Can Currency Crises Be Prevented or Better Managed?

Lessons from Mexico

Edited by
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Forum on Debt and Development (FONDAD)

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Abbreviations

ADR	American Depositary Receipt
BIS	Bank for International Settlements
CRF	Contributed Resources Facility
ERM	Exchange Rate Mechanism (European)
EMS	European Monetary System
ESF	Exchange Stabilisation Fund
FDI	Foreign Direct Investment
GAB	General Arrangements to Borrow
GDP	Gross Domestic Product
G-3	Group of Three (Germany, Japan, US)
G-7	Group of Seven (Canada, France, Germany, Italy, Japan, UK, US)
G-10	Group of Ten (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, UK, US)
ILOLR	International Lender of Last Resort
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commissions
NAFTA	North American Free Trade Agreement
OECD	Organisation for Economic Cooperation and Development
PPP	Purchasing Power Parity
UK	United Kingdom
US	United States

Preface

As a former executive director of the International Monetary Fund and having left the IMF only recently, I still felt very much involved when the Mexican crisis erupted in December 1994. But since I could follow the unfolding events in 1995 solely as an outsider, I was grateful for the invitation of the Forum on Debt and Development to chair a meeting of an international group of outstanding experts who were closely involved with the Mexican crisis and its aftermath. The seminar on which this book reports created a welcome moment to discuss the many sides of past and future currency crises in a quiet setting. It was the kind of gathering you can have only after the crisis has happened and not when you are still in the middle of it.

When the IMF decided to act as a "crisis manager" in the beginning of 1995, my own feeling was that the Mexican authorities could have acted more forcefully at an earlier stage, and that the financial market could have foreseen that Mexico's current account deficit was going to be unsustainable. I must confess, however, that it is very difficult for policymakers to identify the elements which constitute an unsustainable situation before a crisis has emerged, and to judge what the moment is to act and take unpopular measures. Moreover, policymakers are rightly concerned about not starting the crisis themselves. So I agree that one should err on the side of caution, as one of the participants in the seminar said. Likewise, market participants may find it difficult not to extend loans and make portfolio investments when everybody still considers it profitable and safe. With the benefit of hindsight, of course, things look different.

One of the basic questions that was addressed in the seminar was whether currency crises can be prevented. My own answer is no, at least not always, because we live in a real world where mistakes are made by authorities as well as by markets. However, it should also be realised that currency crises do correct mistakes, though in a rather painful way. In fact, one of the ways to manage a currency crisis is to do nothing, because the financial market will do the job and correct misalignments. This and other ways of managing currency crises was the other basic question addressed at the seminar.

One of the other ways of managing a currency crisis is to provide emergency finance to the country in trouble, to enable it to support its currency, to finance its debts, and thus soften the impact of the crisis. The argument in favour of this option is that doing nothing may lead to very great damage to the country, the financial markets or even the global economy. A convincing case can therefore be made that policymakers cannot just leave it to the markets: a local crisis may

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develop into a systemic crisis, obliging financial authorities to come up with a financial rescue package.

Currency crises come unexpectedly, in different circumstances and in different forms. In the liberalised international capital markets we have today, very large capital movements take place within a few days, even hours. The decision to support a country which suffers from a large and immediate capital outflow therefore has to be taken in a very short time if a payment moratorium is to be prevented. In the case of the Mexican crisis the US government and the IMF acted very fast indeed, and put together a financial assistance programme for Mexico of an unprecedented size. In my view, this raises the important question of whether the costs of the crisis have been shared properly by markets and governments. Of course, the financial support extended by the international community to Mexico, through the IMF, has to be repaid by Mexico. But if no support programme had been carried out, wouldn't the capital providers - mainly institutional investors rather than banks, as was the case in the debt crisis of the 1980s - have suffered the losses they ought to have run as a result of assuming commercial risk, at least in the short term? After all, the capital providers had received a return on their investments which reflected higher risks than when they had invested in long-term US bonds, for example. The seminar therefore also discussed another basic question: the feasibility of work-out arrangements for both borrowers and lenders to make sure that the costs of a crisis are shared in a more satisfactory way.

There are many lessons to be learned from the Mexican crisis. Generally, in my view, participants in financial markets should not be protected from their own mistakes, but the markets should be protected from the mistakes of the participants. The contributions included in this book provide profound insights into a problem which is of concern to policymakers, private actors and the public at large in many parts of the world. I hope that this book will help decisionmakers in governments, central banks, and financial markets to prevent the next crisis, and if they fail to do so, to manage it better.

Godert A. Posthumus

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Introduction

Private capital flows are moving freely around the world and are playing an increasingly important role in individual countries as well as in the global economy. They can either promote economic development or suddenly provoke economic instability and create serious crises. A recent example is the Mexican currency crisis that erupted in December 1994.

The latest Mexican crisis has caused concern that similar crises may occur in the future. Policy-oriented researchers and high-level policymakers are therefore puzzling out how new Mexico-style crises can be prevented or better managed, and how the risks can be shared more equally between governments and markets. In the light of these challenges, the Forum on Debt and Development (Fondad) and De Nederlandsche Bank held a seminar to stimulate creative and practically-oriented thinking about the prevention and management of currency crises.

A small group of eminent academics, policymakers and bankers was invited to discuss in four subsequent sessions the following questions: (i) Could the Mexican authorities have prevented or better managed the crisis? (ii) What would be the ways in which future currency crises à la Mexico could be prevented? (iii) How can future currency crises be managed better? (iv) What would be viable long-run strategies, and do short-run measures fit in with such objectives?

Each of the four sessions began with the presentation of a paper written by well-known experts Ariel Buira, Peter Kenen, Stephany Griffith-Jones, and Charles Wyplosz (with Barry Eichengreen as a co-author). The papers were followed by commentaries by Charles Siegman (US Federal Reserve Board), Jack Boorman (International Monetary Fund), William White (Bank for International Settlements), and Coen Voormeulen (De Nederlandsche Bank), and by plenary discussions. These three ingredients - the papers, commentaries and discussions - constitute the content of this book.

The first paper, by Ariel Buira, reviews the three main hypotheses that have been advanced to explain the Mexican crisis: Was it the result of an unsustainable current account, of lax economic policies, or of unpredictable political events? Buira, who as a Deputy Governor of the Bank of Mexico has been closely involved in the events, gives a full and in-depth account. He also considers some broad issues that the Mexican crisis raises.

In the second paper, Peter Kenen addresses the more general issue of how the disruption to national economies that results from fluctuations in cross-border flows can be minimised. In particular, he raises the question of how governments can protect their economies *ex ante* from the volatility of capital flows and what they can do *ex post* to minimise the effects of that volatility when they must

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confront it. Kenen also looks at the ways in which international institutions, especially the International Monetary Fund, can help governments cope with fluctuations in cross-border flows.

In the third paper, Stephany Griffith-Jones considers the new features of recent and possible future currency crises. Griffith-Jones focuses in particular on the growing importance of global institutional investors and suggests how the flows that originate from these global investors and go to emerging markets could be regulated. Griffith-Jones also examines some of the current proposals for currency crisis management.

In the fourth paper, by Charles Wyplosz and Barry Eichengreen, the authors draw out some lessons from exchange rate crises that have occurred over the last thirty years in a large number of industrial countries. In particular, they look at the consequences for the choice of exchange rate regime. According to Wyplosz and Eichengreen, the old debate was about adopting either a fixed or a freely floating regime. Current world economic developments point, however, in their view, to a different choice. The long-run tendency is toward a tripartite monetary world centred around the currency zones of the United States, Western Europe and Japan, Wyplosz and Eichengreen argue. And, given the liberalisation of capital movements, the debate will therefore be forced to make a drastic choice between either a full floating or a complete elimination of exchange rates by establishing a (regional, and eventually world) currency union.

This book arises from a three-year research project set up by Fondad, which aims to explore how regional integration as well as multilateral cooperation can be promoted, in a mutually reinforcing manner, at the same time. At a conference held in 1995 in Santiago de Chile - reflected in our publication *Regionalism and the Global Economy: The Case of Latin America and the Caribbean* - the Mexican currency crisis was one of the hot topics. We are grateful to De Nederlandsche Bank for enabling us to organise another, thorough debate on the lessons to be learned from Mexico-style currency crises by co-sponsoring a seminar at its premises in Amsterdam. We are also grateful for the continuing and solid support of the Dutch Ministry of Foreign Affairs. Special thanks go to Stephany Griffith-Jones and Coen Voormeulen who have been of great help in preparing the seminar from which this book results.

Jan Joost Teunissen
Director
January 1996

The Mexican Crisis of 1994: An Assessment

Ariel Buira[1]

From the middle of the eighties Mexico undertook a far-reaching process of macroeconomic stabilisation and structural economic reform intended to improve its prospects by allowing economic activity to be determined increasingly by market forces.

This process included the strengthening of public finances, deregulation of economic activity, privatisation, financial reform, the restructuring of its external debt, trade liberalisation and the signing of NAFTA. After almost a decade of low growth and high inflation, these policies allowed economic activity to recover (averaging 3.1% between 1989 and 1994) and in 1993 brought inflation down to single digit levels for the first time in more than twenty years. This performance, which earned the country international recognition, suggested that Mexico was ready to enjoy the fruits of economic growth with stability. Economic reforms had increased the country's attractiveness to investors and attracted unprecedented capital flows, which between 1990 and 1994 reached US$104 billion.

Hence, it came as a shock, not only to Mexicans but also to most observers worldwide, that this model economy could fall into a crisis of the depth and magnitude of that of last December.

The severity of the financial crisis, which was felt well beyond Mexico's borders, has given rise to many questions. Several explanations have been proposed of how the devaluation crisis came about and how it could have been averted or its negative effects minimised. This paper will review the three main hypotheses that have been advanced. The first sees the problem as arising from an unsustainable external position. The second one considers lax economic policies as the underlying factors leading to the crisis. Finally, the third view holds that the crisis originated in a series of unpredictable political and criminal events that changed market sentiment towards Mexico. The paper presents some broad issues that the crisis raises as well as a conclusion.

I The Crisis as the Result of an Unsustainable External Position

It has become a stylised fact that in exchange-rate-based stabilisation programmes the currency tends to appreciate, and Mexico's was no exception. Some

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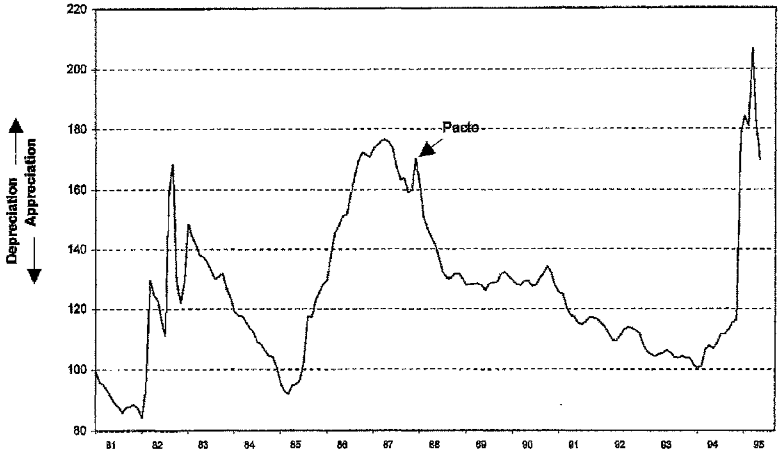
Chart 1 Mexico's Real Exchange Rate
(1970 = 100)



Source: Banco de México

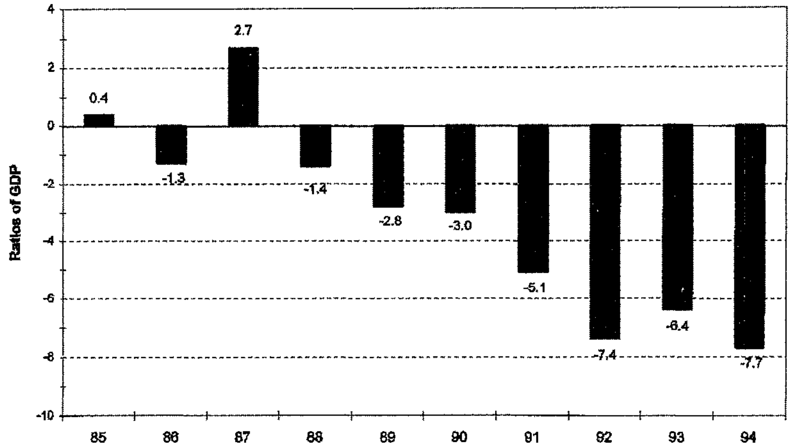
observers have argued that the real appreciation of the peso led the Mexican currency to become overvalued. In their view, this overvaluation of the peso, by hurting the competitiveness of Mexican exports and encouraging imports, gave rise to expanding current account deficits. As the degree of overvaluation increased over time, the external imbalance grew larger and became more difficult to finance. Eventually, the situation became unsustainable and the exchange regime finally collapsed. Proponents of this thesis point to the following to support their view:

- The substantial real appreciation of the peso that followed the launching of the stabilisation programme, known as the "Pacto", in December 1987. (See Chart 1.)
- Mexico's increasing current account deficit, which averaged 6.7% of GDP between 1991-1994 and reached 7.8% in 1994. (See Chart 2.)

While the logic of the above argument is indisputable, the following paragraphs will argue that this is not an accurate description of developments in the Mexican economy, since other factors had a determinant influence on events over this period.

In 1986, nearly two years before the first Pacto was introduced, a sharp reduction in the price of oil, Mexico's main export, had caused a loss of revenues of some US$9 billion (approximately 6% of GDP). At a time when the public sector's

Chart 2 Mexico's Current Account Balance



Source: Banco de México

deficit was close to 15% of GDP, the adjustment required in the face of such a shock led the authorities to allow the peso to depreciate by 60% in 1986. These events threw the Mexican economy into a severe recession, causing aggregate output to decline by almost 4%. The acceleration of the peso's depreciation rate not only helped the country cope with the lesser availability of foreign exchange and with the negative impact that trade liberalisation could have on some sectors, but it also gave rise to a current account surplus in 1987, turning Mexico into a net exporter of capital. As recovery was under way, the collapse of stock markets throughout the world in October 1987 hit the Mexican market heavily, causing a new crisis of confidence and a 20% devaluation in the controlled market rate. The sharp decline in the nominal value of the peso during 1986 and 1987 meant a real depreciation of over 40% that brought the currency to a substantially undervalued level and accelerated inflation.

The Pacto was a concertation mechanism aimed at breaking the inflationary inertia through wage and price guidelines. It also included the strengthening of public finances and the use of the exchange rate as a nominal anchor for the evolution of prices. Moreover, at that time Mexico engaged in a comprehensive structural reform of economic activity which through far-reaching privatisations, deregulation, further trade liberalisation, financial reform, a restructuring of the public sector's debt with foreign commercial banks and the redefinition of the role

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of the State would change Mexico's economic fundamentals over the following years. Within a short period, economic activity began to recover after years of stagnation, while inflation was substantially reduced. At the same time, economic efficiency improved, the country became an important net recipient of foreign capital, and following the opening of the economy and the rapid expansion of trade, productivity increases accelerated. These changes were bound to be reflected in an important appreciation of the equilibrium real exchange rate.

The "unsustainable external position explanation" of the Mexican crisis rests on the idea that large current account deficits coupled with an appreciating currency provide a clear indicator of an overvalued currency and are therefore a prelude to a devaluation. While this is a case which often arises - particularly when authorities follow expansionary monetary and fiscal policies - it is obvious that a current account deficit does not necessarily reflect an overvalued currency. Indeed, there is ample international and historical evidence that a country can run large current deficits for prolonged periods without major strains on its foreign exchange markets or concerns over its currency being overvalued.[2]

Regardless of the level of the exchange rate, a current account deficit will appear whenever domestic savings fall short of investment. Obviously, this gap may emerge as a result of increased investment opportunities or from a decline in the savings rate. In Mexico's case, both factors played a role. Structural reform not only improved the efficiency of the economy, but it also created new profitable openings for investment, well in excess of what could be financed by domestic sources. The response of international markets to the increased investment opportunities triggered an unprecedented flow of foreign capital into the country. Moreover, the reduction in US interest rates that began at the end of 1990, coupled with the liberalisation of capital flows and improved investment opportunities following the approval of NAFTA, added to the surge in external resources pouring into Mexican markets.

The increased availability of foreign capital fuelled aggregate expenditure (in investment and consumption) and contributed to a reduction in national savings, thus widening the external disequilibrium. In fact, the inflow of foreign capital had only two possible uses: an increase in imports or an accumulation of international reserves. Logic dictated resorting to both. Had the choice been to sterilise inflows fully and accumulate international reserves, an opportunity to expand

2. Singapore ran current account deficits averaging more than 10% of GDP between 1970 and 1982 while its currency appreciated 46% in nominal terms vis-à-vis the US dollar; from 1985 on, these deficits turned into increasing surpluses and yet, as of 1994, the Singapore dollar had appreciated an additional 31%. More recently, Thailand during the period 1988-1993, and Malaysia between 1990 and 1993, have run current account deficits averaging more than 6% and 4.5%, respectively, while their currencies have remained fairly stable. Finally, in recent years the US dollar has depreciated substantially in relation to the Japanese yen, the German mark and other European currencies, yet there is broad consensus that in terms of PPP the dollar is undervalued. Nonetheless, the depreciation of the dollar has been accompanied by a large current account deficit for the last 14 years.

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domestic productive capacity would have been lost. Furthermore, this sterilisation would have entailed enormous costs. On the other hand, not to sterilise and allow capital inflows to feed an expansion of aggregate demand would have meant added pressure on the price level and an even larger current account deficit.

A careful analysis of the data demonstrates that, in fact, it was the massive inflow of foreign capital received since 1990 which gave rise to the expansion of the current account deficit, an important accumulation of international reserves, and the appreciation of the currency.

As Chart 1 shows, the appreciation of the peso's real exchange rate took place in two stages: a first one, which extended throughout 1988 and was followed by a period of real exchange rate stability that lasted for about two years; and a second one stretching from the end of 1990 to January 1994.

The first phase of peso appreciation can be attributed to the use of an exchange-rate-based stabilisation strategy and is consistent with the stylised facts presented above. Additionally, it must be recalled that the peso started to appreciate from a grossly undervalued level, and that this appreciation was inevitable as the exchange rate moved towards equilibrium. This phase seems to have ended at the beginning of 1989.The second phase of peso appreciation, between the end of 1990 and early 1994, is largely attributable to changes in fundamentals. It reflects an equilibrium movement and should not be regarded as a misalignment since:

(a) This appreciation was the result of the price of non-tradables growing at a higher rate than that of tradables. This happens when technical progress is greater in industries that produce tradable goods. The rising productivity of labour in this sector tends to raise wages throughout the economy. Since the price of tradables is determined in international markets, the non-tradables sector faces increasing wage costs that are reflected in the prices it charges, and the exchange rate appreciates.[3]

    This phenomenon took place in Mexico in the early 1990s. The opening of the economy to foreign competition starting in 1985 forced firms in the tradables sector to upgrade their technologies in order to compete successfully in an open environment. This pressure was lower in those sectors that produce non-tradable goods and services, such as health, housing, transportation and personal care. At least part of the peso's appreciation is the natural outcome of this process.

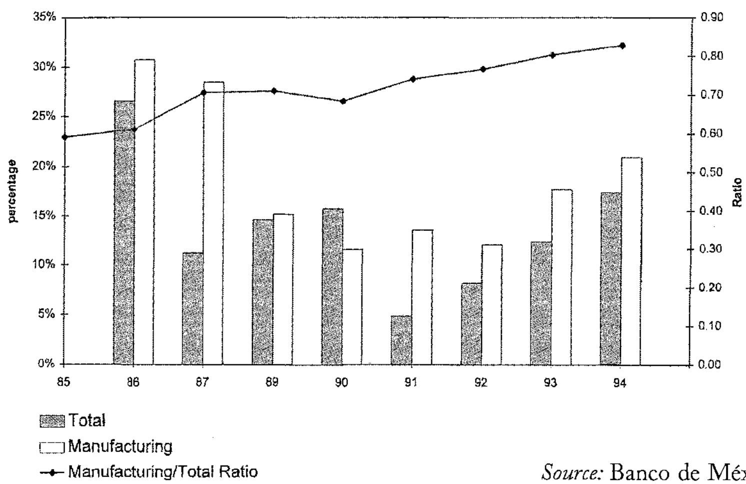
(b) Another fundamental determinant of the real exchange rate is the sign and size of capital flows. In particular, when a country is exporting capital its currency tends to become weaker. On the contrary, with external capital flowing

3. A well-known example of this phenomenon has been provided by Japan. Over the last three decades the yen has appreciated substantially while the international competitiveness of its products (at least up to recent weeks) has remained high, based on the important productivity gains in its export industries.

into the country, the increased supply of foreign currency in domestic financial markets inevitably leads to a real appreciation. In the years prior to the restructuring of Mexico's external debt, the country was a net exporter of capital, and therefore the real equilibrium exchange rate was necessarily weaker. The reduction of the external debt service and the growing investment opportunities created by structural reform made Mexico a favourite destination of foreign investment, turning the country into a large importer of capital. The huge injection of resources received by Mexico between 1990 and 1994 created strong upward pressures on the peso, leading it to appreciate. However, the same outcome would have been obtained regardless of the prevailing exchange regime. The fact that Mexico was using a preannounced exchange rate band as part of its strategy to reduce inflation is irrelevant since, even under a clean floating exchange regime, large inflows of capital would have strengthened the currency. Whether through nominal appreciation or by domestic inflation exceeding the rise of external prices, a real appreciation of the currency is the inevitable result of sizeable capital inflows.[4]

As far as a shift in anchor is concerned, recall that in 1991 the speed at which the band widened was increased and that the inner intervention band was abandoned towards the end of 1993.

