quota formula; when quotas are revised they are typically determined as a weighted average of the existing quota and the calculated quota. This procedure tends to penalize the quotas of countries that are growing rapidly and to reward the slow growers.

106 It should also be noted that the Fund is not the only source of official lending; countries in crisis have in the past had access to financing from non-Fund sources – so that constraints on the availability of Fund financing would still leave a substantial degree of uncertainty about the extent of official financing available to countries heading towards crisis.

107 For the record, I note that I believe credit limits should be tied to quotas, as a way of continuing to ensure the Fund operates without a formal distinction being drawn between creditor and debtor countries. The absence of such a distinction is an important reason the Fund operates successfully as a cooperative institution.

108 To be sure, several countries did impose measures seeking to control or close access to offshore markets in their currency.
Is there any way of establishing that the international capital markets are inefficient? As we know from the literature on the stock market, it is difficult to prove empirically that asset prices fluctuate excessively. But let me mention a few pieces of evidence.

Larry Summers has argued that there is an inconsistency between the pricing of emerging market bonds and the frequency of defaults: specifically, that spreads are so high as to imply a substantial probability of default, but defaults have been few. Figure 1 shows the probability of default as a function of the spread. There are two key assumptions: first, the probability of default is exponential, implying the same probability in each year; second, that the recovery value is a given percentage of the face value of the bond. Two curves are shown, one for a recovery value of 60 percent of the face value, the other for 40 percent.

At a spread of 800 basis points, with a recovery value of 60 percent, the calculated probability of default is 23 percent, implying a default should be expected on average nearly every 4 years; at a spread of 1700 basis points, the probability of default is over 65 percent for a 60 percent recovery value, about 33 percent if the recovery value is

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109 It may be even more difficult to establish excess variability if there are multiple equilibria. Presumably the test of efficiency would then have seek to establish whether the system was in a good or a bad equilibrium at any given time. There have been several crises during which I was convinced we were in a multiple equilibrium situation, in which the government’s policies would be fully viable if spreads were lower – the good equilibrium – but that the policies were not viable at actual spreads – the bad equilibrium. But I do not know how to establish that was the case.

110 I am grateful to Jens Nystedt of the IMF for making Figure 2 available, and for discussions on this topic. See Gabrielle Lipworth and Jens Nystedt, “Crisis Resolution and Private Sector Adaptation”, working paper, IMF, November 2000.
Figure 1: Probability of Default and the EMBI+ Spread (in bps)
40. We should think of these calculations as applying to a single country.\textsuperscript{111} It seems clear 
that these prices exaggerate the probability of default; in other words by this calculation 
spreads are too high. Possibly an argument could be constructed to tie these high spreads to 
uncertainty about the response of the official sector when a country gets into trouble, and thus 
to uncertainty about the returns on these assets, but that argument is not immediately obvious.

One other issue concerns the profitability of holding emerging market bonds. If 
spreads are in some sense too high, then one would expect that returns on these bonds are 
above average. Yet so far as I am aware, the evidence does not show high rates of return on 
emerging market bond portfolios – possibly because price fluctuations for this close of assets 
have been high.

Another striking fact has been the contagion that has been seen in the emerging markets 
– in the Mexican crisis, during the Asian crisis, and the Russian crisis, and possibly at present. 
There are some good reasons for contagion among related markets – for instance, the stock 
prices of firms in the same industry tend to move together, but its extent in the Russian crisis 
was surely excessive. Further, the explanation that contagion spread to the stronger emerging 
markets in part because emerging market traders needed cash, which was most easily obtained 
in a relatively strong market, suggests a market inefficiency in which limited liquidity in the 
market as a whole distorts pricing relations among the different countries’ bonds.\textsuperscript{112}

During crises, the IMF has sometimes heard suggestions that a particular course of 
action should be taken “for the good of the asset class”. This is not a compelling basis for 
making a decision on an individual country, but it does support the view that treating emerging 
market bonds as a separate asset class distorts asset pricing among emerging market countries. 
Perhaps emerging market asset price determination would become more efficient if the bonds 
of the different emerging market countries were no longer treated as an asset class.

How good a job are the markets doing at discriminating among countries now? Figure 
2 shows what has happened to spreads on the bonds of some emerging market countries. The 
extent to which the spreads on a given country have varied over the last few years is striking; 
so is the variation among spreads on the last date shown in each chart. Table 1 provides data 
on spreads for a larger sample of countries, including spreads for yesterday – a day of very 
high spreads by historical standards. The range is extraordinarily wide, which is good news. 
Further, no major anomalies in the ranking of spreads are immediately obvious – though there 
are spreads that seem very high relative to my estimate of fundamentals.