Chart 3 Mexico's Merchandise Exports
(Rates of Growth and Share of Manufacturing)



Source: Banco de México

4. In Chile, a country that has not used the exchange rate as an anchor for prices, a smaller surge in capital inflows has caused an important appreciation of the Chilean peso.

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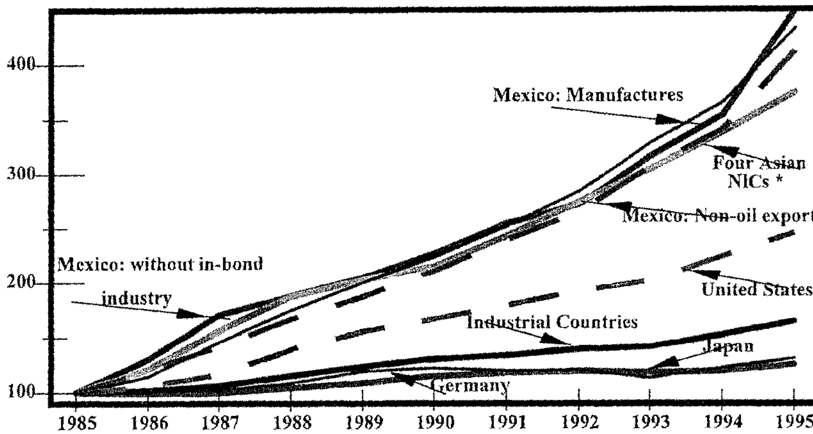
Chart 3a Export Volume (1985 = 100)



* Hong Kong, Korea, Singapore and Taiwan

Source: Banco de México and IMF World Economic Outlook

(c) Currency appreciation, unless compensated by substantial improvements in total factor productivity, will reduce competitiveness, hurt export performance and stimulate imports. As a result of structural reform and trade liberalisation, Mexican labour productivity in manufacturing increased on average 6.7% annually in the four years 1991 to 1994. Indeed, productivity had been increasing throughout this period and reached 8% in 1994. The latest IMF consultation report shows that, despite the appreciation of the peso, Mexican unit labour costs in dollar terms were on average 2.2% lower in 1994 than in 1992, providing evidence that Mexican competitiveness was not eroded by the peso's appreciation.

Over the period 1992-1994, manufacturing exports increased on average 17% per year and their share in total exports reached 83% in 1994, compared to a mere 37.6% in 1985.[5] Moreover, exports of manufactures to the United States were 21% higher in 1994 than in the previous year (see Charts 3 and 3a). This strong performance of exports of manufactures provides a clear indication of their competitiveness. Note that even before NAFTA became effective, rates of growth of Mexican exports had greatly exceeded those of international trade (6.9% per year between 1989 and 1993) as well as the expansion of major Mexican markets (i.e. US imports increased on average 5.7% per annum). In fact, as a result of this impressive performance, Mexican exports were rapidly increasing their share in markets as competitive as those of the United States.

5. This led total exports to increase by 12.6% per annum, despite the stagnation of oil exports.

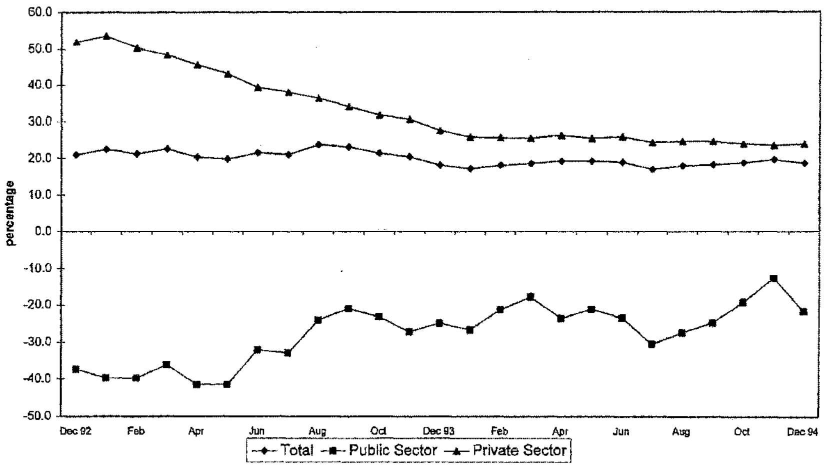
In view of these facts, it would be hard to sustain that the currency was overvalued.[6]

(d) Finally, the overvaluation argument appears even weaker if one considers that in 1994 the real exchange rate depreciated by 14% in real terms prior to the crisis.[7] If there was little reason to believe that the peso was overvalued in 1992, the accumulation of reserves by the central bank throughout 1993 and up to February of 1994, and its depreciation in 1994 makes this argument even less persuasive.

II The Mexican Crisis as the Result of Inadequate Economic Policies

An alternative view would attribute the crisis to the lax monetary and fiscal policies followed by the Mexican authorities. In this view, the balance of payments

Chart 4 Mexico's Domestic Financing*
(Nominal Annual Growth Rates; adjusted to eliminate the effect of exchange rate variations)



* Includes Total Credit From the Banking System, Government Securities, Commercial Paper and other Private Sector Paper

Source: Banco de México

6. Admittedly, imports were also increasing at very high rates. As already mentioned, in 1987 the large undervaluation of the peso represented an important protection for the import-competing industries. Thus, as the first phase of peso appreciation reduced exchange rate protection, imports surged in 1988. Over this period and in the following two years imports of consumption goods more than doubled their share in total imports from a very low level, on average 5.1% in 1983-1987, to 12.3% in 1990. However, this substantial increase proved to be a once and for all adjustment to the opening of the economy as their share levelled off at around 12%, a relatively low level by international standards.

7. Based on consumer prices from 133 countries, using GDP weights.

crisis would be the result of excess demand fuelled by a large credit expansion coupled with the authorities' reluctance to raise interest rates and thus check the expansion of credit, while the public deficit increased in the run-up to, and the immediate aftermath of, the presidential election. However, as will become clear, this view is not supported by the facts.

After 1990 Mexico's financial markets experienced an abundance of loanable funds due to: (a) the strengthening in public finances; (b) the rise in confidence following the restructuring of the external debt in 1990; (c) financial deepening following the liberalisation of interest rates and the elimination of reserve requirements on bank's peso liabilities; and (d) the use of privatisation revenues to retire public debt (US$23.6 billion between 1989 and 1993).

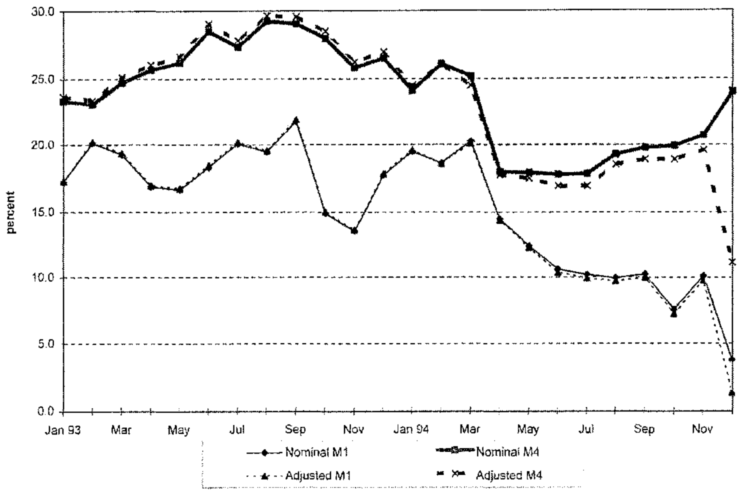
The increased availability of funds eased the budget constraint of individuals and firms and created an incentive for commercial banks to expand credit. Banks had no trouble in finding demand for these resources because: (a) economic reforms had created abundant investment opportunities; (b) there was pent-up demand for plant and equipment following a decade of low investment; (c) improved expectations caused an upward revision of perceived permanent incomes that led to an increase in consumption; (d) there was a wealth effect associated with higher values of both the stock market and real estate; and (e) there were pent-up demands for durable goods and housing after a decade of low growth. These factors combined gave rise to a sharp increase in credit that, in the circumstances, could be easily satisfied. As a result, investment recovered, consumption increased, while private sector savings dropped. Note, however, that positive growth rates of private savings have been observed since 1993.

In terms of flows, beginning in 1991 and continuing until early 1993, the domestic private sector - rather unusually - turned into a net debtor of the commercial banks. However, the slowing down of the economy in 1993 and deteriorating employment opportunities made the net indebtedness of the private sector rather burdensome. Consequently, a process of adjustment of its balance sheet position got under way in the second half of 1993. Furthermore, in response to the rapid growth of non-performing loans, commercial banks adopted a more prudent policy regarding credits to firms and persons. This process continued in 1994. Chart 4, based on data from the 1994 Annual Report of the Bank of Mexico, clearly shows the slower pace of credit to the private sector in 1994.[8]

Following the assassination of the ruling party's presidential candidate, Luis Donaldo Colosio, on 23 March 1994, a large loss of international reserves did occur. Clearly this loss was the result of increased uncertainty and not of expansionary policies. It preceded the sterilisation measures the Bank of Mexico had to

8. Moreover, credit to the private sector in 1994 appears to include an important element of refinancing of interest obligations. This is quite likely given the high level of interest rates charged on loans.

Chart 5 Mexico's Monetary Aggregates
(Annual Growth Rates)



Source: Banco de México

undertake in order to compensate the otherwise vastly contractionary effect international reserve losses would have had on the Mexican economy.

In the aftermath of this tragic event, an 8% nominal depreciation of the exchange rate within the band was allowed, interest rates increased sharply and Tesobonos were issued. Even though the change in the composition of short-term public debt helped maintain stability in financial markets, this strategy involved a degree of risk, particularly as short-term dollar-denominated debt approached the level of international reserves, and thus has been severely criticised. However, a fair assessment should consider that some two-thirds of deposits in the banking system were very short-term and that when fears of devaluation arise, there is no interest rate high enough to compensate investors for the increased perceived risk. Recall that the substitution of Tesobonos for Cetes had been resorted to successfully just before the NAFTA vote in November 1993. At the time, once the uncertainty about the outcome of the vote was removed, the Tesobonos were converted back into Cetes and the exchange rate and interest rates swiftly returned to their previous trend values.

Nominal and real interest rates remained high during 1994. For instance, the 28-day Cetes interest rate - the money market's leading rate - doubled from 9% to 18% in the aftermath of Mr. Colosio's assassination, with other interest rates rising accordingly. Even after their later reduction by some 4 percentage points as

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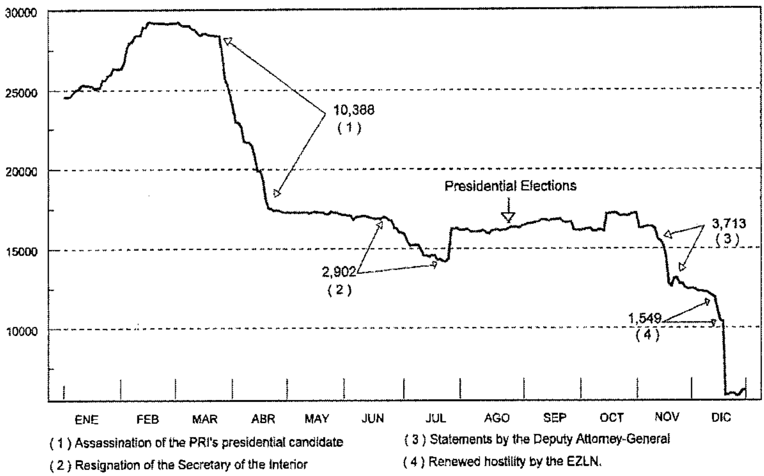
Chart 6 Mexico's Stock of Net International Reserves in 1994
(Millions of dollars)



Source: Banco de México

calm returned to markets and inflation declined, high real interest rates gave rise to repeated complaints by the private sector.

Rates of growth of monetary aggregates in 1994 were significantly lower than in the previous year (Chart 5). Since the aggregates include items denominated in foreign currencies, the appropriate measurement of their growth requires that the effect of the depreciation of the peso on the value of the stock of domestic currency be eliminated. When this is done, not only is the alleged acceleration nowhere to be seen, but in fact credit expansion is seen to decline in relation to 1993. Indeed, the fact that interest rates were rising along with the quantity of money in 1994, rather than falling, suggests that currency growth responded to demand shocks. This is borne out by econometric estimates,[9] which have found little evidence of a relaxation of monetary policy in 1994.

Finally, the available data suggest that fiscal policy in 1994 continued to be fundamentally sound. Although the non-financial public sector showed a cash deficit of 0.3% of GDP compared to a surplus equivalent to 0.7% of GDP in 1993, when non-recurrent revenues from privatisation are included the fiscal deficit turns into a cash surplus of 0.1% of GDP. Though somewhat less restrictive than in 1993, these results can hardly be considered an indication of loose fiscal policies.

9. See, for instance, John H. Rogers "Mexican Money Demand", a paper presented to the Federal Reserve Board of Governors on June 12, 1995.

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III The Crisis as the Outcome of Unpredictable Shocks

If Mexico's external position could not be said to be unsustainable, and the thesis of lax fiscal and monetary policies is unsupported, we are left with the initial question: What caused the Mexican crisis?

The crisis was fundamentally the outcome of a series of unpredictable political and criminal events, including the Chiapas uprising, that finally undermined the confidence of domestic and foreign investors, translating into a lower availability of foreign capital and eventually to a reversal of capital flows to an economy that was heavily dependent on them.

Before the assassination of the ruling party's presidential candidate a totally different set of issues was in the minds of investors and authorities. Given the large inflows of capital registered after the approval of NAFTA by the US Congress, there were strong market pressures for a revaluation of the nominal exchange rate and a reduction in interest rates. Inflation was declining and there were signs that a recovery of economic activity was in the making. At the time, during the first two months of 1994, the central bank had to sterilise large inflows of capital since the potential expansion of the monetary base would have occurred when seasonal demand is at its weakest.

The recurrence of crimes and other political events in 1994, such as had not been experienced by Mexico in two generations, dramatically altered prospects. These events translated into increased uncertainty and resulted in the loss of a sizeable fraction of the country's international reserves. Nevertheless, from the end of April until mid-November, the policy combination pursued was successful in preventing further reserve losses. (See Chart 6.) Capital inflows throughout the period were large enough to finance the current account deficit. Over that period, in the absence of political shocks or criminal events, there was no capital outflow, international reserves remained stable, and the central bank's domestic credit did not expand. It was only when new shocks hit that reserves were lost and the Bank of Mexico allowed net domestic credit to expand in order to satisfy the demand for base money by replacing the resulting loss of liquidity.

Faced with what appeared as temporary shocks attributable to circumstances beyond their control, the authorities decided to draw on the stock of international reserves rather than adjust policies significantly. Initially, it was felt that political uncertainties would be largely resolved by a clean electoral process. Later, as the elections had been credible and had produced clear-cut results, it became apparent that economic policies were to continue along the same broad lines. Thus, it was expected that confidence would be fully restored. Moreover, the medium-term prospects of the Mexican economy following its major structural reform and the coming into effect of NAFTA continued to appear very favourable. Thus, the use of a fraction of the central bank's international reserves to smooth out the effects of the transitory shocks seemed an appropriate policy response. That is, after all, the purpose of holding reserves.

In hindsight, the policy combination turned out to be inadequate. At the time, however, it was not known that further political turmoil loomed ahead. Had the authorities known, they would in all probability have acted to avoid the sharp adjustment that followed. Unfortunately, perfect foresight is not available for guiding policy decisions. At the time that choices had to be made, erring on either side appeared to be costly. Higher interest rates would impede the recovery of activity and add to the difficulties of the financial system, while greater exchange rate flexibility would add to inflationary expectations, sacrificing progress made in stabilisation. If shocks were non-recurrent, as they seemed in the light of historical experience, those policy actions would be unwarranted. In a sense, the authorities made what appeared as a reasonable bet in the light of available information.

IV Reflections on the Crisis

The process of structural change that culminated in the passage of NAFTA and Mexico's admission to the OECD held for many a symbolism that went beyond their immediate economic significance: Mexico with what some foreign observers regarded as the "best economic management in the world" was leaving underdevelopment behind and entering the First World. A new economic power had appeared on the world scene. Expectations of sustained economic progress and prosperity rose rapidly not only in Mexico but abroad.

An excessive surge of optimism and overblown expectations, which official statements did not discourage, were to contribute in no small measure to the depth of the crisis that followed the devaluation as both domestic opinion and foreign investors felt not simply disappointed but deceived.

The Chiapas uprising had shown that Third World poverty prevailed in some regions of the country. Chiapas, together with the political assassinations, gave rise to a serious questioning of the stability of the political system. The devaluation was seen by many as a breach of faith. The ensuing disappointment may explain why the exchange rate adjustment, rather than restoring confidence in the country's ability to correct the external imbalance, gave rise to, or exacerbated, a confidence crisis of major proportions. The virulence of the reaction to the devaluation on the part of domestic investors and international institutional investment managers must also be given full consideration if the depth of the crisis is to be understood.

The current crisis is a reminder that while large current account deficits can be financed for prolonged periods when they are the result of a country's doing things "the right way", these deficits significantly increase the vulnerability of the economy to variations in international capital flows. Indeed, when an important fraction of the funds used to finance the deficit is composed of short-term,

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volatile resources, the vulnerability is even greater. Although determining a sustainable deficit may not be an easy task, awareness of this vulnerability could lead authorities to limit the current deficit to a certain level.

A country that becomes very attractive to foreign investors confronts a paradoxical situation. As inflows eventually translate into a growing current account deficit, the very same investors who were eager to bring in their capital will look at the size of the deficit and become nervous. Investors may over-react to any unfavourable development by withdrawing their funds and in this way may contribute to the emergence of a payments crisis. Thus, as capital inflows - a symbol of success - give rise to a current account deficit, they ironically become the country's weakness. Reducing the exposure of the country to the volatility of external capital, while sustaining a healthy level of investment, requires an increase of national savings. One way to accomplish this, which has proved its effectiveness in countries such as Chile, is through the development of pension programmes.

The liberalisation of cross-border flows led to the internationalisation of investment by institutional funds. This, in turn, generated a large supply of funds that tend to be yield-sensitive and which swiftly respond to changes in sentiment about the recipient economies. Abrupt and massive changes in capital flows leave policymakers and private agents little time to adjust. The December 1994 devaluation of the peso triggered a run on the country, a turn of events associated with the behaviour of mutual funds and domestic investors. The net result was a liquidity crisis of huge proportions as capital flows were not only interrupted but reversed. The depth of the crisis would call for massive external support and extreme economic measures.

The negative consequences of a reversal in capital flows may make desirable the adoption of measures to discourage the entrance of the so called "hot money". For prudential reasons, the Bank of Mexico had imposed a limit on the foreign currency denominated liabilities that commercial banks could take on. By narrowing this avenue for foreign capital to enter the country, the regulation may have had the effect of containing the growth of the current account deficit. In hindsight, perhaps additional restrictions could have discouraged short-term foreign capital inflows - for instance, limits on the acquisition of public debt instruments by non-residents. In fact, such a restriction had applied to foreign purchases of government paper from December 1980 to December 1990, a measure that was eliminated in the wake of the liberalisation sweeping the country at the time. Recall that Mexico further liberalised its capital account in 1993 as the OECD Codes of Liberalisation require the full elimination of all restrictions on capital movements.

Measures to discourage short-term capital, including the adoption of a floating exchange rate, might be looked at as a means to reduce the risks of a large current account deficit and of neutralising the effects of market imperfections. Indeed, in the event of a capital withdrawal, a difference may arise between the individual

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and social costs. While investors may bear a market-imposed reduction in the value of their investment in an emerging market - which often accounts for a small proportion of their portfolio - a massive capital outflow may cause the financial collapse of an economy. Moreover, if a run on a country develops, investors who get out first increase the cost of getting out for others who react less quickly. This, in turn, places a premium on volatility, an undesirable result for all.

The Mexican crisis raises a number of issues for emerging countries that have undertaken internal reforms and external opening. For instance, can a danger level for the current account deficit be determined? What are the appropriate policies to cope with short-term capital movements and sudden changes in market sentiment? How is one to distinguish between temporary and permanent shocks? Is the blanket removal of restrictions on capital inflows always the good thing that it is presumed to be? Is it possible to sterilise massive capital inflows? Can a country be expected to offset capital inflows by running large fiscal surpluses?

V Conclusion

Mexico suffered a series of far-reaching political shocks of a magnitude sufficient to jar the system, displace expectations and alter the economic outlook. The ensuing sudden halt in foreign lending and reversal of capital flows were bound to generate a financial crisis.

When a change in expectations arises from objects as disparate as political assassinations, the first in more than 60 years, and interest rate movements abroad, and there is no systematic monetary weakness that feeds it, there is some basis for suggesting that it is largely accidental in origin. Thus, the abrupt change in expectations, which in the context of NAFTA had perhaps reached unrealistic levels, may be seen as the cause of the crisis. What Alfred Marshall had written on bank failures may equally apply to investment fund managers: "Their trust had been ignorant, their distrust was ignorant and fierce. Such a rush often caused a bank to fail which might have paid them gradually".

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Comment on "The Mexican Crisis of 1994: An Assessment," by Ariel Buira

Charles Siegman

Post Mortem of a Crisis

Seminars on the Mexico currency crisis have become a cottage industry - worldwide, meetings of this sort are being held. Let us hope that the lessons extracted from these seminars at least will be identified and absorbed for the future, so that we will have fewer crises and maybe have more time for reflective thinking rather than policy management by crisis.

In reviewing the developments leading up to the collapse of the peso and the subsequent financial crisis, Ariel Buira dismissed one by one some of the economic and financial explanations of the crisis: the overvaluation of the peso; large, unsustainable current account deficits; the appropriateness of the exchange rate regime; too easy monetary and fiscal policies. He instead maintained "that the crisis originated in a series of unpredictable political and criminal events that changed market sentiments towards Mexico."

In doing a post mortem of a crisis, it is always difficult to identify specific causal factors. Hindsight has two problems. One is our sense that we know more today than we actually knew at the time. In assessing a crisis in retrospect we at times forget this fact and therefore assume we could have acted very differently. In addition, hindsight also blurs our ability to reconstruct exactly what was happening at the time. From my observation post at the time there were increasing warning signals that Mexico was entering, and eventually was actually in, an unsustainable financial position. No doubt the political events in 1994 intensified these circumstances. In 1994, Mexico was heading towards a position where it was vulnerable to adverse shocks, economic as well as political, and therefore, with hindsight, as well as perhaps at the time of the evolving events, the policy course selected by the authorities might have been different had they been more responsive to some of these warning signals. If we are to learn for the future from this particular Mexican crisis, it is essential that policymakers be sensitive to similar alarm bells on a more timely basis and respond accordingly in a more timely fashion.

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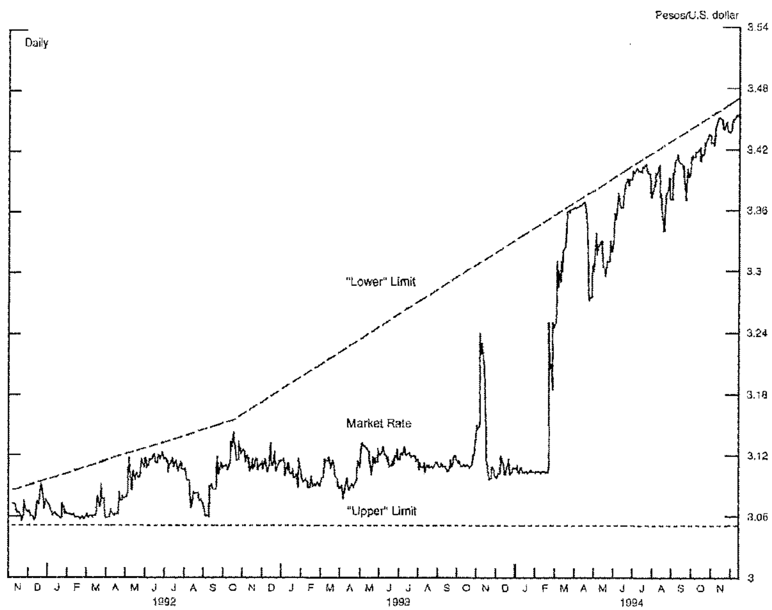
With regard to the question of whether the Mexican peso was overvalued or not, according to many analysts Mexico was able to absorb a considerable amount of the appreciation of the peso it experienced in the early period of its narrow exchange rate arrangement - as pointed out by Ariel - because of the initial undervalued position of the peso and because of very strong productivity changes. However, a good case could nevertheless be made that, given Mexico's relative inflation performance and prospects, the Mexican peso was becoming overvalued. Reasonable people could disagree about the timing and perhaps the amount of the peso overvaluation, but as the year 1994 progressed it was becoming increasingly evident that the peso was losing its competitiveness.

The shift from a reasonably healthy trade and current account position to deficits - and large deficits - provided support that the peso was becoming uncompetitive. Ariel Buira emphasised the point that exports were growing rapidly and that this would indicate that the peso was competitive, but he fails to explain the even more rapid growth of imports at a time when the Mexican economy was far from buoyant. Moreover, the declining employment in manufacturing over the last decade provides some evidence that the tradable sector was being actively restrained by the exchange rate.

Chart 1 Mexican Exchange Rate Changes within the Exchange Rate Band
(November 1991 through mid-December 1994)



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But perhaps the whole debate among academics and policymakers of whether or not Mexico's peso had become overvalued may be somewhat irrelevant. The important point is that enough investors started to conclude that the peso was overvalued and acted accordingly, which spurred a series of speculative attacks. Chart 1, which I circulated, plots the exchange rate developments from 1992 to 1993, and 1994. One notices that the pressure on the peso manifested itself sequentially during 1994, and that the peso stayed under pressure throughout the period starting March-April despite the various policy responses. The market's perception of where the peso was heading was becoming evident month by month.

Policy Options

With regard to the policy response to the various episodes of market pressure on the peso in 1994, Mexican authorities had to choose from a menu of four policy options: (i) tightening monetary and/or fiscal policy; (ii) drawing on reserves; (iii) borrowing to supplement the reserves; and/or (iv) adjusting the exchange rate. Over time, they selected elements of all these four options and actually did tighten monetary policy - at various stages, monetary policy was tightened and they did allow some additional adjustment of the exchange rate, as Ariel pointed out. However, they relied very heavily on drawing on Mexico's international reserves and very heavily on short-term borrowing. With regard to fiscal policy, the focus in Ariel's paper is on the non-financial sector of the public sector accounts only. If one includes the development banks, the deficit in the public sector is 4%, a shift from a more healthy fiscal position earlier. The inclusion of privatisation funds is subject to general debate among economists as to whether it is an appropriate element in determining a country's public sector balance since it is a one-off event. Thus, it would appear that Mexico's fiscal health was deteriorating.

As noted, Mexican policymakers relied heavily on drawing on the reserves and on short-term borrowing. Among the reasons for this is that the policymakers, as was pointed out and re-emphasised by Ariel Buira, thought that the pressure on the peso was due to political shocks which, they were convinced, would only be temporary.

Chart 2, which I circulated, shows the elements of this approach, starting with December 1993 as we move through 1994. It plots gross reserves and the issuing of Tesobonos. But if one also plots reserves net of Tesobonos, one realises that in the early part of the year the reserve position was very strong and the amount of borrowing of short-term dollar-denominated issues was just starting. It was most probably a reasonable approach when the initial pressure on the exchange rate manifested itself. The problem was the continuation of these two elements: drawing on reserves and supplementing resources by short-term borrowing. That is a risky business. A policymaker ought to be very cautious in getting into a position where the ability to meet debt obligations is reduced at the same time as

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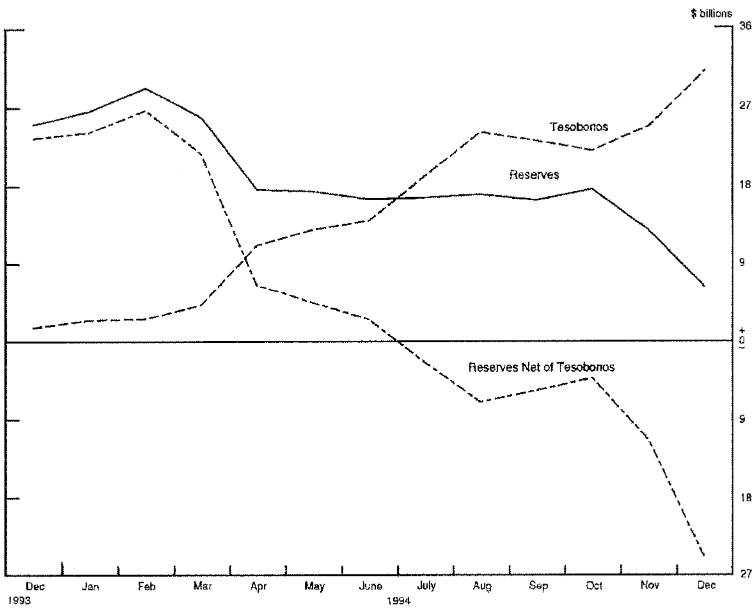
Chart 2 Mexican International Reserves and Tesobonos Outstanding
(December 1993 through mid-December 1994)



additional indebtedness, especially short-term indebtedness, is increased. As 1994 progressed, there were different junctures where, with hindsight, policy-makers should have become exceptionally cautious of both allowing the reserve position to deteriorate and incurring additional short-term debt. Again, reasonable people could disagree, but at some time in 1994 a hold on the drain of reserves and a hold on the additional accumulation of short-term debt would have been appropriate. Chart 2 is pretty graphic in illustrating the various timing points where that could have been identified. Sooner would have been better.

Thus, drawing on one's international reserves and supplementing one's resources by short-term borrowing was a legitimate policy approach as a means of buying time, but only up to a point. As 1994 evolved, the continuation of this approach made Mexico's external financial position increasingly vulnerable and undermined investor confidence in Mexico's capacity to honour its external debt. Thus, Mexico was subjected to repeated and intensified pressures on its exchange rate. Once credibility and market confidence was lost, Ariel Buira may well be right that at that point no reasonable amount of monetary tightening would have been enough to stabilise the situation. However, had the Mexican authorities ceased their reliance on the use of the reserves/short-term borrowing option earlier in the year, a very sharp rise in interest rates and a prompter adjustment of the exchange rate might well have been able to prevent an exchange rate crisis from developing into a full-blown economic crisis.

Defending an Exchange Rate in a Volatile Political and Capital Mobility Environment

I would question the contention that political shocks caused the crisis and did not allow the exchange rate to be maintained. It is quite right that some of the political developments in Mexico in 1994 were unique and perhaps once in a lifetime, but the six-year cycle in Mexico is a recurring event, and this was not the first time that Mexico faced serious economic difficulties during an election year. Policymakers needed to prepare themselves for it in 1994. What may have been an adequate policy response in a "normal" or favourable economic and political environment may not be enough in an election year. While the political calendar acted as a constraint to take the timely and adequate policy steps, perhaps understandably so, that was not necessarily the cause of the crisis. The constraint of taking timely policy actions because of political considerations is not the explanation of why the event did eventually occur.

In his paper Ariel notes the paradoxical effects of capital inflows in appreciating the real exchange rate and in widening the current account deficit. He offers some insightful observations in pointing out the psychological dimensions of this problem, in which excessive optimism very quickly gives way to excessive pessimism. It's worth asking whether such huge swings would occur in a floating exchange rate regime as Ariel himself points out, where changes in investor sentiment are reflected perhaps more quickly in the exchange rate, thereby leading to a smoother and more gradual adjustment of expectations over time rather than more abrupt ones. That is an issue that one has to consider. Under floating there may be considerably more day-to-day and week-to-week volatility, but perhaps not the very sharp, abrupt shocks in the exchange rate which undermine confidence, both domestically and externally. The Mexican crisis also confirms the risk of using the exchange rate regime as an inflation stabilisation anchor, as was the case in Mexico and is advocated for other countries. Such a policy has little tolerance for policy error and capacity to absorb shocks, both economic and political. In an environment of very mobile capital, where capital can move rapidly in and out of a country, or out of currency, the tendency for the exchange rate regime under very narrow bands to be sustainable becomes very questionable. Any form of fixed exchange rate regime makes a very good target - not just in Mexico, but in Europe as well, as people have experienced with the breakdown of the ERM, especially when market participants question the adequacy of policies needed to sustain the fixed rate.

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Let me conclude with my comment on the interesting paper by Buira. Ariel himself concedes that in hindsight the policy combination used by the Mexican authorities turned out to be inadequate. Recent statements by other Mexican officials confirm this. President Zedillo, in his Informe in September 1995, referred to a variety of factors in addition to political shocks and a fall in the savings rate. For example, as key contributors he lists the large external imbalance financed with volatile foreign capital, the maturity mismatch in the financial system (short-term liabilities versus long-term assets), the dollarisation of the public debt, and the sharp real appreciation of the peso over time. All of these factors made the Mexican peso vulnerable and all contributed to generating a crisis. Thus adverse shocks, an unsustainable external position, and policy slippage were all at work in 1994 and all contributed to the collapse of the peso. Inadequate timely action at various stages as the problems were becoming more evident and the capital markets were becoming restive aggravated the situation. Policymakers underestimated the risk of not acting forcefully and in timely fashion, at a time when the country's reserve position was still relatively favourable. The market forced the hand of the Mexican authorities, resulting in economic consequences considerably beyond what would have resulted had policymakers acted earlier and more forcefully in 1994. The lessons to be learned are part of our discussion the rest of the day.

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Floor Discussion of the Buira Paper

Ariel Buira started off the discussion by arguing that it is difficult to assess what an unsustainable external position is before a crisis emerges. Buira did not agree that the currency crisis of Mexico was spurred by a too large current account deficit. "There are a number of countries in South East Asia - Thailand, Malaysia and so forth - which have run much larger current account deficits than Mexico, for much longer periods. Singapore, for example, has run a 10% current account deficit for twelve years."

Buira also contested the notion that the Mexican peso was overvalued. "There is a question of definition of what is overvalued. If you mean to say that the currency is overvalued when you have a current account deficit, obviously you are over-valued. If you mean to say that you are not competitive, I would challenge this. Chart 3a in my paper shows that Mexican exports were doing much better than the exports of most of the world. Perhaps one has to distinguish between a current account deficit which results from an imbalance between savings and investment, and the evolution of relative prices. One could equally argue that the US dollar is overvalued because the United States has a current account deficit, but it seems to me that if you go to the US, you will find that prices in the US are lower than in most of the industrial countries. The decline in employment in manufactures to which Charles Siegman refers has to do more with structural change and high productivity than with overvaluation, because output was not declining."

Buira agreed that the Mexican authorities had relied on drawing of reserves, but thought that they had good reasons to do so since it was generally expected that the problem was transitory and there would be a return of confidence. "The financial crisis was essentially of a political nature, having to do with the Chiapas events and the assassination of the candidate of the government party and other political shocks. The Mexican authorities expected that the political uncertainties would be resolved, first with the elections and then with the confirmation of the policies by the new administration. That this did not work out that way was completely unexpected. The so-called 'six-year cycle' is a bit of a caricature. Charles Siegman - and other economists - suggest that presidential elections were constraining policy actions. If that had been the case, Mexico could have tightened policy on August 21, 1994. But there was no need to do this because Mexico's reserves had been stable, and remained stable for a few more months."

Buira did not agree that the Mexican authorities had resorted to heavy short-term borrowing and that, as a result, public debt had increased. "There was a conversion of *Cetes,* which were peso-denominated debts, to *Tesobonos,* which were

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also peso-denominated debts but indexed to the exchange rate. There was not a continuous rise in public debt. If you look at public finances - which include the expenses of the development banks and the revenues from privatisation - you see that the overall monetary aggregates declined. Public finances, for purposes of balance of payments on a cash basis, do and should include the revenues from privatisation, and they were in surplus."

Bernd Goos strongly supported Buira's view that there is no simple link between, on the one hand, the overvaluation of a currency and, on the other, the existence of a current account deficit. "Very often, one approaches this issue from the current account position, leading to the conclusion that when you see a deficit the currency must be overvalued and vice versa. I strongly agree with what Ariel Buira just said, that there is no such simple correlation. He gave a very good example when he said that if you look at the US deficit, you would have to come to the conclusion on the basis of that concept that the dollar is overvalued, which I think makes very little sense."

However, Goos agreed with Siegman that Mexico's current account deficit was not sustainable and had to be corrected at some point in time. "I have a lot of sympathy for the analysis presented by Charles Siegman. If you look at the figures, in particular at the current account and the behaviour of consumption and savings, they suggest that the situation was unsustainable. It is oversimplistic to compare the deficits of Mexico with current account deficits in Asia, because they are different in precisely that respect, in terms of behaviour of savings and consumption. So, from that perspective, the situation looked unsustainable."

Bernd Goos disagreed with Buira that there was no reason for concern about Mexico's monetary expansion. "If you look at chart 5, you see that one of the monetary aggregates, nominal M4, is expanding at a rate of growth of 25 to 30% until spring 1994. True, this was followed by a deceleration to below 20%, but then a renewed expansion set in, up to close to 25% later on. I would have thought that such an expansion of monetary growth was not sustainable."

Goos' overall impression was that many of the policies pursued by the Mexican authorities were based on the principle of hope rather than on the worst-case scenario. "With hindsight, one can understand why the Mexican authorities behaved the way they actually did, because there were intermediate improvements and, indeed, the setbacks were caused by political problems and criminal events. But my feeling is that there were clear indications that suggested that tightening would have been appropriate much earlier and to a much larger extent than actually occurred."

According to Goos, three lessons can be learned from the Mexican crisis. "One lesson is that policies should err on the cautious side, particularly in a situation such as that of Mexico, a country which had been undergoing very strong structural reforms and which had had these huge capital inflows. You could not really rely on the sustainability of those flows against the background of the indicators

I just mentioned. The best approach would have been to operate on the basis of the worst-case scenario. It is true that this might imply forgoing some of the benefits of the capital inflows, as Ariel Buira said, but if you look at the situation in which the country is now, it would have been advisable to forgo some of the benefits and not to have been confronted with the big losses and the difficult situation in which the country finds itself today.

Another lesson I would draw, which has not been stressed very much so far, is that a country should beware of short-term external financing, in particular denominated in foreign currency. In the case of Mexico this has clearly accelerated or prompted the crisis.

The final lesson relates to financial market liberalisation. I got the impression from conversations with Mexican officials that the authorities were well aware of the need to tighten monetary policy much more than they actually did, but they were fearful of doing so because of the fragility of the banking system. They were concerned that that might even lead to the collapse of the banking system. Hence, they did not tighten and they allowed the situation to deteriorate even further. From that experience, I'd draw the lesson that financial market liberalisation should not be done prematurely. It should only be done if you have a stable domestic banking system, including an effective supervisory structure that prevents the kinds of problems that worsened the case of Mexico."

Charles Wyplosz challenged the thesis of Buira's paper that it was a clear political problem which had caused the crisis. "I'd like to challenge that thesis, but not on the same ground as the previous discussant. Ariel Buira's argument that there was no clear economic problem is fairly convincing. There was no massive overvaluation and even if there had been some overvaluation - reference was made to some 20% before the event - the actual devaluation that came in December 1994 should have fixed it. Should there have been no crisis, everyone would have said: 'It's fine, that was the correction needed.' But that is exactly the moment the crisis started. So it cannot be just a matter of overvaluation.

Now, Bernd Goos is right that the monetary growth figures were a bit worrisome, but one could argue that this was a normal situation at the end of a period of inflation. Again, it's not an absolutely clear-cut case that the money growth was too lax, although there are some indications of that. But what I would like to argue is that while at first sight there seemed to be no clear economic problem, there was indeed such a problem, not a specific Mexican one but a more general one. The Mexican story should be familiar to us over here in Europe, because it is the result of two phenomena we have witnessed in Europe as well.

First, there is the aftermath of financial deregulation. We saw exactly the same syndrome in the United Kingdom and in various Scandinavian countries when they went through financial deregulation - the same fall in savings, the same deterioration in current account, and the same increase in the financing of private consumption, not investment, through capital inflows. So we know that this is

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something that happens after financial deregulation, as it has happened all over, with the same results. The UK and the Scandinavian countries have gone through a massive exchange rate crisis. The reason is that the private sector borrows to finance consumption, and at some point the borrowing has to stop. That is when the crisis hits.

The second aspect of the Mexican crisis which is not generic to Mexico is the aftermath of successful disinflation. We have seen the same phenomenon in Latin America and, closer to home, in Italy. In the aftermath of disinflation, the interest rate is still very high, because credibility takes time to build up. In the meantime, capital flows on a very short-term basis are being sucked in because there is enough credibility to believe that there will not be a devaluation in the next two or three months. The interest yields are so high that it is impossible not to have this surge of capital inflows. So this is a problem which has nothing to do with the particular conditions of Mexico and which has created trouble in several other countries. This is the root of the problem.

In both cases, the problem is not long-term capital inflows, but short-term capital inflows. Therefore I would suggest that instead of looking for specific Mexican aspects and policy mistakes - sure, there were some policy mistakes - we should realise that there are some very generic problems at work here. We should focus our attention much more on the spontaneous capital inflows that take place when these kind of events happen.

There is another lesson that I would like to draw, if only because it has implications for Europe too, and that is the matter of the bandwidth. The picture that Charles Siegman gave us has this graphic representation of the sliding upper floor or lower floor of the peso. By the end, we see that the bandwidth was very, very large and could have given a feeling of security. A lesson we should remember from the European monetary system is: no matter how wide the band is, when a crisis unfolds, it unfolds, and it really goes through the ceiling very quickly."

Godert Posthumus observed that if the issue was familiar, either Mexico itself or its advisors could have warned Mexico earlier to try to take measures. According to Posthumus the problem was: at what moment should the Mexican authorities have acted? "If you look at chart 1 in Ariel Buira's paper, you see a long-term real appreciation over 4 or 5 years. If you look at chart 2, the current account balance had already been deteriorating for quite some time. It was known that it was short-term financing. But the real problem was at what point during those three or four years should Mexico have decided to act? Should it have acted earlier? Bernd Goos says: 'You should err on the cautious side,' but where does that moment strike?"

Jean-Jacques Rey stressed that it is very easy to look at the Mexican crisis with the benefit of hindsight - "things are much less obvious when you're in the midst of them" - and suggested making a distinction between the period from 1990 to early 1994, and the more recent period from February/March 1994 to the eruption of the crisis.