\textsuperscript{111} Careful calculations would need to be made to use the EMBI average to calculate the probability of at least one 
default in a given year; that is \((1 - k)\), where \(k\) is the probability that no country defaults in a given year.
\textsuperscript{112} Some of the explanations for contagion in the Mexican crisis also relied on the rebalancing of dedicated 
emerging market funds.
Figure 2: Individual Country Bond Spreads

Source: IMF
### Table 1: Selected Emerging market Bond Spreads

<table>
<thead>
<tr>
<th>Country</th>
<th>09/10/01</th>
<th>10/26/01</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMBI+</td>
<td>900</td>
<td>1013</td>
<td>330</td>
<td>1924</td>
<td>782</td>
</tr>
<tr>
<td>SKorea</td>
<td>162</td>
<td>150</td>
<td>126</td>
<td>967</td>
<td>230</td>
</tr>
<tr>
<td>Poland</td>
<td>218</td>
<td>255</td>
<td>133</td>
<td>1065</td>
<td>290</td>
</tr>
<tr>
<td>Mexico</td>
<td>352</td>
<td>386</td>
<td>265</td>
<td>2426</td>
<td>581</td>
</tr>
<tr>
<td>Panama</td>
<td>398</td>
<td>477</td>
<td>222</td>
<td>769</td>
<td>412</td>
</tr>
<tr>
<td>Morocco</td>
<td>421</td>
<td>545</td>
<td>331</td>
<td>1519</td>
<td>554</td>
</tr>
<tr>
<td>Colombia</td>
<td>582</td>
<td>599</td>
<td>402</td>
<td>888</td>
<td>637</td>
</tr>
<tr>
<td>Philippines</td>
<td>593</td>
<td>636</td>
<td>861</td>
<td>1004</td>
<td>897</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>608</td>
<td>649</td>
<td>414</td>
<td>2694</td>
<td>997</td>
</tr>
<tr>
<td>Peru</td>
<td>608</td>
<td>649</td>
<td>319</td>
<td>1061</td>
<td>572</td>
</tr>
<tr>
<td>Turkey</td>
<td>903</td>
<td>887</td>
<td>370</td>
<td>1194</td>
<td>648</td>
</tr>
<tr>
<td>Russia</td>
<td>840</td>
<td>905</td>
<td>608</td>
<td>6890</td>
<td>2248</td>
</tr>
<tr>
<td>Venezuela</td>
<td>925</td>
<td>1034</td>
<td>254</td>
<td>2703</td>
<td>1005</td>
</tr>
<tr>
<td>Brazil</td>
<td>973</td>
<td>1127</td>
<td>339</td>
<td>1779</td>
<td>827</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1419</td>
<td>1514</td>
<td>458</td>
<td>4764</td>
<td>1645</td>
</tr>
<tr>
<td>Argentina</td>
<td>1510</td>
<td>1838</td>
<td>313</td>
<td>2456</td>
<td>778</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1881</td>
<td>1959</td>
<td>472</td>
<td>3606</td>
<td>1545</td>
</tr>
</tbody>
</table>

Source: JP Morgan
One encouraging feature of Table 1 is that despite current market tensions, several countries with good macroeconomic policies have spreads that appear relatively low by their historical standards, for instance Mexico, Poland, and South Africa.

Possibly we are in a period in which relative asset pricing among the bonds of the emerging market countries is becoming more efficient, and in which the countries with strong fundamentals, high transparency, and good investor relations programs are being rewarded by the markets. But we should also remember that the overall flow of resources to the developing countries is highly variable, and that we are once again in a period in which gross flows are extremely low, and net flows are almost certainly negative.

In 1997 there was much talk about there being no need for the IFIs because the private markets were doing the job of financing the developing countries. That was never true for the smaller less developed countries, but the variability of private sector flows makes clear the need for the official sector to try to offset some of the fluctuations in private flows.\textsuperscript{113}

\section*{IV Concluding Comments}

Paul Volcker remarked during the debate over the international financial architecture that the proposals for reform were more like interior decorating than architecture. The proposals we have discussed today lack the grandeur of the vision of the global economy that the wartime generation, Keynes and Robbins and Harry Dexter White and others, put in place. But opportunities to redesign the entire international system are fortunately rare – for the last one came after a Great Depression and a world war.