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"It seems to me that this latter period is when the enormous current account deficit started being financed by very short-term capital flows, which considerably increased the vulnerability of the Mexican situation. It increased, indeed, at the time when all these dramatic criminal and political events occurred, and I find it remarkable that confidence was apparently still there during the initial months. To some extent this can be looked at as a market failure. One element that perhaps contributed to the crisis when confidence was so necessary was - and perhaps here I stand to be corrected, it is a question of memory - that when the devaluation was announced in December 1994, there was no impressive adjustment package accompanying the devaluation. This was a very dramatic element in the later evolution of the crisis.

From an economic point of view, it is much more complicated to say whether the Mexican authorities failed during the previous period, 1990 to 1993. There were some elements of overheating in the economy, but when you look at the Mexican economy you also have to take into account the demographic situation in Mexico; this is a country where demographic expansion and urbanisation are phenomenal, and it is crucial for Mexico to create jobs at a tremendous rate. You have to look at the policies being carried out in terms of these real factors as well. The question I have for Ariel Buira is the following: Now that the adjustment is dramatically taking place, with a tremendous reduction in GDP, isn't there a risk that this is also an unsustainable situation?"

Johannes Witteveen thought that Ariel Buira's description of the development of the Mexican situation was rather persuasive. In the view of Witteveen there is a more general problem hidden behind the Mexican crisis. "The main problem behind it is really these enormous capital inflows and their sudden turnaround. That is the general problem that emerges here - this enormous volatility of capital movements, occurring now in the climate of liberalisation. It is not so much the banks but the mutual funds and so on, the funds that react immediately to what they see, and act with a kind of herd instinct. I think that is a major problem."

Witteveen wondered whether Charles Siegman's suggestion of letting the exchange rate float instead of keeping it fixed would be a good approach. "The question is, as Siegman said, wouldn't it be better then to let exchange rates float in order to dampen capital inflows somewhat? Of course, in a smaller economy, with a large international trade, a more or less freely fluctuating exchange rate is very bad for the real economy, causing serious dislocations. The question is therefore whether in such a case as Mexico's emerging economy, where they have these volatile capital flows, one couldn't consider a dual exchange rate. I know that this causes problems with control and things like that, but I also know that in some cases, for example Belgium or South Africa, this has been used for quite some time, with reasonable success. A dual exchange rate offers the advantage of some regulation of the capital flows without disturbing the real economy."

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Stephany Griffith-Jones observed that Ariel Buira's paper illustrated very clearly the extent to which the Mexican crisis was pushed by a dramatic change in perceptions. "None of us around the table imagined the crisis would have such dramatic proportions."

Nonetheless, Griffith-Jones believed Mexican policymakers could have anticipated a crisis. "One point that is obvious, but which was mentioned only in passing in Ariel's paper, is the increase in US interest rates. And though the political shocks were not known and it could not be forecast that they would continue, the clear upward trend of US interest rates during 1994 should have clearly told Mexican policymakers that the level of capital inflows that had been sustainable in 1993 - with incredibly low interest rates in the United States was not sustainable."

"Another point is how people should react to good and bad news. It's a difficult question. I like the sentence that John Williamson has in a recent paper that says 'All good news should be treated as transitory and all bad news should be treated as permanent'. Perhaps the main criticism one can make of the Mexican authorities, although of many other authorities as well, is that they did it the other way around.

With regard to the comparisons with Asia I think one has to be careful, because Asian countries have a very long-established tradition of macroeconomic stability as well as high savings rates; when one talks to investors, they look at Asian countries differently than they look at Latin America. The very fact that Latin America is more prone to crisis is a bit self-fulfilling. So I think large current account deficits in Asian countries are different, although also a risk.

Finally, I would argue that another interesting difference with Asia is that Asians are much more pragmatic than the Mexicans were, and than most Latin American countries were, on using some kinds of disincentives for short-term inflows. Countries like Korea and Malaysia are very pragmatic and when they see very large inflows they simply put on the brakes. And although this may not be very market-oriented it seems to work quite well," Griffith-Jones observed.

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How Can Future Currency Crises à la Mexico Be Prevented?

Peter B. Kenen

Introduction

The answer to this question depends crucially on the meaning attached to the term "crisis." If the question asks how we can tranquillise capital markets in order to protect national economies from the need to adjust to fluctuations in cross-border capital flows, the answer is simple: We can't. If the question asks how we can minimise the disruption to national economies resulting from fluctuations in cross-border flows, the answer is complicated. It is, in fact, more complicated than suggested by recent official pronouncements, which seem to be saying that capital markets will behave benignly if governments can get the "fundamentals" right. That will not always happen. On the one hand, the behaviour of capital markets is not always governed by the fundamentals. On the other hand, governments will not always get them right. It is therefore necessary to ask how governments can protect their economies *ex ante* from the volatility of capital flows and what they can do *ex post* to minimise the effects of that volatility when they must confront it. I start by explaining my strong statement about markets and fundamentals. Next, I ask how governments can reduce the vulnerability of their economies to the volatility of cross-border flows, *ex ante* and *ex post*. Finally, I look at the ways in which international institutions, especially the International Monetary Fund, can help governments cope with fluctuations in cross-border flows.

Markets and Fundamentals

What happened in the first half of 1994, when Mexico's troubles began to build up? Was there a major deterioration in the fundamentals? Or did something else go wrong?

There was some deterioration in the fundamentals, but not very much. The current account deficit was bigger in the first quarter of 1994 than it was in the previous quarter, but no bigger than it was in the quarter before that. The monetary base, while slightly higher than it was in the previous quarter, was very stable in the first half of 1994. The real exchange rate was levelling out, after

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appreciating steadily from 1988 to 1993, and the inflation rate was still falling. The gap between Mexican and US interest rates narrowed during the first quarter of 1994, due to the increase in US rates, but widened again in the second quarter.

It is now agreed, with the benefit of hindsight, that Mexico's current account deficit was too large and that the peso was thus overvalued. But that was no less clear before the cessation of capital inflows in the spring of 1994, which set the stage for the subsequent exchange rate crisis. The cessation was not due to a sharp shift in the markets' views about the economic outlook. It was due to a shift in views about the political outlook and, in particular, the political fate of the policy-making team in which markets had great confidence - the team that was deified before the crisis but demonised after it. The shift in the markets' views cannot be ascribed to a change in the way that markets were reading the Mexican numbers. It must be ascribed to the way that markets were reading the Mexican headlines - the news of unrest in Chiapas and the Colosio assassination.

If markets have confidence in a government's ability to maintain or restore economic stability without changing policy parameters abruptly, they do not react strongly to a gradual deterioration in the fundamentals. If their confidence is shaken by bad news, they are apt to react very strongly indeed, even if there has been no appreciable change in the fundamentals. That is what happened in the Mexican case. It is also what happened in the Italian case two years before. The capital outflow that started in August 1992, which led to the departure of the lira from the EMS, was not due to deterioration in the fundamentals. It was due to a change in the markets' views about the political situation - the strength of the Italian government's commitment to reduce its budget deficit. This change was due in turn to reports of a change in French public opinion regarding the Maastricht treaty. If French voters were to reject the treaty, the Italian government would have less incentive - and political cover - to face its fiscal problems and defend the lira.

These assertions have two implications. First, the markets' view about a particular country will always be volatile, not subject to gradual reassessment in the light of underlying economic trends. This conclusion challenges the newly popular view that the prompt production of economic statistics can, by itself, contribute substantially to the stabilisation of capital flows. Second, a country cannot protect itself from the volatility of capital markets unless it is willing and able to forgo some of the benefits of capital inflows, to limit the inflows themselves, or to make policy changes with the speed and vigour required to offset any unforeseen shock to confidence. Let me expand on these possibilities.

The Benefits and Costs of Capital Inflows

A country confronting a capital inflow faces a difficult choice. If it does not allow the inflow to affect the domestic economy in any important way, apart from raising the prices of the financial assets that foreign investors seek to buy, it cannot benefit appreciably from the capital inflow. Suppose that the central bank intervenes in the foreign exchange market to keep the home currency from appreciating and is able to sterilise the monetary impact of its intervention. There will not be any significant change in aggregate demand and no change in the current account balance. The additional claims held by foreign investors - the counterpart of the capital inflow - will be matched by the additional foreign claims held by the central bank.

This is, of course, the optimal response when a capital inflow is thought to be temporary, but it will be costly and difficult if the inflow is large or long-lasting. It will be costly because the rate of return on the claims acquired by foreign investors will usually exceed the rate of return on the reserves acquired by the central bank. It will be difficult because the central bank may not be able to sterilise a large increase in reserves without raising domestic interest rates, which will usually produce a larger capital inflow.[1]

To take this course of action, moreover, is also to forgo the main benefit of a capital inflow - the ability to borrow real resources by running a current account deficit - and is thus the wrong one to take if the capital inflow can be expected to continue for a long time. To run a current account deficit, however, a government must let its country's currency appreciate in real terms, and there are two ways to do that. The central bank can intervene, as before, to keep the nominal exchange rate from changing but allow the resulting increase in reserves to raise the money supply and domestic price level. Alternatively, the central bank can abstain from intervening and let the nominal exchange rate change in response to the capital inflow.

There are three reasons to let the nominal exchange rate change. First, a change in the nominal rate is more readily reversed than a change in the price level. Second, the change in the nominal rate depresses the home currency prices of traded goods, whereas a one-off increase in the price level may ignite inflationary expectations. Third, a change in the nominal exchange rate serves to remind foreign investors that exchange rate risks are real, which will curb their appetite for assets denominated in the currency of the capital-importing country and thus limit the inflow itself.

But any attempt to exploit a capital inflow by running a current account deficit runs the risk of reversing the inflow by casting doubt on the sustainability of the situation. Markets do not like deficits - neither budget deficits nor current account deficits. They are particularly nervous about current account deficits that are not fully matched by an increase in domestic investment (which may be why markets have been less nervous about the current account deficits of Asian

1. A number of developing countries have tried to offset capital inflows by sterilised intervention but were forced to abandon the effort because the inflows were big or long-lasting; see International Monetary Fund, *International Capital Markets*, Washington, 1995.

countries than those of Latin American countries). I know of no way to define in advance a sustainable current account deficit, although its size is surely larger when it is indeed matched by an increase in investment.[2] It is probably wise to err on the side of caution and thus to start worrying if the current account deficit exceeds 3 or 4% of GDP. If the capital inflow is larger than that, as it was in the Mexican case from 1991 to 1993, the current account deficit must be held down by using sterilised intervention to limit the appreciation of the home currency or by repelling part of the capital inflow when sterilisation is too difficult or costly.

How can one repel a capital inflow? Most economists, officials, and market participants agree that controls on capital outflows are not very effective and can be counterproductive, but there is less agreement about controls on capital inflows. They appear to have been effective in curbing capital inflows to several countries - the Chilean case is widely cited - and there is an a priori reason for expecting them to be more effective than controls on outflows. When owners of capital want to remove it from a particular country, it is usually because they fear large losses. Hence, they are prepared to incur the costs of avoiding or evading controls on capital outflows. When owners of capital want to invest in a particular country, by contrast, it is usually because they expect to earn modest profits compared to those they could earn by investing elsewhere. Hence, they may not be prepared to incur the costs of avoiding or evading controls on capital inflows.[3] They will go elsewhere.

Coping with Capital Outflows

If a country attracts more foreign capital than it can absorb safely by running a moderate current account deficit, it can surely count on suffering very large capital outflows later.[4] But no capital-importing country can avoid them completely - not even one that manages those inflows successfully. Too many things can go wrong at home and abroad. How, then, can a country minimise the impact of those outflows?

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2. I am puzzled by the popular assertion that a current account deficit is less likely to be sustainable if a country is running a large budget deficit - unless this is merely another way to say that the current account deficit should be matched by an increase of investment rather than an increase of public or private consumption. I am all the more puzzled when countries are told to reduce their budget deficits because they want to raise their current account deficits but are also told to reduce their budget deficits because they want to cut their current account deficits. But this advice comes largely from central bankers, who always favour smaller budget deficits.

3. This point is made in the 1995 IMF report cited above, which is remarkably tolerant of taxes and direct controls aimed at limiting capital inflows.

4. When I refer here to outflows, I have in mind reductions in inflows as well as outright outflows. A reduction in inflows, however, can induce actual outflows, including capital flight. This seems to have happened in the Mexican case, where there was at first a sharp fall in inflows of foreign capital and then, at the time of the devaluation, a large outflow of domestic capital; see the account in the IMF report cited above.

The size of the outflow can itself be limited by raising domestic interest rates, but the size of the requisite increase will depend on the markets' expectations concerning a country's currency. If markets expect a large depreciation or devaluation, a very large increase will be needed to limit if not halt the capital outflow, and the recent experience of Mexico shows how costly that can be - not only to debtors, including the government, who must pay the very high interest rates, but also to creditors, whose debtors can no longer meet their obligations. Banks and other financial intermediaries are especially vulnerable. They are hit twice by high interest rates - as debtors who must pay higher rates to their depositors, and as creditors who cannot collect from their debtors. If the banks are fragile initially, as they were in Mexico and Argentina, a temporary increase of interest rates can have permanent effects on the banking system. If the government has to step in, moreover, the fiscal effects can be large.

The adverse effects of high interest rates are, of course, compounded when the home currency is allowed to depreciate or is devalued deliberately and some of the foreigners' claims on the country are denominated in foreign currencies. These extra effects can be minimised by limiting severely the amounts of foreign currency debt that firms, banks, and the government may incur. It is especially important to limit the stock of short-term foreign currency debt and to spread the maturity dates on stocks of long-term debt. Mexico's currency crisis became a debt crisis because the Mexican government had issued large amounts of short-term dollar-indexed debt, the so-called *Tesobonos*, to minimise the drain on Mexico's reserves when foreigners began to run down their holdings of peso-denominated debt, the so-called *Cetes*.

It is better, however, to avoid these additional problems completely by defending the domestic currency when capital outflows begin, rather than letting it depreciate.[5] If the currency can be defended successfully, it will not be necessary to raise domestic interest rates hugely (i.e. to offset expectations of a change in the exchange rate). If the capital outflow continues, of course, it will be both necessary and appropriate to let the domestic currency depreciate or to devalue it deliberately, because the current account deficit must be reduced.

A successful defense of the exchange rate, however, may not be possible without international assistance. If a capital-importing country runs a current account deficit, it will not increase its reserves by enough to offset fully the increase of foreigners' claims. When an inflow gives way to an outflow, moreover, the latter can be larger than the former, because the exodus of foreign capital can induce an exodus of domestic capital. This brings me to my final topic: the role of the international community and, specifically, the role of the IMF.

5. Defending the currency does not necessarily mean pegging it rigidly. It does mean, however, that the authorities should not change their exchange rate arrangements abruptly. On this definition, a country that has kept its exchange rate within a band should not widen or shift the band suddenly. If the band has been "crawling" at a specified rate, it should not be allowed to crawl faster.

The Case for International Assistance

At the start of the 1982 debt crisis, every effort was made to postpone the day on which banks would have to recognise losses, because of concerns about the effects on the banks' capital and thus on confidence in the banking system. Debt rescheduling could not give way to debt reduction until the banks had built up their capital enough to take the necessary losses.

In 1994, by contrast, many of Mexico's creditors took losses right away because of sharp falls in the foreign currency values of their peso-denominated claims. But most of those creditors were not badly hurt, as their claims on Mexico were not very large compared to their total assets or, more importantly, their net worth. It was not immediately obvious then that the new Mexican crisis threatened the stability of the international financial system. Nevertheless, the US Treasury and IMF came to the aid of Mexico on an unprecedented scale. Why?

Many observers invoke NAFTA and other special links between Mexico and the United States to explain why the US Treasury wanted to help Mexico. Some of them go on to explain that the IMF got involved when Congressional opposition kept the United States from going forward on its own. No package after one had been promised would be the worst of all possible outcomes from the Mexican standpoint, but other observers argue that the Mexican crisis threatened to have systemic consequences and that the IMF had therefore to act as lender of last resort to the system.

This claim is not persuasive. There is ample evidence of contagion in the wake of the Mexican crisis, just as there was in 1982. Stock markets plunged in several emerging market countries, and several currencies came under pressure, but contagion is not synonymous with systemic risk. The international financial system would not have been badly damaged had there been acute crises in several emerging market countries. Without the promise of large-scale financial support, of course, Mexico might have been forced to suspend redemptions of Tesobonos, and this might have been more serious - a blow to confidence in the unwritten rules of the financial system. Still some might say that it would have been wiser to face that possibility than to bail out a government that had made serious errors.

All of these issues, however, arise from the basic misconception that the IMF was created to cope with systemic risk and thus act as lender of last resort when that risk arises. If that were the case, of course, the IMF would never come to the aid of Costa Rica or Sierra Leone, not even Peru or Nigeria. They are too small to threaten the stability of the international financial system. The IMF was meant to solve one important systemic problem - to help its members forswear beggar-thy-neighbour policies when dealing with balance of payments deficits; with help from the IMF, they could buy the time required to implement less harmful policies. But the IMF had a larger purpose: to provide a framework for collective support in times of individual distress.

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Several years ago, Max Corden compared the IMF to an insurance company, because it protects its members from certain calamities. I objected to that analogy. Although there is an actuarial relationship between the premiums charged by an insurance company and its total payments to its policyholders, the premiums paid by an individual policyholder do not limit the benefits paid to that policyholder when a calamity strikes. The benefits, moreover, are not loans; the policyholder does not have to pay them back. Because most drawings on the IMF must be repaid, and the amounts that members can draw are normally determined by their quotas, which also determine their subscriptions, the IMF is more like a credit union. Relations among its members are based on the principle of mutual support.[6]

The size of the IMF itself was based implicitly on the supposition that its resources would be used to finance temporary current account deficits; in fact, the IMF was forbidden to make its resources available for offsetting capital flows. With the growth and globalisation of financial markets, however, reserve credit needs have risen enormously. There is thus some truth in the claim that the huge support package for Mexico was the first twenty-first-century package. There is thus a strong case for a very large increase in IMF quotas to give the Fund the resources it will need and allow it to provide large-scale assistance to its members within its traditional quota-based framework. However, there is not likely to be any such increase for the next few years. No one can hope to steer it through US Congress, which will surely say that the US Treasury, having used the IMF to circumvent Congressional opposition to its original plan for Mexico, is now asking the Congress to reimburse the IMF. Nor will there be support from those European countries that had their own objections to the role of the Fund in the Mexican crisis.

Other, stop-gap solutions are being discussed, including an enlargement of the General Arrangements to Borrow (GAB), but they have one drawback: large-scale assistance to a single country on the scale required to cope with a big capital outflow will still call for *ad hoc* exceptions to the quota-based rules governing access to IMF credit. I have therefore proposed a different approach, designed expressly to deal with the special problems of emerging market countries - those that run the risk of sudden and large capital outflows. At a previous FONDAD meeting I made this suggestion:

> The staff of the Fund could recommend that such countries undertake to build up their reserves. The target could be formulated in flow or stock terms ... Once such targets were agreed, the staff could recommend that

6. See W.M. Corden, "Is There an Important Role for an International Reserve Asset Such as the SDR?" in G.M. von Furstenberg, ed., *International Money and Credit*, International Monetary Fund, 1983, and my reply in P.B. Kenen, *Financing, Adjustment, and the International Monetary Fund*, the Brookings Institution, 1986. (I went on to argue that Corden's analogy is flawed for another reason. It led him to treat the problem of moral hazard as the rationale for conditionality. The problem of moral hazard calls for preventive measures rather than corrective measures; it may justify IMF surveillance but not conditionality.)

> the countries meeting them be promised supplementary access to Fund credit, above and beyond their ordinary drawing rights. The amounts of supplementary credit would be geared to each country's reserve target. ... The supplementary credit would be made available under the conditions normally applied to drawings in the first credit tranche, without imposing onerous policy conditions; it would be made available *pari passu* with the use of the countries' own reserves.[7]

This proposal could easily become the basis for creating a new IMF facility, which may be called for convenience the Contributed Resources Facility (CRF).

The CRF would be open to any developing country willing to deposit some of its reserves with the CRF in exchange for the right to draw a multiple of its deposit when facing a sudden, severe balance of payments problem of the sort usually associated with a large capital outflow. The liquidity of the CRF could be protected by enlarging the GAB and amending the conditions on which it can be activated; drawings on the CRF large enough to impair its liquidity would be deemed to constitute an "impairment of the international monetary system" and thus be a basis for activating the GAB.

A country's right to draw on the CRF would depend on its willingness to submit to intensive IMF surveillance. That process would involve a continuing dialogue with the Fund concerning the country's actual and contingent policies - those the country should pursue to achieve and maintain a sustainable balance of payments position and those it should adopt if faced by a very large capital outflow. A country drawing on the CRF might be expected to make an IMF ordinary drawing at the same time but should not have to defer a drawing on the CRF until it has negotiated the terms and conditions of an ordinary drawing.

This proposal has two advantages over most other proposals for dealing with exceptional situations. First, it would not involve any discrimination between large and small countries; participation would be voluntary and open to every developing country regardless of size. (An absolute or quota-based floor and ceiling might nevertheless be imposed on each participant's contribution to make sure that the CRF will be of significant size and to protect its liquidity against a drawing by a single, dominant participant.) Second, the proposal would not require *ad hoc* exceptions to the Fund's quota-based policies, because it would involve the use of additional resources contributed by the participants themselves.

The proposal has an obvious disadvantage. If a disagreement between a country and the Fund regarding the country's actual or contingent policies would lead automatically to a suspension of the country's right to draw on the CRF, many countries might be quite reluctant to participate. Each country would have to

7. See P.B. Kenen, "Reforming the International Monetary System: An Agenda for the Developing Countries," in J.J. Teunissen, ed., *The Pursuit of Reform*, Fondad, 1993.

weigh the advantage of participation - the ability to draw a multiple of its reserve deposit - against the risk of participation - the risk of being barred from using its reserve deposit. Clearly, the attractiveness of participation would depend on the size of the multiple, but if it were made large enough to attract wide-spread participation, a single drawing by a big participant could impair the liquidity of the CRF. Alternatively, participation could be made more attractive by reducing the risk that disagreement between a country and the Fund would bar a country from drawing on the CRF. Relaxing the rigor of surveillance, however, might cause the industrial countries - the parties to the GAB - to oppose creation of the CRF or insist on restricting use of the GAB to maintain the liquidity of the CRF. These issues require more thought.

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Comment on "How Can Future Currency Crises Be Prevented?" by Peter Kenen

Jack Boorman

Peter Kenen surveys a good number of the issues that need to be raised in any consideration of how future currency crises à la Mexico can be prevented. However, I am not sure that I know quite what to conclude when I come away from the paper.

A few points are made that I would very much agree with. Countries must manage capital inflows better. I think the discussion we had this morning begins to touch on some of the aspects of that question. Similarly, there is a need, and here I begin to detect differences around the table, to limit current account deficits. And on this I would say that it is better to err, as Bernd Goos says, on the side of caution. These points are generally unarguable, but when given operational content - the limitation of current accounts, for example, to 3 or 4% of GDP - they may not be generally applicable. Country situations just differ too much. I do not think that there really are any simple, quantitative rules by which to gear economic policies across diverse country situations, which would both minimise the potential adverse effects of shocks and at the same time maximise the economic well-being of the country that can come from successful exploitation - if I can use that word - of capital inflows. At the same time, I would certainly support the proposition that before current account deficits get up to the levels reached in Mexico, somebody had better start scrutinising them very carefully.

Here, there is some difference between my view and that expressed by Ariel Buira and perhaps also by Peter Kenen. The offsetting decline in savings that occurred in Mexico was almost extreme by country experience. Looking at a chart of the increase in foreign investment over the period cited in Ariel's paper, from 1989 to 1994, we see that if this is plotted against the corresponding decline in domestic savings in the country, they virtually offset each other, suggesting that most of the capital in Mexico going into the country went into domestic consumption. This is a very dangerous set of circumstances and one that distinguishes the Mexican case from the Asian experience.

Peter makes a number of points regarding markets and market reactions with which I would like to associate myself. I agree, for example, that we cannot tranquillise markets and indeed, I would argue that we shouldn't. In fact, the policy disciplining aspect of financial markets is something that should not be lost and

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should not be neutralised. It is a matter, rather, of finding means to react to the disciplining force of markets in a timely manner. But, as discussed in the context of Buira's paper, the extent to which markets are likely to be traumatised by events can be limited and can be influenced by policy; specifically, by limiting the underlying vulnerability of the economy and the financial system.

I would also agree that getting the fundamentals right is not foolproof protection against market attacks. It is even more difficult than that, since the correct fundamentals may themselves be a function of market perceptions and market confidence. However, the Asian experience in the wake of Mexico suggests that having strong fundamentals goes a long way in limiting the severity, the duration and therefore the impact of such attacks.

Peter makes an assertion in this context with which I do have some problems. He says: "The shift in the market's views cannot be ascribed to a change in the way that markets were reading the Mexican numbers. It must be ascribed to the way that markets were reading the Mexican headlines." I would argue that the way that markets read headlines is not independent of the policy atmosphere in which they are read, i.e. market judgement of the fundamentals and market expectations regarding the response of policymakers to shocks that may occur. And on both of these accounts, I would argue that the situation in Mexico was arguably worsening. Let's take just two examples on the fundamentals. First, while the current account deficit might not have widened in 1994, as was noted this morning, the cumulative impact on debt stocks of the way in which it was financed was taking a toll. For example, debt service plus amortisation of Mexico in 1995 - about a three hundred billion dollar economy at that time - was fifty-two billion dollars because of the required amortisation of Tesobonos. Secondly, on the expected policy response, lack of action on the fiscal side in the face of earlier shocks may have generated negative expectations. I would agree here with the point made by Charles Siegman, that you have to look at some of the off-budget operations that were taking place in 1994 and, specifically, the lending taking place through the development banks, to get a full picture of that situation. The full sterilisation of reserve losses that took place in the course of 1994 must also have been raising questions in the markets. In my view, it was the reading of headlines in the context of this set of events that had an impact on investor confidence. I would argue that the political shocks were somewhat in the nature of wake-up calls, offsetting what had been a bit of a market stupor about the Mexican miracle. When I say that, I don't in any way mean to demean what was accomplished in Mexico, which is extraordinary, by any standards. At the same time, the "successful case syndrome" set in, which tends to blind people or allow them to assume the best of every circumstance that arises, rather than to look at the risk in each circumstance that arises.

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Why Did the IMF Support Mexico?

Now, by saying all this I don't by any means wish to disclaim the impact of shocks completely. My favourite example of that - not example, but fear - is Indonesia. Indonesia is a country with strong fundamentals across the board. However, I shudder to imagine what would happen if President Suharto had a heart attack. So shocks do matter. The response to those shocks is a function of the perceived vulnerabilities of the country, which has something to do with all these other factors we're talking about. This brings me to the issue of data reporting.

I don't think I agree with what Peter says, at least not quite the way he puts it. He cites others as saying that the prompt production of economic statistics can by itself contribute substantially to the stabilisation of capitals flows. He takes issue with that. To a certain extent I agree, and I think that there is an enthusiasm for this exercise that perhaps has run a little bit too far ahead of the exercise, which is creating unwarranted expectations. But at the same time, I do believe that there's an important contribution to be made here. Better information can help reduce the vulnerabilities, if authorities are encouraged or forced by markets to adjust gradually as imbalances emerge, and as markets react adversely to them. In order for the markets to react gradually in time, better information than markets have been getting from a number of countries is required.

Now, to take up the question of the size of the Fund's support in the case of Mexico and the reasons given for it. I will use this question to make a number of points regarding the nature and purpose of the Fund, on which I agree with Peter's basic propositions. In particular, the Fund's powers to provide assistance are not limited to cases that threaten the international financial system. The articles are clear on this. They clearly speak of assisting individual members in the context of their own problems, not just in the context of the system. It is, as Peter says - and it's a good phrase - a "mechanism for collective support in time of individual distress". That is indeed what it is. But the reasons for the exceptional support for Mexico are not hard to find. There may have been an unfortunate reaching for the word "systemic" in the early days of thinking about and talking about the response to Mexico, and perhaps less of a distinction between what systemic is and what "contagious" really means.

First of all, in looking at the reasons for the support, there is the size and the nature of the financial threat to Mexico itself. This is always difficult to define. We had to judge the situation as large in the early days of the crisis and frankly, it was given greater definition, rightly or wrongly, when the United States put the forty billion dollar guarantee package to Congress. In the weeks after having submitted that package to Congress, the US repeatedly defended it as the minimum necessary package. So in an environment where it is very difficult to define quantitatively the size of a threat to a country, that commitment became - if you want

- the atmospheric definition of the size of the threat. Peter is therefore right to note that "no package" after the one that was promised would have been the worst possible outcome. The sequence of events is such that when the US withdrew the forty billion dollar guarantee package and substituted the twenty billion from the exchange stabilisation fund, it was at that particular moment that the Fund increased its support from 300% of quota to nearly 700% of quota. That decision had not been made before that moment.

Secondly, besides the size of the threat to Mexico itself, there is the issue of contagion, which I have mentioned and which we indeed believed to be very real. I think we were proved right on that by the events on Asian markets and on the Latin American markets throughout January and February - in fact, until the Mexican package was strengthened in early March.

Third was our best guess about the cost of the alternative, i.e. a failure of the package, by which I don't just mean access to Fund resources but the policy side of the package as well. The size of the recession - which is already bigger than had been expected, not just in Mexico but across the other countries that suffered those contagion effects - would have been very large if Mexico's adjustment turned out to be more disruptive than was anticipated and if that disruption spread to other emerging markets, thereby affecting the industrial world. We can't forget the extent to which the US economy itself, no longer a closed economy in any sense of the word, is dependent upon very rapidly growing exports to Latin America as well as elsewhere.

I would add as a last element the danger to "the paradigm". We are in a world where people have basically accepted the opening of markets, the liberalisation of capital flows, the kind of structural reform that Mexico was so successful in implementing. Mexico was clearly the beacon in terms of this paradigm and if Mexico failed, so to speak, it certainly would have raised serious questions about that model.

So there was both a financing aspect to the question and also a confidence-building aspect. To the extent that the latter worked, perhaps Mexico will not draw all the resources committed by the Fund, as looks likely now on the basis of statements by Mexican officials, and it is anticipated as well in the arrangement with Mexico. That might have something to do with whether or not it will be possible to steer a quota increase through US Congress. If those resources are not fully drawn and if they are repurchased early, perhaps attitudes could be influenced a bit about what was the nature of this operation.

IMF Emergency Financing

I was going to say a few words about Peter's last proposal but he didn't say anything about it! ...Let me take up very briefly two points in connection with it.

He mentioned the emergency financing mechanism. I find his proposal interesting. If I understand it right, it is basically a mechanism by which the Fund would be able to provide supplementary credit to members, tied in some way to deposits they would make in the Fund out of accumulating reserves. He suggests briefly in this paper that access be under something like first credit tranche conditionality. It is interesting that his proposal has elements that characterise the mechanisms we have recently been looking at - not the association of access with deposits, and not specifically the first credit tranche conditionality, but much more importantly, some kind of a tie-in between any of these mechanisms and strengthened surveillance. A year ago, we put a paper to the Board on a possible short-term financing facility. This didn't go anywhere. This was going to be a mechanism, at least in one of its guises, which would have provided something like lines of credit to member countries, which they could draw against automatically, on the basis of a certification of policy performance in the Article IV consultation. If the Article IV consultation was conducted in a way that allowed the Board to come to a conclusion about the satisfactory nature of the country's policies, the country may have had access, let's say for a period of six months, to a line of credit from the Fund. This was not supported by the Board, to a large extent, I think, because of the fear of committing Fund resources to an environment - even if only for six months - during which circumstances can change very dramatically. There are other questions as well about the way in which the proposal was put forward, but I think that was possibly the major issue that people had.

One of the keys, though, which is the same one Peter was getting at, is: How do you tie the surveillance process to access to Fund resources to make it a more orderly process? We have recently (just last week, as a matter of fact) received approval from the Board on the emergency financing mechanism. The formulation of the emergency financing mechanism is basically a set of procedures, very similar to the procedures that operated in the context of the Mexican case: involving the Board at a very early stage, finding informal mechanisms to keep the Board informed of the progress in negotiations, and then shortening every procedural requirement within the Fund to be sure of obtaining approval of use of resources very, very quickly. The key there, again, is the attachment to surveillance. The extent to which the Fund is able to assist a member quickly is a function of the extent to which the Fund staff, the Fund management and the Board know the situation in a country and in addition, of course, the extent to which the country is then ready, willing and able to take the kind of actions that are thought necessary. The trick is to introduce the necessary conditionality. That is not something which is timeless, and that really is the reason why the Board was uncomfortable with the proposals that had been made on the short-term financing facility.

Two very brief final points on the emergency financing mechanism. There are many, many unanswered questions. One of them is the link or tie-in between an emergency financing mechanism and whatever enlargement takes place of the GAB or other mechanisms; that is not defined in the agreement that was reached by the Board last week. The second, of course, is a very difficult question that is being worked on in many forums, namely that of orderly work-outs. Is there a way of dealing with creditors in the very short period between the advent of a crisis and the provision of financial support from the Fund? Both of these questions will be on the table for a good period of time in the future, and Stephany Griffith-Jones' paper this afternoon begins to address at least one of them.

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Floor Discussion of the Kenen Paper

Bernd Goos observed that there is a tendency to reason that, since capital flows have become so big and so rapid, facilities would be needed that can cope with undesired effects of these flows. Goos wondered whether the idea was not that, if there was a hundred billion dollars moving cross-border, a facility of a similar magnitude would be required.

"What this boils down to is an attitude that the problems under discussion can be solved by throwing money at them, but that is a false proposition and it never works. Even in the past, when capital flows were smaller, these problems could be solved only by adjusting underlying policies so that confidence was re-established. That is the important part, and in that respect I am concerned about these emergency facilities that come up with a huge amount of money before a government has given a clear signal to the markets that policies will change. I am also concerned about the effects created for the markets, in the form of moral hazard. If the markets know that there is a facility of the size of the Mexican rescue package or even larger, then why care? Why not go to whichever country you wish, because you will be bailed out anyway?"

Goos also wondered whether one could really assess the extent to which markets respond to economic fundamentals and the extent to which they respond to political events. "I do not think you can keep these two aspects apart. They are interwoven. The fundamentals are affected continuously by political events. If there is a political problem that raises doubts in the markets as to the extent to which a government will be able to contain the fiscal deficit, this will, of course, affect fundamentals. Therefore, it is no surprise that markets react to fundamentals in a prospective way."

Charles Siegman stressed that the term 'bailing out' has a negative connotation and needed clarification in the context of the discussion about contagion and systemic risks.

"It is clear that Mexico did not get a free ride. It paid a very heavy price. Different investors also paid, in the interval, a price. Moreover, the support package for Mexico was a very highly conditioned type of assistance, which is proving successful in terms of assuring repayment and not drawing on the full capacity of the financial facilities that had been established. This also reflects the stabilisation programme that the Mexican authorities have adopted in response to the crisis. As was pointed out by Jean-Jacques Rey, one of the difficulties of the December 1994 devaluation of the peso was that Mexico did not supplement it by a comprehensive stabilisation programme at that time. The support package has con-

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tributed to the successful implementation of the Mexican stabilisation programme and the reinforcement of market confidence.

Financial authorities outside Mexico were concerned about the risk of Mexico's problem becoming a systemic problem and therefore might have erred on the side of doing more than was necessary. They did not want to test whether the market contagion would spread to the extent that there would be systemic risks. As was pointed out by previous speakers, there was financial fragility not only in the Mexican situation but also in other countries. The stock markets, exchange markets, and banking systems in Latin America and some other marginally emerging market countries were at risk. And the official authorities judged that it was better to err on the side of a financial support programme with conditionality than to do nothing and take the risks of the Mexican problem spreading from country to country. Thus, in the support arrangement for Mexico there was a certain amount of caution involved, much higher than just an individual country facing a problem would have warranted.

That brings me to an observation with regard to the role of the Fund in today's financial environment. The initial purpose of the Fund was to assist individual countries with traditional balance of payments problems. But since countries were not yet confronted with this globalisation of capital markets and were dealing primarily with trade and service imbalances, the orders of magnitude of imbalances were relatively small-scale. As the global economy has changed, the discussion is now whether the Fund should have the capacity to deal with very large movements of capital. The Fund clearly does not have the means, and the question is what role it should play. But to be absenting itself from addressing the impact of very high volatility of capital movements, and to maintain that that is not the role of the Fund, is probably to withdraw too early from the game."

Peter Kenen elaborated on Siegman's observation that the Mexican crisis is typical of the cases one may expect in the future, given the size of capital flows. "We are no longer dealing with just current account adjustment, as Charles and I both pointed out. The difficulty is that because we cannot realistically expect an increase of the size of the Fund appropriate to the circumstances, we are going to be faced with a series of *ad hoc* arrangements for some time to come. The question is: Who qualifies for these *ad hoc* arrangements and how do we back them up? Will even a doubling of the GAB be sufficient to deal with the situation over the next few years? I am frankly very pessimistic.

On a related question, namely the use of surveillance as the trigger mechanism or certification of eligibility for arrangements of this kind and assistance on this scale, I see a major flaw, from which my own proposal suffers as well. Suppose a country is declared ineligible because its policies have gone awry. The Fund is not exactly the world's most confidential institution, and word of this itself getting out into the markets could be disastrous for the country. I do not know what to do about that. It seems to me a very serious problem."

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Reacting to Bernd Goos' remark about the interweaving of economic fundamentals and political events, Peter Kenen admitted that he had overdrawn the case. "I have taken academic licence in contrasting market reactions to political shocks and market reactions to fundamentals, and deliberately overdrew it. It is obvious that a shift in political climate involves a market re-assessment of the capacity to deal with the fundamentals. If a country faces political uncertainty, and yet its economic fundamentals are sound, I do not think the market will worry. If, on the other hand, a country faces some political uncertainties and the fundamentals are not that sound, you have a problem. All I was suggesting is that the markets will not typically react to a gradual deterioration of fundamentals. As long as the political regime is in good standing, the markets will say 'well, they'll handle it'. But when they perceive that the government is no longer politically capable of dealing with the situation, they will overreact - because of the nature of the change in perception. You then need large-scale support."

Frans van Loon confirmed that investors indeed tend to overreact when perception changes. He wondered what could be done to reduce the chance of crisis. "I would suggest that the incidence of sudden changes can be reduced by the provision of systematic, high-quality, well-organised information. The effect of these new, large-scale, international capital flows is certainly that there is a much larger number of decision-makers than before and that there is a vast appetite in the market for all kinds of information. Perhaps a comparison can be made with what companies are doing. A very well-organised shareholder information system -not only financial but a very broad amount of information - has clear benefits. The evidence everywhere is that the value of shares is better maintained if you have an excellent information system combining factual business with, admittedly, good public relations. I would argue strongly in favour of much stronger involvement of official institutions like the IMF, and a substantial improvement in the provision of information.

In that context, I would like to mention that there are sometimes lapses or room between the information available to the official institutions and the market. The confidentiality issue - what knowledge does the US Federal Reserve have, what knowledge does the IMF have, what did the World Bank economic reviews do, and what filters through to the market? Or indeed, what information does the Mexican government, the Banco de México have or what did they publish? There will inevitably have to be some confidentiality, but the price of maintaining confidentiality or having privileged information which will in part not be available to the market may be rising and becoming much more costly. The chance of sudden changes such as those referred to by Peter Kenen and Jack Boorman increases if information is hoarded."

Ariel Buira stressed that there is a widespread misperception that Mexico somehow withheld information from the markets or provided less information in 1994 than it did in previous years. "Let me assure you that this is not the case.

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The Banco de México publishes something like ten thousand statistical series. The only thing that was not provided on a timely basis was the international reserves. This, however, had been a policy which had been followed for the last twenty or thirty years. International reserves were published three or four times a year on given occasions, and the same policy was followed in 1994. The last time information about the international reserves was published before the crisis was November 1, 1994. You saw in Chart 6 that the reserves suffered a very sharp drop following the assassination of Colosio and that they remained stable for around seven months. They started declining again in mid-November, but the same information was available as had been before.

Let me also add that this same information had been thought sufficient by investment fund managers and mutual fund managers, who are generally professionals, to allow them to bring one hundred billion dollars or more into the country.

This is a point which should be made very clear. The problem was not one of information. I agree with Peter Kenen that they were not reading the data, but that they were reading the headlines. When the political instability was setting in, the feeling was that the country was becoming unstable, but I do not think this was an issue concerning the fundamentals. The fundamentals were not different in any significant way from what they had been. This includes the lending of the development banks, which is included in the monetary figures. I also want to stress that there was no significant easing of monetary policy; if anything, monetary policy was tighter in 1994 than in 1993. Moreover, GDP growth was considerably higher in 1994 (1993 was a year of recession pending the uncertainty about the NAFTA approval by the US Congress). I should also mention in passing that the savings rate in Mexico had started to rise in 1993 and in 1994.

Hence in 1991-1994 there was a very sharp impact of the accumulation of various things: the strengthening of public finances, by which the public sector liberated a number of resources that it used to absorb; the increase in capital inflows; the pentup demand, as there had been virtually no consumer credit for a decade; the improved expectations in terms of future income and so forth. So there were a number of things that joined together to produce a sharp expansion in consumer credit. But by the end of 1994 this had levelled off and savings were rising again.

A very good point was raised, however, on the financial fragility of the Mexican banking system. The fact is that the non-performing assets of our banking system were approaching or even in a number of cases were exceeding the level of the capital of the banks. This was certainly a significant problem.

Moreover, as Jean-Jacques Rey said, there are of course demographic pressures in Mexico. The working population is growing by over a million per year and we haven't created enough jobs for over a decade. So the pressure is continuing to build up."

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Coen Voormeulen doubted that the Mexican crisis could have been prevented by better information. "In my view, the discussion about information points out that the most important feature of the whole discussion is not what actually triggered the crisis in 1994 but how it built up during the previous years. If information had been better, perhaps markets would have made a different assessment during the previous years. Ariel Buira mentioned in his paper that non-performing loans had increased substantially over that period. In my view that was a strong indication that the current account position was not sustainable. The banking system is really an important feature in this process. You can argue that markets were looking at headlines, but that is not the issue. They may be looking at headlines, but these headlines are the result of something that has gone wrong over the years before."

Bernd Goos observed that information is important, but that it cannot solve the problem. "One experience which is indicative of this is the ERM crisis in 1992. All the countries involved had elaborate statistical systems and publications. The markets had access to this information and could have responded to it much earlier than they actually did."

Jean-Jacques Rey added that the point is not whether a country like Mexico should have published figures about its international reserves on a more regular basis, or that the publishing of bad figures at the end of November 1994 would have precipitated the crisis, but that the Mexican authorities -knowing that these bad figures were going to be published - would have been forced to accompany this statement by announcing ways to deal with the problem. "That is nearly the only viable route to prevention. One can indeed reinforce surveillance and open a dialogue between the IMF and the authorities, but this dialogue will have to be kept very secret. It is unthinkable that the IMF would go public on the viability of an exchange rate peg. The same is true for the IMF informing the market. The IMF could not inform the market in a more or less confidential manner - that would raise an enormous problem of insider trading. The only thing the IMF could do is send a message on Internet that said 'watch out for Mexico'. This clearly would also precipitate the crisis. It seems to me that the only pressure is really regular disclosure."