Those who favor a more thoroughgoing reform of the system – including Paul Volcker – focus on the exchange rate system among the major currencies. There is no question that such fluctuations have been disruptive, and that changes in the yen-dollar rate contributed to the Asian crisis – given their peg to the U.S. dollar. But for now and the foreseeable future there is no prospect of changing the flexible exchange rate system among the major currencies.

Would emerging market countries be better off giving up their currencies and dollarizing or euroizing? I believe that will ultimately happen, but that for a long time, most emerging market countries will and should continue to allow exchange rate flexibility. Had exchange rates been flexible, the six crises we have discussed in these lectures would either not have happened, or would not have taken the form they did. That is why the shift to flexible rates among the emerging market countries is the most important change in the international financial architecture during the past decade. It will not prevent all external crises, for debt-sustainability crises will still occur, but it should greatly reduce the frequency of crises.

What else needs to be done? All the measures we have discussed to prevent crises by strengthening individual economies – including lower debt to GDP ratios – will contribute to

\textsuperscript{113} The argument that IMF lending creates moral hazard implies that spreads are on average too low. That point does not jump out of the data.
the better performance of those economies and the international system. So will lessons learned by the IMF from the recent crises. So too should the introduction of the Contingent Credit Line facility and the shift of the IMF towards precautionary lending. So too should better supervision by industrial country regulators over the financial institutions active in international markets, and more provision of information by those institutions.

The major unresolved issue is the framework for private sector involvement. Sometimes countries, like companies, need either a pause in their debt servicing (in a liquidity crisis) or a permanent reduction in the burden of debt servicing (in a solvency crisis). The international financial system will not work well unless the imposition of a standstill or debt reduction is extremely costly to a country, and very rare. But that cost is currently too high.

The introduction of collective action clauses in bond agreements will help reduce the costs of restructuring when that is necessary. But the balance between creditors and debtors could also be changed by changing the legal framework for standstills and debt restructurings. What would happen to the international capital markets if the rules could be changed in this way? The initial reaction is to think that flows would decline, and spreads would rise. But there is another, more likely, possibility: that with more room for more orderly resolution of crises, and less risk of extreme crises, flows would soon rise and spreads would decline as the stability of emerging market economies grows.

What should we expect? Measures already in place or under way will increase the stability of the international capital markets, and as normalcy returns to the global economy, should also lead to greater flows to countries that are managing themselves well. Work on developing a better legal framework for standstills and sovereign debt restructuring should get under way, but will take time to complete and longer to agree. If the apparent improvements in the ability of the international capital markets to discriminate among countries continues, thereby helping provide incentives for good behavior, the system could be operating far better, with fewer crises, even before a new legal framework is in place.

Thank you: this has been a real pleasure.
ANNEX

From the Communiqué of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund; September 24, 2000; Press Release No.00/54

Private Sector Involvement

21. The Committee endorses the report by the Managing Director on the involvement of the private sector in crisis prevention and management. It welcomes the progress on developing a framework for involving private creditors in the resolution of crises. The Committee notes that this approach strikes a balance between the clarity needed to guide market expectations and the operational flexibility, anchored in clear principles, needed to allow the most effective response in each case. The Committee notes that Fund resources are limited and that extraordinary access should be exceptional; further, neither creditors nor debtors should expect to be protected from adverse outcomes by official action.

22. The Committee agrees that the operational framework for private sector involvement must rely as much as possible on market-oriented solutions and voluntary approaches. The approach adopted by the international community should be based on the IMF's assessment of a country's underlying payment capacity and prospects of regaining market access. In some cases, the combination of catalytic official financing and policy adjustment should allow the country to regain full market access quickly. The Committee agrees that reliance on the catalytic approach at high levels of access presumes substantial justification, both in terms of its likely effectiveness and of the risks of alternative approaches. In other cases, emphasis should be placed on encouraging voluntary approaches, as needed, to overcome creditor coordination problems. In yet other cases, the early restoration of full market access on terms consistent with medium-term external sustainability may be judged to be unrealistic, and a broader spectrum of actions by private creditors, including comprehensive debt restructuring, may be warranted to provide for an adequately financed program and a viable medium-term payments profile. This includes the possibility that, in certain extreme cases, a temporary payments suspension or standstill may be unavoidable. The Fund should continue to be prepared to provide financial support to a member's adjustment program despite arrears to private creditors, provided the country is seeking to work cooperatively and in good faith with its private creditors and is meeting other program requirements. The Committee urges progress in the application of the framework agreed in April 2000, and in further work to refine the analytical basis for the required judgments, and it looks forward to a progress report by its next meeting.