Ariel Buira added: "Chart 6 in my paper shows a stretch of stable reserves until mid-November 1994. What happened then? The deputy Attorney General in charge of the investigation of the murder of his brother denounced a cover-up by ministers and high party officials. This led to a loss of nearly 4 billion in reserves. Only a few days later, as soon as the new administration took office, it was faced with a new uprising of the rebels in Chiapas who took 46 municipalities. I suggest that there is no interest rate measure that could have stopped the outflow then. It was not, at that moment, an economic problem. It was the complete loss of confidence in the political stability of a country.

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You can announce reserves and what other measures can you take? You can raise interest rates to 100%, in which case you tell the markets that you are desperate, and in fact, you provoke the crisis that day, or you try to ride it out and see what happens. The hope was that the new administration would give confidence."

Charles Wyplosz, going back to the distinction between political and economic causes of the Mexican crisis, observed that the economics of the exchange rate includes the concept of multiple equilibria. "This concept means that there is not a one-to-one relation-ship between what we call the economic fundamentals and the value of the exchange rate. As Bernd Goos said, the expectations of future policy actions or political difficulties are all factored into the exchange rate, and the markets of course continually can and do assess the situation. So there is a very complicated link between policy actions and the exchange rate, because it is all mediated through expectations. I wanted to make this theoretical point in order to relate it exactly to what we are discussing here. What it means is that the situation can get its own dynamics. For example, Ariel Buira was talking about releasing or not releasing information. Just releasing information can be interpreted by the market in such a way that the market will conclude that there will be a change in exchange rates, or there will be a crisis. It is enough that they believe that this is the natural outcome, for this to become the outcome. We call this self-fulfilling prophecy, and it does happen. So that is an argument.

Jean-Jacques Rey made the point that giving more information forces you to behave yourself. It is a good point. But there is a counter argument, namely that giving information can be misinterpreted, which can then trigger things which do not make sense or which you want to avoid. I believe that going to 7.00 for the exchange rate for Mexico was not what anybody wanted to recommend to Mexico in the first place - it was forced upon it. So there is an argument for secrecy, because the markets do not know for sure what is going on, and may misinterpret the information."

According to Stephany Griffith-Jones, one of the serious problems is how markets perceive information. "If you look at how people spoke about Mexico before December 20, 1994, nobody mentioned the current account deficit. It's not that they didn't know about it, but people didn't analyse it. They focused on Mexico's entry into NAFTA, on low inflation and so forth. Suddenly, after December 20th, the only thing that people focused on was the size of the current account deficit. And indeed, even in analysing other countries - I was in Eastern Europe at the time of the Mexican crisis - people in the markets were saying: 'Hungary is the country in this region that looks most like Mexico, because it has a similar current account deficit.' Obviously, the current account deficit is a very important variable, but there was this obsession then, whereas there had been a complete neglect before. I think these swings are not just linked to the availability of

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information. Everybody knew what the numbers were before and afterwards. The problem is: how do markets react."

Stephany Griffith-Jones wondered why Peter Kenen had said that if Mexico had just stuck to *Cetes* instead of changing them for *Tesobonos,* the situation would have been the same. "My impression is, if there hadn't been this transformation to Tesobonos, things would have been different. First, the crisis could have started sooner. Second, the Mexican government would have taken less of a loss and foreign investors would have taken more of a loss, because there would not have been this exchange rate guarantee, and so the distribution might have been more equable. I do not know how that would have affected the way investors would have reacted: whether this would have precipitated the crisis, or whether it would have diminished the outflow because investors would have been unwilling to take such loss."

Peter Kenen agreed with Griffith-Jones: "If these loans had not been dollar-indexed, then certainly the budgetary costs of servicing them would have been smaller. Those investors who held Tesobonos suffered virtually no loss; those who held peso-denominated assets (Cetes) obviously did suffer losses. So there was that difference. I was merely objecting to Charles Siegman's earlier chart, in which he was netting the Tesobonos against the reserves. What you want to net against the reserves is the totality of short-term claims that can be exercised against the reserves, and not just one particular claim. Suppose Mexico had issued no Tesobonos and only Cetes, and that people had bought them. True, they would have suffered larger exchange losses if they had held them one minute too long, but the problem for Mexico of funding a short-term capital outflow would have been there anyway - slightly different in magnitude, but still there."

On the issue of information, Peter Kenen warned that a clear distinction should be made between what one is asking countries to publish and what one is asking them to provide on a current basis for official surveillance. "You would, for instance, not ask a country to publish its internal working fiscal forecasts. You might ask it to discuss these in an Article IV consultation with the IMF. There are all sorts of things which the government might be willing to provide to the Fund but cannot be expected to provide to the market. While I agree that publication of many more numbers may be useful in alerting the market to what is happening in countries and forcing the security analysts to keep up to date with what's going on, I don't think it solves the problem. I'm also worried about the danger of urging countries to publish data on a uniform basis, because countries are not uniform. The meaning of a particular number is different in one country than it is in another. How many people were sophisticated enough to know that there were development banks in Mexico and that the monetary statistics must be interpreted in light of those? I am terribly worried about the idea that there ought to be a standard international format. Publish frequently, but publish in your own format."

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Peter Kenen added one new element to the lessons that can be learned from the Mexican crisis. "What's puzzling about the Mexican situation - and no one has mentioned this - is that this is one of those rare occasions in which a finance minister repeatedly said the currency would not be devalued and everyone believed it. This is odd, because statements of this kind are very often discounted by sophisticated market operators. But the operators in the Mexican situation were not sophisticated in that sense. After all, for many, this was their first international spree. These were mutual fund managers - people who were not used to this kind of thing, and took the promise of no change in the exchange rate at face value. That is why I suggested that it was appropriate to introduce enough exchange rate flexibility to remind people that exchange risk was real."

Kenen objected to the term 'bail-out' being used in the case of Mexico. "We are not bailing out Mexico. As Ariel Buira said, an awful lot of people took awfully large losses, on equities, peso-denominated liabilities and so forth. There were losses. The issue here was bailing out a country that was going to suffer enormous pain if it did not have this kind of assistance. It's the country and not the investor. True, the Tesobonos created a special problem, and those investors were bailed out. The lesson from that is: limit your short-term obligations in foreign currency."

Ariel Buira explained that the Tesobonos were, in a sense, a policy of signalling commitment to the exchange rate policy. "They were an attempt to keep people in the country. You can, of course, relate that to reserves, but if you are going to do that I would side with Peter Kenen, because what you really have to consider is all liquid claims in the banking system against the reserves. And Mexico is a country where most of the deposits are overnight or less than a week. So what you have to do is maintain confidence that this will hold. If you do not maintain confidence that this will hold, no amount of reserves will face the conversion of M4.

On the very loud and moral hazard - it wasn't exactly very loud nor is there really a moral hazard, except that the cost to Mexico has been enormous, staggering. We have a decline in GDP of 10.5% in the second quarter and we have a doubling of the rate of unemployment. It is not as though it is an easy way out for anyone. In fact, one could argue that there was not enough financing. If the Fund is supposed to help countries overcome their difficulties without measures destructive of national and international prosperity - I think that is what Article I says - there was not enough financing, as this objective was not met. Now, we have heard again a lot about the development banks. The development banks are not a deficit. The development banks normally operate through what we call 'second-story' banks. They lend to commercial banks, which in turn lend to borrowers. They are specialised banks that deal with foreign trade, with industry or whatever. Only the one dealing with agriculture suffers substantial losses from time to time, not the others. The others are as good as any bank anywhere. Besides, the cost of recapitalising the agricultural bank is always included in the budget. It is not as though we are cheating with our fiscal accounts."

Charles Siegman agreed with the thrust of Jean-Jacques Rey's argument that a systematic information release would alert the policymakers somewhat earlier than otherwise to a possible market response and therefore stimulate them to implement a policy package in anticipation.

"I agree, there is a certain amount of prevention in that. On the other hand, the publication of data should not be relied on to solve the potential problem of emerging crises. As Ariel Buira pointed out, in the case of Mexico a lot of data were published. In response to the latest crisis, Mexico has been releasing a considerable amount of data in a more systematic way.

I would like to add one comment about the risks of publication of data, which should not go unmentioned, particularly for the IMF. The IMF is now involved in an exercise of identifying standards of information release and of potentially even certifying countries releasing data according to these standards. But the IMF is on a very slippery slope, where one mistakenly implies that by certifying that countries are issuing a set of data, the IMF is certifying that the data are accurate. The IMF could be very helpful in improving the quality of data, but the certification of data is something the IMF must be very cautious about getting involved in. This is not to suggest that countries necessarily report inaccurate data. But because of the diversity of the content of the data - how they are assembled, what they convey, what is included, what is excluded - which differ from country to country, the IMF ought to be very cautious.

With regard to the Tesobonos discussion, Peter Kenen is quite right that, in the broader sense of the term, the system is vulnerable to all potential drains. No country's reserves are up to meeting all claims. The reason for focusing in this particular exercise on the Tesobonos was as a way of assessing the authorities' response to the loss of reserves. It was dual-featured: allowing reserves to be drained, and simultaneously incurring a noticeable increase in obligations which had due dates, for which a day of reckoning is involved. The day of reckoning was much more applicable to short-term Tesobonos than to other monies. The financial investors had to make their choice between a roll-over and redemption. It is that kind of policy environment to which I tried to relate the exchange rate, the reserves, and the new obligations. But Peter is quite right that in a more convertible world than Mexico was living in, they were vulnerable way beyond the Tesobonos. But 30 billion dollars of additional short-term external debt obligations is a very high-powered risk."

Jack Boorman agreed with Charles Siegman that the IMF ought to be careful not to certify the performance of countries that are providing data. "However, it was not the Fund who even suggested that the Fund should do that, it was the G-7 at the Halifax summit who suggested that the Fund should do that. There

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are various proposals to the Board right now about how to deal with that situation, but none of them is coming from the staff. I don't think it can be done."

How Can Future Currency Crises Be Prevented or Better Managed?

Stephany Griffith-Jones

I Introduction

The speed and the severity of the Mexican peso crisis, which the IMF Managing Director[1] characterised as "the first major crisis of the 21st Century", have started an important debate at all levels (including the BIS and IMF) on how to avoid crises like the Mexican one occurring again and to improve their management. It is noteworthy in this context that the G-7 Halifax Summit in July 1995 devoted much time and attention to the prevention and management of 'Mexican-style crises'; the high priority attached to this issue was clearly reflected in the Communiqué.[2] It is important also to stress that several valuable policy proposals were made.

This position paper will have two aims. Firstly, it will try to contribute to the discussion of proposals already made, particularly in aspects of crisis management. This is important, both because these proposals are still at a general level and - particularly - because the Mexican crisis (and possible future ones) have some new and relatively unknown features, linked to the modality, scale and speed through which capital flows to (and can flow out of) the emerging markets. The modality of these flows relates mainly to the securitisation of capital flows, globally and to developing countries.[3] Securitised flows seem to be far more volatile than bank loans, as in many cases the *stock* of the securitised flow can leave a country in a few hours, whereas in the case of medium-term bank loans, even in a very serious crisis like the 1982 debt crisis, the stock of the debt cannot leave the country. Furthermore, securitisation has made investors faceless and more diversified, thus making negotiations with them far more difficult, if not impossible. The speed with which capital flows in (and out) of countries also seems to relate to the growing importance of global institutional investors, which implies that flows to emerging markets are now predominantly driven by liquidity and short-term

1. Camdessus, M., "Press Conference of Managing Director", 2 February 1995, IMF, mimeo, 1995.
2. Halifax Summit, "G-7 Communiqué", 15-17 June 1995.
3. Griffith-Jones (1993).

From: Can Currency Crises Be Prevented or Better Managed?: Lessons from Mexico FONDAD, The Hague, 1996, www.fondad.org

performance considerations, rather than by longer-term banking relationships.[4] The rapid and recent growth of these global institutional investors, which has coincided with a period of liberalisation of financial markets, has also implied that flows originating from those global institutional investors are almost completely unregulated in their source country, and even more internationally.

This leads us to the second, and perhaps more important, aim of this paper: to add some new proposals for policy action to the package already being discussed internationally. These relate to apparent gaps in the policy package connected with the lack of regulation and/or even lack of sufficient disclosure of many of the flows going to emerging markets, particularly those originating from global institutional investors. Such additional measures would perform two crucial roles. Firstly, if appropriately implemented, they would significantly reduce the likelihood of Mexico-style crises occurring by softening the 'herd behaviour' typical in general of financial markets, but apparently particularly characteristic of largely unregulated securities flows originating from global institutional investors, which characterise the 1990s. As the Halifax Summit declaration wisely says, 'the prevention of crisis is the preferred course of action'; perhaps one should add explicitly that prevention of crisis implies avoiding the massive costs for the countries involved, for investors and for the international community, which Mexico-style financial crises imply. Secondly, if regrettably a crises of this type does occur, a very likely component of the policy package will be large and speedy official lending (see more detailed discussion below). To facilitate this, the Halifax Communiqué has proposed the establishment of an Emergency Financing Mechanism to provide faster access to Fund arrangements with strong conditionality and larger up-front disbursements in crisis situations, and suggested that the G-10 and other countries develop financing arrangements to double the amount currently available under the GAB. This basically implies setting up a type of international lender of last resort which would perform the valuable function of contributing to the public good of stability internationally, in ways parallel to the way in which national central banks, by acting as domestic lenders of last resort, seem to have diminished the frequency of national financial crisis.[5] However, the serious problem with any explicit - or even implicit - international lender of last resort is that it encourages 'moral hazard', that is that both investors and recipients take additional risks, because they are confident of being bailed out if things go wrong. To contain - or ideally eliminate - such 'moral hazard', mechanisms need to be found to constrain cross-border flows to emerging markets. The IMF has rightly suggested that one such way will be for it to enhance and formalise its surveillance of recipient countries. Though this is a very valuable step, it may not be sufficient, particularly as countries with large access to capital markets do not

4. IMF (1995).
5. Griffith-Jones and Lipton (1987).

require IMF funding at the time and are therefore less willing to accept policy advice from the Fund at that stage. It therefore would seem valuable as an additional measure to reduce 'moral hazard' to impose some additional regulatory and/or disclosure restrictions on investors, so as to contribute to avoiding excessive surges of easily reversible capital inflows to emerging markets. It would also seem appropriate to exercise some regulation and/or improved disclosure of flows by source countries affecting investors as a counterpart to an explicit lender of last resort, given that this latter facility - though made available to an emerging market country - would also benefit (or may particularly benefit) the investors. Thus, if the new package of policy measures does not include additional regulation, but does include increased or more explicit international lender of last resort facilities, the 'moral hazard' aspect - as it affects investors - will be significantly enhanced, which could make the flows more destabilising and an eventual future crisis more likely and more costly.

In what follows, we will first (Section II) examine those crisis prevention measures that have not yet been included in the policy package being discussed internationally. Then we will examine (Section III) proposals for currency crisis management.

II The Gaps in the Policy Package for Crisis Prevention

As pointed out above, the Mexican peso crisis has led to a number of valuable suggestions for crisis prevention. These include more emphasis on each country pursuing sound fiscal and monetary policies and an 'improved early warning system' internationally, with improved surveillance of national economic policies and fuller disclosure of information to market participants.[6]

An aspect that has been rather neglected in the discussion so far is the need for better disclosure of exposure of investors in different emerging markets, as well as the possibility of warnings or even some regulatory restrictions on investors by home country regulators, to avoid excessive surges of easily reversible capital inflows to emerging economies. Such regulations could - in the first place - be applied by home countries, but could at a later stage be coordinated by international forums such as IOSCO and the Basle Committee.

The justification for such measures is based on both historical and particularly recent experience of financial markets, as well as on economic theory. Though generally efficient, financial markets do have important imperfections.[7] Factors such as asymmetric information and disaster myopia may lead financial markets to over-invest or over-lend in certain markets; however, once the excessive nature of the over-investment is perceived (and this may be due to a fairly small change

6. See IMF Survey (1995), several issues; Halifax Communiqué, 1995.

7. For a very useful review, see Davies (1992); also, for some of the seminal works, see Stiglitz and Weiss (1981); Kindleberger (1978); Guttentag and Herring (1984) and Mishkin (1991).

in the particular market), there can be a huge over-reaction, with flows not only declining sharply but even becoming negative.

Thus, the Mexican peso crisis not only shows the importance of pursuing appropriate monetary, fiscal and exchange rate policies at a national level. It also shows how rapidly perceptions in financial markets can change (e.g. on 20 December 1994), when there has in fact been relatively little change in the economic fundamentals. (However, throughout 1994, there had been two major changes relating to Mexico, one relating to increased real and perceived political instability and the other relating to increased US interest rates.) As a consequence, to avoid Mexico-style crises it is not only necessary to ensure that countries pursue appropriate macroeconomic policies, a task which is made more difficult by large surges in capital flows.[8] It is also necessary to help financial markets to work in a more efficient way by helping them to overcome certain imperfections to which they are prone.

The proposed provision of more accurate information on emerging markets will help overcome problems of asymmetric information. However, the key problem relating to over-optimism in Mexico, and other emerging markets, followed by over-pessimism was not lack of information, but the behaviour of fund managers, related to their incentive structure.[9] If a fund manager is wrong when everybody else is right (i.e. he/she does not take a very profitable opportunity that everybody else is taking), his/her institution will be punished by the market. However, if a fund manager is wrong when everybody else is wrong, this is not so serious, the market is less likely to punish his/her institution, and it may be backed by a bail-out. As a consequence, 'band-wagon effects' or 'herd behaviour' is common, as financial actors seek safety in numbers. This is illustrated by the fact that several fund managers interviewed in late 1993 said that their investment policy in Latin American emerging markets was 'safe', because they concentrated a very high proportion of this investment in Mexico! This 'safety' was not due to economic fundamentals, (as Mexico at the time already had a current account deficit of almost 8% of GDP), but was more related to the fact that the majority in the international financial community had decided that Mexico was safe.

Improved disclosure and some regulation of capital flows would need to be done in ways that discourage destabilising flows but that maintain incentives for the valuable increase in international capital mobility that has occurred in recent years, as both investors and emerging markets benefit from it.

Any additional disclosure or regulations need to focus on securities' flows, which are now such a dominant part of flows to emerging markets and which are far less regulated than banking flows. An appropriate initial point for improved disclosure requirements and some additional regulation would seem to be at the

8. Ffrench-Davis and Griffith-Jones (1995).

9. This is illustrated by the fact that one large merchant bank pulled out of investment in Mexico on its own account well before it told its clients that a problems was likely.

level of existing regulation of collective investment schemes carried out by the securities' regulator in the major source countries. A second level for regulation could be carried out by the international forums that coordinate regulations, such as IOSCO and/or the Basle Committee.

A problem is that these regulators (and especially national securities' regulators and IOSCO) focus to an important extent on regulation geared to avoiding criminal or incorrect behaviour relating for example to avoiding conflict of interest,[10] and deal far less or not at all with instances when many investors are wrong at the same time. Furthermore, in assessing emerging markets, their concern seems to focus on the quality of regulation of stock exchanges, etc. without practically any analysis of the macroeconomic situation, potential imbalances, etc. of that country. On the other hand, institutions like the IMF which have in-depth knowledge of, and focus their analysis on, macroeconomic trends and policies in all countries have no regulatory powers over investors or financial institutions. The BIS is in an intermediate position, in that it has strong links with regulators, though relating particularly to banks (via the Basle Committee), and also has a fairly strong in-house capacity for macroeconomic analysis, though with far fewer staff than the IMF allocated for this purpose.

Given these institutional realities, it would seem most appropriate that the lead initially be taken by the national securities' regulators, especially of the major source countries, but that they coordinate with the IMF and the BIS. Also, because of the relative lack of experience of securities' regulators in macroeconomic trends, the suggestions and rules initially designed for this purpose should be simple, whilst trying to avoid being simplistic.

Such rules could for example discourage or forbid investment by collective investment schemes in emerging markets whose current account deficit as a proportion of GDP was for the second year higher than 3%; exceptions could be made for those countries whose exports grow at a very rapid rate and/or for countries where a somewhat higher current account deficit was funded mainly by direct investment flows and in other special circumstances. Such exceptions could be defined in consultation with the IMF and/or the BIS, though IOSCO as the international coordinator of securities' regulators could also play a role. Another rule could limit the proportion of short-term Treasury Bills of a particular emerging market country that can be held by persons or institutions domiciled abroad; for example, regulators in source countries could discourage or forbid investment in a particular emerging market country to finance their short-term Treasury Bills if for example foreigners already hold more than 20% of those short-term Treasury Bills. Also a maximum ratio could be fixed for the proportion of short-term Treasury Bills in total Treasury Bills that the recipient country should have for it to be eligible for funding them externally.

10. IOSCO (1995).

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These rules are proposed tentatively and partly for illustrative purposes. More definite rules could be elaborated and reviewed by the IMF and/or the BIS, institutions where some work is reportedly already being carried out for defining 'red light' warnings. Close coordination would be required with the major securities' regulators, to verify that the necessary information would be available to them in a timely fashion and that they could implement such rules with relative ease.

Such rules need to be complemented by better disclosure requirements and by more precise information, issued by collective investment schemes to their investors, for example in their prospectuses and publicity material. In the case of funds with large investments in emerging markets, this should provide information about the country - and other - distribution of such investments, some basic macroeconomic information on the countries where most of the investment is concentrated and some analysis of risks involved (as well as the traditional emphasis on likely high yields). The major securities' regulators (such as the US Securities' Exchange Commission) already tend to review prospectuses and publicity material of collective investment schemes,[11] so their task would just be broadened to review these new dimensions. This, as well as the design and verification of rules described above, may possibly require some additional staff in securities' regulators, to carry out this additional work. However, any additional costs would be easily compensated by savings on far larger costs that would be incurred if large crises occurred.

It should be emphasised that regulations from source countries would clearly be complementary with regulations or other measures for discouragement of short-term capital inflows existing in recipient countries. Several studies[12] have shown how regulations of short-term capital inflows in some countries - like Chile, Colombia and Malaysia - have been a contributory factor to a relatively more successful management of capital inflows; furthermore, these countries have continued to attract high levels of long-term flows, such as FDI. It is interesting that both the IMF and the BIS[13] have recently very explicitly recognised that - though having some limitations - measures taken by recipient governments to discourage short-term capital flows may, when combined with other policies leading to sound macro- economic fundamentals, play a positive role in managing effectively capital flows and thus reducing the likelihood of a costly financial crisis or of severe macroeconomic distortions.

The question could be asked whether measures to discourage short-term capital inflows by recipient countries would not be enough. There are two reasons, though, why some complementary action by source countries is necessary. Firstly, several major recipient countries do not discourage short-term capital inflows; others, like Mexico, took some measures to discourage those inflows, but made

11. See IOSCO (1995).
12. See, for example, Ffrench-Davis and Griffith-Jones (1995) and Khan and Reinhart (1995).
13. IMF (1995) and BIS (1995).

themselves more vulnerable to financial crisis by, for example, a very short maturity structure of Treasury Bills, a high proportion of which were denominated in dollars and owned by foreigners. Second, even those recipient countries - like Chile, Colombia and Malaysia - which have deployed a battery of measures to discourage or limit short-term capital inflows have on occasions found these measures insufficient to stem very massive inflows, with problematic effects on variables such as the exchange rate. It therefore seems advisable for source countries to take some measures (as outlined above) to discourage excessive and potentially unsustainable short-term capital inflows into emerging markets, so as to avoid possible future costly financial crises. This is particularly justified because, as a recent IMF study[14] points out, due to the difficulty of restructuring securitised exposures owned by a diversity of investors, if a major emerging market country is experiencing debt-servicing difficulties, it will far more probably than in the past be forced to seek official funding to allow it to continue servicing its external debt in full, rather than being able - as in the past - to renegotiate such debt. Indeed, one could argue that as the IMF will play such a large role in providing funding during any such crisis, it should also influence both source and particularly recipient countries to discourage excessive short-term capital inflows that may become unsustainable, and which pose a risk that a rapid outflow could lead to a costly financial crisis. A similar argument could be made for the BIS, to the extent that it too is likely to play some (probably smaller) role in providing emergency short-term finance in case of a future Mexico-style financial crisis, and therefore has both an institutional and a systemic strong interest in crisis avoidance.

Finally, it should be emphasised that restrictions or discouragement of excessive short-term capital flows to emerging markets may seem 'second best' if compared to an ideal neo-classical utopia of perfectly efficient financial markets and sound macroeconomic policies. As very unfortunately such a utopia does not exist, a 'second best' world of some discouragement of excessive flows which may prove unsustainable is *far superior* to either a world of more frequent and very costly, as well as disruptive, financial crises and/or a world where countries unilaterally (or with support of the international community, through some internationally agreed bankruptcy procedures as discussed in Section III below) restructure their debt or other liabilities. As regards the latter option, the IMF[15] is completely correct in arguing that capital controls on inflows by emerging market countries are far superior to highly undesirable capital controls on outflows in times of crisis. It should be added that ex-post capital controls on outflows in times of crisis imply a far greater and more fundamental violation of free-market principles than do ex-ante measures to discourage some capital inflows. Similarly, large and costly foreign

14. IMF (1995).
15. IMF (1995).

exchange crises also are very disruptive for market economies and may lead to unjustified criticisms of the overall market model and of market reforms.

Therefore it can be concluded that a smoother and more efficient functioning of the market economy in emerging markets can best be achieved with some discouragement and/or regulation of excessive and potentially unsustainable short-term capital inflows. Such measures will be most effective if they are applied both by source and recipient countries, if they are designed in ways that avoid any discouragement of more long-term flows, and if the rules designed are simple and clearly targeted at unsustainable flows and can be justified on prudential grounds.

III How Can Future Currency Crises Be Better Managed?

We now enter the undesirable world of 'third' and even 'fourth' best, which arises when crisis prevention has failed and a major currency crisis is starting.

The first -and main response -in such a situation is to activate quickly a sufficiently large 'international lender of last resort' to provide the important public good of stability; such an action is justified because private flows have become globalised and financial markets are prone to speculative changes of mood.

It therefore seems appropriate that in their Halifax Meeting,[16] the G-7 approved in principle that, 'the IMF establish an "Emergency Financing Mechanism", with strong conditionality and larger up-front disbursements in crisis situations'. (This "Mechanism" has also been approved in broad terms by the IMF Executive Board.) They also asked G-10 and other countries to develop financial arrangements to double as soon as possible the amount available under the GAB to 'respond to financial emergencies', and support 'continued discussions on a new IMF quota review'.

Bagehot's[17] classic advice on a national lender of last resort may throw some light on the complex issues raised by establishing and operating an International Lender of Last Resort (ILOLR). Bagehot argued for a lender of last resort that would lend freely (that is, without limits), but at a penalty rate to an illiquid yet solvent debtor facing a creditor panic. Bagehot's conditions need to be adapted to the fact that the problem is international and that the ILOLR would support a country, instead of a creditor financial institution (even though indirectly investors and financial institutions may be the main beneficiaries).

A first issue to resolve is which countries would have access to the facility, and under what conditions. A recent paper by Williamson[18] suggests that such an ILOLR facility should be addressed to all IMF member countries that have a high level of involvement in the international capital markets. Such a broad definition,

16. Halifax Summit, "G-7 Communiqué", 15-17 June 1995.
17. Bagehot (1873).
18. Williamson (1995).

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though valuable in the sense of protecting more countries from destabilising flows, could further increase the potentially massive scale of such an ILOLR (see below); a more limited facility, designed for the less stable but smaller emerging markets, would initially seem to be a better option.

As Bagehot[19] stressed, the terms of access are crucial, and should imply 'penalty rates' or 'onerous terms' to help avoid moral hazard; in this case, this refers in the first instance to countries mismanaging their economy in the knowledge that they will be bailed out if markets panic. The 'onerous terms' refer not so much to the level of interest rates (though these should be above market rates) but to 'the policy conditionality' attached to the ILOLR. It is, however, crucial that policy conditionality be attached particularly *before* the crisis breaks out, to try to avoid it, though naturally continued conditionality would be important once the ILOLR operates. The former is not so easy to implement, as normally when countries have abundant access to international private markets they do not have recourse to IMF facilities. As a consequence, a proposal made in an IMF[20] paper seems very useful; it suggests that a request for the right to borrow under an ILOLR type of facility would be made before a crisis happens, and during the time of an Article IV consultation. The IMF paper suggests that its Board could approve the availability of a credit line for a specified period (which could be a year), if 'the country had a good record of economic policies and there was no fundamental balance of payments problem'. However, if these conditions had been implemented rigorously, Mexico would *not* have been eligible for such a facility in early 1994, when its last Article IV consultation with the Fund before the peso crisis occurred. Therefore it would seem essential that for such a facility to be approved for a particular country, the Fund should also be entitled (even though this was merely a 'shadow programme' and would not imply immediate but potential disbursements) to request policy changes as a precondition for approval. It should be noted that the IMF has positive experience with shadow programmes in somewhat different contexts. This somewhat onerous imposition for the recipient country would be compensated by the fact that, in the event of a major crisis, the country would have an automatic right to draw off a large credit (or at least a first tranche), with an immediate report to the Fund's Board, but with *no* need for Board approval of the drawing. This procedure would have the *great advantage* for the country (and for the international community) that the facility could be immediately activated and used if the need arises, and could therefore have far more potential to reassure the markets. This quicker reassurance of the markets would hopefully reduce the scale of any potential crisis, and thus its cost both to the country and to the international community. For the Fund to make such an open-ended commitment, it would seem essential that previously the country would have made any necessary

19. Bagehot (1873).
20. IMF (1994).

policy changes that the Fund requests to try to avoid the crisis, in exchange for the potential, but crucial, automatic availability of Fund credit should a crisis break out. This may require some extension and improvement of the Fund's analytical capacity to judge whether or not a country's policies are sustainable. Indeed, it can be argued[21] that the Fund's warnings to Mexico in its 1994 Article IV consultations on the dangers of its large current account deficit were far too weak. However, there is no reason why, given its expertise, the Fund's analytical capabilities could not be improved and adapted, particularly as it could also liaise with expertise from other institutions like the BIS or even draw on academic economists.

A second crucial issue relates to the scale of such a facility. Since Bagehot, analysts of lenders of last resort have argued that - to be effective in convincing the markets - such a facility must be able to 'lend freely', that is be virtually open-ended, or at least extremely large. The scale of the package for Mexico is illustrative. The IMF lending of $17.8 billion was equal to around seven times the Mexican quota at the Fund; this was only a bit over a third of the total package that Mexico needed, which reached around $50 billion. Similarly, during the 1992 crisis of the ERM, the Bundesbank and other institutions used massive amounts of funds (reportedly over $120 billion) to defend the parities of several European countries.

This massive scale for an international lender of last resort poses a very serious problem for the governments and central banks of the major countries, not so much for assembling a funding package (via, for example, the GAB, the expansion of IMF quotas and other mechanisms) but more in case such a facility is to be used several times.

As a consequence, an ILOLR must be established very carefully, with very precise and stringent conditions for its use and with very strong emphasis on crisis prevention measures, such as discussed in Section II above. Such prevention measures also will help limit 'moral hazard'. Moral hazard for countries would be reduced both by the dramatic economic, social and political costs which a nation like Mexico has to bear in the aftermath of a currency crisis and by the pre-crisis and past-crisis IMF conditionality suggested above. More problematic could be the moral hazard for investors and fund managers. Indeed it should be noted that in particular holders of Tesobonos (which represent assets of almost $30 billion) have *not* had any losses as a result of the massive Mexican crisis, precisely due to the scale of the IMF-US Treasury package. (However, foreign investors in Mexican ADRs - if they sold during the crisis - have suffered some losses.) For this reason, it is essential that moral hazard for investors, fund managers and other financial institutions is curbed by preventive measures by source countries to regulate and/or discourage short-term and apparently unsustainable flows. Indeed, to

21. Williamson (1995).

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establish an explicit and large international lender of last resort *without* accompanying measures to curb moral hazard, both on the country and the investor side, would seem unacceptable for the taxpayers of the industrial countries who would fund it. It would also seem morally incorrect to establish such a large and even open-ended facility without sufficient *quid pro quo* at a time when many developed countries' governments are cutting back on aid flows to the poorest countries and people in the world. These arguments are not against the establishment of an explicit international lender of last resort per se, as such a facility seems essential in a time of large, globalised speculative capital flows. They just stress the need for rigorous ex-ante conditions, both on recipient countries and on investors, for access to such a facility to be made available. To further reduce the risk of moral hazard as it relates to investors and investing institutions, and to help reduce the scale of ILOLR operations, it may also be necessary to prepare in advance some measures that would, however, be implemented after a crisis begins to happen. The G-7[22] have hinted at such measures, somewhat cryptically, by encouraging 'further review of other procedures that might also usefully be considered for their orderly resolution'. Senior figures in the United States, like Congressman James Leach, Chairman of the US House of Representatives Banking and Finance Committee, have called for the IMF to create some international equivalent of US bankruptcy arrangements.[23] Robert Rubin, the US Treasury Secretary, is reported to have requested a 'cautious exploration' of a special facility to work out international debt crises in an orderly way.[24]

Academics[25] have gone further in explicitly arguing for the IMF or others to play a role like an international bankruptcy court.

These proposals draw close parallels with Chapter 11 and Chapter 9 of the US Bankruptcy Code. Chapter 11 recognises that there are three stages in a restructuring of an insolvent corporation, each of which is prone to deep collective action problems. The first stage occurs when bills cannot be paid. This stage is prone to 'a creditor grab race', as liquidation is accelerated - or even partly caused - by creditors trying to get their money before others do, provoking collective inefficiency. Assuming there is no liquidation, there is a restructuring phase. During this phase, the enterprise needs credit; however, no lender or investor has an incentive to provide new money unless it has preferential status. The third stage implies adjusting the balance sheet by debt reduction or debt equity. The collective action problem is that each creditor is happy if other creditors make concessions, while individually holding out for full repayment. To deal with these problems, American bankruptcy laws provide an appropriate framework for a corporation or even a municipality in financial difficulties. This includes

22. Halifax, "G-7 Communiqué", 15-17 June 1995.
23. Wall Street Journal, 11 April, 1995.
24. Financial Times, 25 April, 1995.
25. In particular Sachs (1995), but also, Raffer (1990)

a debt freeze to prevent 'the creditor grab race', a legal provision to allow for borrowing new money that is senior to the old and, if necessary, a mechanism to write down existing obligations. In the view of Sachs and Raffer, such a framework can also be applied to a sovereign borrower in financial distress to overcome similar collective action problems to those that affect corporations. It is proposed that such a framework would involve a debt service standstill, fresh loans, and possibly some reduction. It has further been argued that the IMF could possibly authorise such procedures in the framework of its Articles of Agreement. Suggestions for using Article VIII, Section 2b, which relates to exchange restrictions that would not be subject to challenge in the courts of member countries, have been made, though current analysis seems to show that it would not be appropriate.

This proposal has some important advantages. The main one is that it could completely eliminate or significantly reduce the cost to rich countries' central banks and/or governments of massive bail-outs. A secondary advantage could be that, if explicitly announced ex-ante, it could curb excessive short-term capital flows and reduce moral hazard of investors for an ILOLR. However, the danger is that it could throw out the baby of capital flows to emerging markets in general with the bath water of more speculative or less sustainable flows.

More broadly, we agree with the IMF[26] that ex-post restrictions on capital outflows are the least desirable option because they will be viewed by market participants as some type of confiscatory measure. In this context a bankruptcy type of procedure seems too 'market unfriendly' and too radical, and therefore should be used, if at all, only as an *absolutely last resort.* It would also seem more appropriate if an 'orderly work-out approach' was to be used only in very extreme circumstances, if it was used more for extending maturities than debt reduction, and if it was used in combination with (and not as a substitute for) an international lender of last resort. The advantage of the latter combination would be that the costs of a financial crisis would be shared by the country affected, by international official support and by the investors. This would be in contrast with how the 1994 Mexico crisis was handled, where practically all the costs and strains were taken by the official international support and the Mexican economy. In spite of all the above reservations about using 'international bankruptcy procedures', it may be desirable to prepare the framework for such a mechanism in any case, so as to enlarge the availability of options, but to do so without giving much publicity to it, particularly in this current phase when capital flows to many emerging markets are just beginning to recover from the crisis of early 1995, and where market confidence needs to be bolstered. Finally, it is crucial to stress again that in international private capital flows - as in medicine - prevention is far more desirable, effective and cheaper than curing avoidable illnesses. Therefore emphasis must be placed on the relatively less radical, less costly and less disruptive measures outlined

26. IMF (1995)

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above in Section II (as well as those discussed internationally) for crisis avoidance. It would seem essential to include amongst them not just improved surveillance of countries, but also some regulation and/or discouragement of unsustainable short-term capital flows. These measures will also act to reduce significantly the 'moral hazard' which the existence of an explicit (or even of an implicit) international lender of last resort generates, as well as to diminish greatly the likelihood of the very radical 'international bankruptcy procedures' having to be implemented.

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Comment on "How Can Future Currency Crises Be Prevented or Better Managed?" by Stephany Griffith-Jones

William R. White

What Are the Problems that Need Fixing?

This paper provides a useful evaluation of procedures already suggested by others for better preventing and managing currency crises in emerging economies. It then turns to some inventive and welcome new suggestions for official involvement, and in so doing clearly moves the debate forward. Before turning to three of Stephany Griffith-Jones' specific suggestions, let me spend a few minutes on identifying three aspects of crises which might justifiably worry policymakers. Since all new policy measures will be costly in some regard, either in their formation or their implementation, it is important that their benefits be perceived to outweigh their costs. Moreover, solutions implying new procedures on the part of the official sector should ideally be devised to deal with those aspects of crises which are judged most troublesome.

A first possibility is concern that a country with liquidity problems will be faced with an overshooting problem. As capital, both domestic and foreign, leaves the country, interest rates may rise "excessively" and the value of the currency may fall "excessively", with potentially damaging international and domestic effects.

Turning to the first of these, what is the likelihood that overshooting problems in the case of a single country would cause systemic problems for the international financial system? One new factor reducing the likelihood of such an outcome is that most of the capital inflow into emerging markets in recent years has been provided by non-banks. This is completely different from the 1980s when the safety of the international banking system was at stake. Contagion is of course more likely, but we must remember that contagion is not systemic risk, and that even if a number of smaller countries experienced problems, it is not clear that the further reverberations would have costs sufficient to warrant grand solutions. Yet it is worth underlining that, if a liquidity crisis were thought to have systemic implications, this would certainly tilt the bias in the direction of the official sector doing something other than relying solely on what has been called "the market solution".

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In contrast, it is quite likely that the interest rate and exchange rate overshooting could be so great as to seriously harm the economic prospects of the country under attack. The international official community would wish to avoid this if it could. That is to say, the official sector would wish to intervene if the costs of doing so (especially moral hazard) were not greater than the perceived benefits. Yet it is not clear that market failure of this sort should normally be presumed. Indeed, I would like normally to put the burden of proof in the opposite direction, particularly given that the more people are involved in securities markets, the greater is the likelihood of market efficiency and price setting consistent with fundamentals. Note too that for countries with balance of payments (trade) problems, higher interest rates and a lower exchange rate (forced by the market) are not necessarily part of the problem. They may indeed be part of the solution.

One factor that seriously aggravates the danger of overshooting is a weak domestic financial system. Given such weakness, the domestic monetary authorities cannot respond in a timely way with adequate interest rate increases, and the currency may thus be viewed as seriously vulnerable on the downside. Moreover, sharply higher interest rates may eventually be forced upon the authorities by the markets with very serious domestic implications. While the obvious preventive measure is to strengthen the domestic financial system, if the system is weak when a crisis hits, the resulting domestic damage may be grave. This raises the issue of what procedures might be put in place to help a country in such circumstances.

A second problem that new procedures might deal with is the seizure of assets and attempts to pursue sovereign countries through the courts. Those suggesting "officially sanctioned" standstills seem to see this as a major problem. The history of the last fifteen years makes me doubt this, though it is clear that this problem is more likely to be consequential given a myriad of unorganised security lenders (as at present) than given a smaller number of bank creditors (as in the past). A helpful factor is that, in fact, most sovereign countries do not have assets abroad of any significant worth.

A third problem raised in the context of recent liquidity crises, but not directly caused by them, may be the need to reduce (rather than restructure) sovereign debt. The Griffith-Jones paper only mentions this in passing, but better ways to approach debt reduction are what may be quintessentially "new" in recent discussions. Sachs' suggestions, based on the reasoning underlying Chapter 9 and 11 of the US Bankruptcy Law, do explicitly include procedures for more orderly debt restructuring and possible debt reduction. To me, the need for better and faster procedures to deal with "debt overhang" problems is self-evident. It is now well over a decade since the debt crisis broke and its resolution has been glacial.

Yet to identify a problem is not to identify a solution, since all solutions have costs as well as benefits. Let me now turn more specifically to the proposals in Griffith-Jones' paper. She recommends three things:

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Some Specific Solutions to the Identified Problems

There should be controls over (or at least fuller disclosure of) capital inflows into emerging economies with control being exercised from both the debtor side and the creditor side (regulation).

There is clearly a need for more disclosure by debtors of timely and relevant information, in particular macro-data and data on the size and maturity of liabilities. Markets need information to price risk correctly and to avoid problems of "self-fulfilling expectations". Yet to go from disclosure to regulation (particularly of creditors) is a big jump. Griffith-Jones suggests that, if there is to be an International Lender of Last Resort (ILOLR) then regulation (particularly of creditors) is needed. She is led to this conclusion by the analogy that provision of a domestic lender of last resort facility implies complementary regulation to minimise the cost to the public purse. Yet this argument is not compelling for two reasons. First, there should be no certainty that an ILOLR will always lend and, short of that assumption, there will still be a great incentive for self-regulation and less need for the official sector to do it. Second, if the ILOLR is to lend only to "solvent" countries, analogous to a domestic lender of last resort, then the taxpayer will not be exposed. Mexico will not prove to be a bail-out if the Mexicans repay. I agree, however, that the ILOLR could always make a mistake in assessing solvency, at which point the taxpayers of the creditor countries would be exposed.

Turning briefly to the specifics of Griffith-Jones recommendation, I have three points. First, the whole thrust of her approach assumes it is "foreign" holders of securities who are the problem. In fact, domestic holders of assets may be the first to head for the exits. This regulatory/control path would, moreover, lead into exchange controls very quickly if both foreign and domestic holders of government debt must be dealt with. Second, focusing rules on current account deficits may lead to tardy policy reactions if such deficits are lagged effects of underlying problems (e.g. an overvalued exchange rate). Measuring the size of an "unsustainable" current account deficit is also an inherently difficult task. Third, the suggestion that we need regulation and supervision of securities flows because they are less well "overseen" than bank loans ignores the fact that it was bank loans that got us into the debt crisis of the 1980s. In sum, supervision and regulation have benefits in some circumstances, but they are no panacea.

There should be an ILOLR lending on Bagehot's terms (unlimited loans to solvent debtors) with terms ideally arranged before a crisis hits.

The suggestion that the Fund pre-negotiate "conditionality", using the promise of immediately available funding later if a crisis should occur, is interesting, but I see certain problems. Would news that the Fund had prepared a crisis package actually catalyse such a crisis? This is a real danger in that many "threatened" crises never happen, as noted in the Wyplosz-Eichengreen paper. Would countries ever

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bind themselves to conditionality they did not want (because otherwise they would do it anyway), to help deal with a crisis that was not already there? Similar to the problem of identifying "unsustainable" current account deficits, there is also no agreement as to when fiscal deficits are "too big" or monetary policies "too expansionary". This ambiguity will clearly hamper pre-crisis agreements.

Second, the suggestion that the ILOLR facility should be designed for "the less stable but smaller emerging markets" brings us back to the need to specify clearly the nature of the problem being addressed. Problems in small emerging markets have far less likelihood of developing into systemic problems. On the other hand, as Peter Kenen's paper notes, we should remember that the Fund was not set up to deal with systemic risk but rather to help out member countries with temporary balance of payments financing needs.

There should be, as an "absolutely last resort", recourse to some more formal work-out procedures for sovereign countries akin to Chapter 9 and 11 of the US Bankruptcy Code.

Let me raise a number of problems whilst reiterating my personal belief that finding a better way forward in this area justifies the further, serious attention paid to it in Griffith-Jones' paper:

1. The use of IMF Article VIII 2(b) to support such formal procedures is not legally sufficient. New Articles or an international treaty would be required, and this could take years to negotiate.
2. At the "standstill" stage, if creditors could be prevented from having recourse to the courts, they could still sell assets, leading to overshooting. Thus, if overshooting is the big problem arising from securitisation, it is not obvious that more formal procedures will help significantly. Some questioning of market participants as to possible market responses in altered circumstances might be illuminating.
3. As for "new money", it is not at all clear how security holders could be forced to lend more. There could then still be need for official liquidity support and exposure.
4. As for new "debt reduction" procedures, they would be better than what we currently have if they could be applied in a more timely way, and if they assured that all creditors were treated fairly subject to the various levels of risk they had been paid to assume. In this context, the issue of institutional participation needs serious reflection. One important question is whether the IMF, as a preferred creditor, could be given responsibility for deciding when bankruptcy could be declared, thus imposing costs on others.

Finally, should we be talking publicly about all this? I think the answer is yes. As Stephany Griffith-Jones rightly says, the very fact that investors know a bail-out is not automatic means they will be more prudent than otherwise. This almost always represents a step forward.

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Floor Discussion of the Griffith-Jones Paper

Jack Boorman wondered whether it would be feasible, let alone advisable, to establish international rules for global capital flows. "I have difficulty with the idea that you have to regulate these flows putting in rules, were such rules formulable - I doubt that they are for the same reasons I gave previously about trying to find numerics, for example for the appropriate level of the current account, that apply across a large number of countries. It seems to me that if you then had marketeers who followed those rules, the burden of proof of the official community to act as a lender of last resort would go up enormously. For that reason alone, I would argue strongly against that. It ought to be the market out there, fighting the issue out."

Boorman also disagreed with Griffith-Jones' point that, when a crisis emerges, the first and main response should be to activate quickly a sufficiently large international lender of last resort. "I think not. The first and most important activity in the context of any crisis is to formulate a policy package and to convince the markets that policy is in the end what's going to deal with the situation, not so much the financing, and certainly not primarily the financing that is going to be associated with it. The short-term financing facility that I made reference to was a non-starter and I think it will probably continue to be a non-starter."

Boorman agreed that the discussion about bankruptcy is extremely useful. "If only because it signals the markets that the official community would like to see mechanisms that make the private community take a hit in instances such as Mexico. If there had been a way of isolating the Tesobono holders and getting them to voluntarily extend their maturities as part of a package of policies and financing from the official community in the restructuring of that debt, you could have had a very different solution. And that could be part of the kind of orderly work-out processes that people have in mind."

Finally, Boorman thought that Griffith-Jones' reference to a 'stock of securitised flows that can leave the country within a few hours' might be confusing. "I sometimes think that here language gets in the way. The securities are not even in the country, for the most part. Brady bonds, for example, are trading in New York - they are not going to leave anywhere. They are only going to go down in price. That also holds for securitised credit which is in the country as well. And that's the point. In the extreme, you do not need any funding whatsoever. You can just let the price adjust. What we are trying to do is find that happy medium between funding which provides confidence, so that the price adjustment isn't such

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that it becomes dangerous to the social and political fabric of the country. So I think we do have to step back and ask what it is we are talking about in terms of magnitudes when we think about the potential problems that confront us here."

Charles Siegman endorsed the view that the regulation of capital flows may not be possible or desirable. "The issue of capital inflows and how to 'filter the good and eliminate the bad' has been a task for all investors. The question is whether government officials or international institutions have the ultimate wisdom to make that filter just fine enough so as not to eat into the bone or to allow the 'bad' to come in. This is the delicate part of any form of regulation. I am hesitant about giving a vote of confidence on the ability of regulators, whether domestic, national or international civil servants, to achieve this. It is a very slippery road."

Siegman dwelled on the issues of the risk of a seizure of assets and of an orderly work-out arrangement. "With regard to attaching assets, the issue Bill White asked me to comment on briefly: you are quite right, Bill, that one of the underlying fears during the December-January period of 1994-1995 was of a default by Mexico, with implications that then the risk of attachments would arise. It was most remarkable that in the post-resolution of the 1980s debt crisis there were no attachments. But then you were dealing with a group of very large banks which did a lot of arm-twisting to the smaller banks. Moreover, the full range of debtor countries themselves, from the very responsible countries to perhaps even less responsible ones, wanted to avoid defaulting on their debt and preferred seeking a work-out. But there was a self-interest motive involved. People avoided the word 'default' and emphasised moratorium or suspension of payments and sought debt restructuring instead. Default did not occur because it was to the mutual interests of both the debtors and the creditors to avoid the attachment of assets and legal entanglements, because an attachment provokes a sequence of events: creditors line up, commerce is paralysed, spreading quickly to other parties.

But in 1994, the problem was more acute, because the group of creditors was far more diversified and much more difficult to assemble - whom should you address? The Brady bond holders - whom do you call? Or other securities? The problem with mutual funds is that they are not the final owners. So the objective of the exercise was to avoid attachment of assets with the consequent spiralling effects of unwinding commerce which would have affected much more than just the debtor country or the individual creditors. Whether such a chain reaction would have happened, how bad it would have been - one could draw a very bleak scenario, but it was not inconceivable that such a thing could happen.

With regard to work-outs, Stephany Griffith-Jones points out in one of her comments that it is too late to talk about these in public. We are talking about it here, it is in the newspapers, it is being discussed in various forms. In fact, it is impressive that we are able to discuss this at the same time a country such as Mexico and others are issuing new government securities. And people are buying them! One of the big problems of work-outs is that we have a stock of old debt. Even if you get the best work-out arrangement, how do you draw those people into your orbit? That's not easy. People did not sign a contract with a work-out clause, but if they eventually sign such a contract, there may be certain risks associated with lending, and there will be a premium and costs associated. The market will sort that out easier on new debts - and people are to this day absorbing new debt, from countries of which we do not know whether the terms of repayment will be assured in the future.

The whole question of work-out arrangements is to redistribute the burden of risk- taking. It is not necessarily a governmental obligation to deal with this problem, but whether you have national regulations on capital or not, eventually there may be systemic international risks, and that is where the international community gets involved. Stephany's point is that we have all these preparatory steps, including regulations on capital transactions. But what happens if a country is so important that there are systemic effects - it signs up or it does not sign up and it fails? Do we let that country sink because it did not follow the prescribed preconditions or otherwise? Then we would be back to where we started from in 1994."

Peter Kenen elaborated further on the issue of work-out arrangements. "Some of the talk about analogies with Chapter 9 and Chapter 11 of the US Bankruptcy Code derive from a paper by Jeffrey Sachs. Sachs drew an analogy between Macy's, that was able to raise 750 million dollars in new working capital after declaring bankruptcy, and Russia, which in the same period of time raised much less. He was also somewhat exasperated by the time taken in negotiating Russian debt rescheduling. But I do think that the case he had in mind was rather unique. Indeed, any number of countries have had access to what was essentially working capital from the Fund in periods in which they had difficulty. But the argument in favour of a special procedure to keep working capital flowing to a country is not the key issue. The real issue in debt work-out situations is the one Charles Siegman has just referred to, namely the problem of attachment, which is even greater when there are so many private sector entities. A large number of foreigners have claims. And here I come to the point that Jack Boorman made. It is not simply a question of price adjustment. If I'm holding equities in Mexico or bonds issued by some Mexican entity - not necessarily the government - and there is a crisis (which implies that there will be a price adjustment), I can sell them and go to the foreign exchange market. I will then demand that the Mexican government provide Mexican reserves - unless the exchange rate is freely floating. So even when there is a price adjustment there is still a foreign exchange problem. Mexican nationals will do the same thing - they will liquidate the various claims they have on other Mexican entities and flee the country. So you have a double problem of price adjustment and exchange rate adjustment. I don't see how a work-out arrangement can deal with this problem.

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Let me make one other remark on the suggestion that Stephany made concerning the administration of controls, of guidelines by the capital exporting country's authorities. Quite apart from the problem of devising such rules, there are all kinds of practical problems. Suppose that I have money invested in a country fund and the fund is suddenly told that the country's current account deficit has hit 3.5% for two years running, which implies that no more investments can be made in that country. What should the country fund do? What will happen to my equity? There are very serious problems in the case of instruments like that. How do you deal with Mr. Soros' Quantum Fund, which is an offshore entity? And there are many more funds like that. Finally, I doubt whether it is the responsibility of the securities regulators to administer such controls when it is their principal job simply to protect institutions and investors within their own countries. They are not, after all, empowered to administer controls on behalf of some foreign entity. The idea appeals to me in that it would create jobs for my students, but I really think it is way out of the ball park in terms of practicality, and the administrative problems are enormous."

Johannes Witteveen supported the idea of having a kind of pre-crisis arrangement or a stand-by with the Fund if certain conditions are satisfied. "Bill White feels this to be all very difficult, yet I remember that during my time at the Fund, there were a few countries which regularly had a stand-by with the Fund without needing the money at all, just to have the assurance. (Also, I suspect, because often the Minister of Finance liked to have these conditions because it strengthened his position in relation to his colleagues.) That worked in a number of countries and therefore I wonder whether it would be a good idea to have the possibility - connected to the Article VIII consultations - that countries can resort to a certain additional amount of stand-by that, if necessary, would be available immediately. I think it would work quite well."

Jean-Jacques Rey argued that, before new approaches are discussed, it would be useful to assess what the successes and failures of the current practice have been. "Looking at what was done in the case of Mexico, I have tried to align the pluses and the minuses in retrospect and have found that what was done was fairly successful after all. On the side of the pluses, I have five items. There was the speed of reaction; there was the fact that we indeed avoided contagion - and I agree that there is a difference between systemic risk and contagion, but you cannot push the argument too far because the more contagions you have the more you risk turning back to systemic risk; there was little or no moral hazard on the side of the debtors - conditionality was there and we heard how strong it was; there was very quick recovery of capital market access both for other Latin American countries and I believe for Mexico itself; and, very likely, there are hardly any costs associated with bridging finance since, as Bill White pointed out, it is just a liquidity provision, and nobody thinks that Mexico will not eventually repay, so why not bridge the problem?

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On the side of the minuses: One very evident minus is the issue of channels of communication. The whole thing was very speedy, so speedy that it created a lot of irritation and some lessening of confidence between authorities. Something must be done about that. There was an important moral hazard problem on the side of private creditors (repayment at par whereas prices of securities went down), which one should not under-estimate. There is a minus in terms of equal treatment. Mexico virtually emptied the official funds available for this sort of thing. We must find some sort of replenishment for future countries. And here I reach an issue - I don't know whether it is a plus or minus - and that is the degree of stress put on institutions by these situations. The Congress of the United States refused to deliver so it went back to the Exchange Stabilisation Fund (ESF) and now Congress is trying to tie the ESF. The IMF, too, was pressed into a role which nobody had an opportunity to discuss beforehand and now the G-7 summit in Halifax has urged a doubling of GAB as a most urgent matter. While such a doubling is quite reasonable and could have been reasonable on other grounds, I am concerned that we are now signalling that there are opportunities for doing a sort of Mexican operation again. To that extent, I think that there is a valid counterbalancing argument in working hard on work-out procedures. This will be terribly difficult, indeed. I think the function of this is to enlarge the availability of options for the authorities, not to devise a procedure which will henceforth substitute for and improve on what has been done in the past. But at least when authorities are confronted with such a situation, if they can get together in some form and decide on the basis of various arguments whether the financing road is better in that particular case or whether perhaps private creditors could be enlisted, to come in and share the burden, that may be indeed in itself desirable."

Bernd Goos stressed that he was concerned about resorting to the IMF as a kind of lender of last resort. "I agree with Bill White that the lender of last resort function of central banks is set up on the basis of constructive ambiguity. I am concerned about the Fund becoming a kind of international lender of last resort because the facility which is now discussed in the Fund is not based on constructive ambiguity. There is an attempt to spell out clearly access conditions to this facility, and to that extent it is bound to be counter-productive because it will create moral hazard problems."

Goos did not agree with those who had argued that it is now much harder to restructure debt because it is owned by a very diverse group of bond holders, while most of the debt that was rescheduled in the 1980s was owned by a more homogeneous group of private banks. "There was repeated reference to the difficulties of corralling creditors with securitised credits, and that the world has become much more diverse compared with the 1980s. But I would like to draw attention to a Fund paper which refers to a number of recent cases where rescheduling of bonds was done in a very effective way. One example was one of the Mexican airlines which rescheduled outstanding bonds in a matter of two months, and there

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were also other examples of official debt held in bonds that was rescheduled in a short period with rates of consent by the creditors of up to 97%. So apparently there are ways and means to handle such crises, without a formalised procedure necessarily being required."

Goos thought that the idea of establishing international work-out arrangements was not realistic. "In Europe, efforts have been made for a number of years to harmonise bankruptcy procedures for private firms. This has proved to be an impossible task. The conclusion has been that the legal systems are so different and the perceptions of the problem so different that an agreement is impossible. The idea has since been abandoned. To imagine that it would be possible on a worldwide scale to design and implement work-out and bankruptcy agreements strikes me as unrealistic."

Ariel Buira, however, did not think one should go for constructive ambiguity on the road of the international lender of last resort. "I think we should have a fully developed scheme and work-out facility and so forth. The reason for constructive ambiguity, it was suggested, was that it would minimise the risk of moral hazard. But this is best dealt with by an appropriate balance between costs and benefits, in which costs and benefits are shared in an appropriate way by lenders and debtors. If you look at the Mexican case, the Mexican crisis occurred on December 20, and the final package - with all the interest the Fund and the US had in putting it together - was more or less in place on March 9. Now, Mexico is a special case, for reasons obvious to all of you. It has a large economy, it is a major trading partner of the US, it was a model reformer, it could send several million immigrants to the US - whatever. But it took some time to get all this in place. In the process, the exchange rate moved from 3.50 to 7.50. This was too much, and too costly. I think the risk we are running is not of moral hazard but of doing too little too late. For a smaller country you may not even have made this effort. The problem is one of not doing enough, leading to scarce funds and, even in the case of Mexico, a situation yielding a sharp drop in GDP, a huge rise in unemployment, and rising social and political tensions. I think in future we must be ready with a more structured approach which can be put in place quickly and minimise the unnecessary cost."

Reply by Stephany Griffith-Jones

"A couple of years ago in a previous FONDAD seminar somebody who was sitting here said that the problem with private flows was not a serious problem because if there was a crisis, there would be no bail-out, because it was private investors investing in private companies in developing countries. But in fact, in the case of the recent Mexican crisis there was - it doesn't matter what we call it - a major lending, a major commitment of official resources. So I think we have a problem with these very volatile capital flows and none of us has very clear

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answers. We cannot dismiss the problem. I don't think I was presuming market failure. I am just saying that on occasions markets which may work well do fail. And again, I think that is completely evident.

It is true, as Bill White argues, that it is maybe more a problem of contagion and not of systemic risk. However, having said that, we then talk about financial fragility in major developing countries like Mexico, Argentina and possibly others. And surely if we were going to have crises in banking systems of countries like Mexico and Argentina, there would have been some systemic risk. In a way, the fact that we have an international lender of last resort operating, whether because of systemic risk or contagion, shows that there is obviously a problem.

The other point that we were discussing with Bill at coffee was that he said that the issue the BIS had accepted was that countries should liberalise slower and that Chile was an example of that. I happen to know the Chilean case very well, and what has actually happened, independent of how the Chileans sell this internationally, is that the Chileans have acted pro-cyclically. I think that is correct. It is what the Asians do as well: when capital flows in very quickly, they tend to impose more discouragement measures. The Chileans have now put reserve requirements on secondary purchases of shares and so on, and when there is stringency with regard to new money coming in, they re-liberalise. But it is not true that they liberalise completely. The Chileans are, overall, very committed to a free market economy, but on capital flows they are very pragmatic. And this is also true of other successful countries like Colombia, South Korea, Malaysia. They are counter-cyclical in their measures. They react to flows. In my judgement that is correct. Obviously, if you have too little money coming in, you will want to encourage it. But when you have these surges of excessive inflows, I think there is a case for reserve requirements or other measures. There is a problem in the way, say, the OECD code of liberalisation presents this, because it presents this as a continuum - we are always going towards this long-term goal. Maybe in the year 2100 we can go toward this goal, but we are still quite far away because these are fragile economies, with weak financial markets, etc.

Bill White also makes the point that because most capital flowing into emerging markets in the 1990s is provided by non-banks, this implies that there is far less systemic risk than there was in the case of bank flows in the 1980s. However, none of us believes that the massive devaluation and the massive increase in interest rates that followed the Mexican crisis was either desirable or positive. There was clearly a case of overshooting, which had more damaging effects, as Bill points out, due to the fragility of the Mexican financial system.

I do not agree entirely with Bill's points to counteract the possible need for an international lender of last resort (ILOLR). Though there may be uncertainty that the ILOLR will lend, at least for the larger countries (like Mexico), there will be quite a high likelihood; there will also be the risk that ultimately the country is - or may become - unable to pay all its debts to the ILOLR. Indeed, we learnt in

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the 1980s that the distinction between illiquidity and insolvency is very unclear for developing countries. Consequently, there is a 'moral hazard' problem of an ILOLR (however cleverly defined) and therefore a need for some *ex-ante* regulation to diminish it.

I agree that it is difficult to define an 'unsustainable' current account deficit. However, in recent papers (for example by John Williamson, William Cline, Helmut Reisen and in World Bank documents), valuable attempts have been made which give fairly logical - and similar - suggestions.

I agree that supervision and regulation cannot provide all answers, but they can be a very valuable complement to other measures being discussed. Furthermore, bank supervision - and its coordination internationally improved - much *after* the debt crisis of the 1980s. It would be valuable to improve regulations before new crises occur!

As regards Jack Boorman's comments, I would like to elaborate on what Peter Kenen said. It is not just a matter of the impact that selling securities has on their price - or worse, not renewing short-term securities at any price, as occurred during several weeks with the Tesobonos - but their crucial impact on the foreign market and on the balance of payments. This is precisely what happened in Mexico.

Peter Kenen demonstrated concern that controls could be avoided by people like Soros and so on. However, a recent IMF report shows that these people, although they played a major role in the ERM crisis, played a very small role in the Mexican crisis, so that if one did not manage to control the hedge funds, it would not have affected Mexico all that much. A more serious problem is that of capital flight, but I suspect that even a lot of the capital of the Mexicans and the others which flies in and out would very often use the same instruments as the foreigners coming in. I am not saying that the 'bad' foreign investors should be discouraged, but that certain modalities of investment should be discouraged, whether it is Mr. García (nationals) or Mr. Smith (foreigners). Because they may be using the same instruments. Mr. García, I suspect, may be coming in through the mutual funds, because that gives him more protection.

I agree with the point Charles Siegman makes about diversified investors, who are difficult to assemble. This seems to me to be another reason to emphasise far more than has been done this year the role of crisis prevention.

Finally, in reply to Jean-Jacques Rey, I would like to stress, when he draws a balance of the Mexican peso crisis, a key element which he omits. This is the tremendous cost to the Mexican economy - and people. GDP will fall in 1995 by around 6% (more than during any of the years of the debt crisis!); real wages and investment by far more. This, in spite of the massive financial package put together by the international community."

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What Do Currency Crises Tell Us About the Future of the International Monetary System?

Barry Eichengreen and Charles Wyplosz

I Introduction

Mexico may be the latest but it is not the last in the series of currency crises that have rocked international financial markets. A partial list of recent episodes would include the sterling and lira crises in the summer of 1992, the year-long spasm that then afflicted the remaining ERM currencies, and the collapse of the Mexican peso - with reverberations felt throughout Latin America and Asia - early in 1995.

These crises share three characteristics. First, the necessity of a change in the exchange rate had been debated prior to the crisis but without any consensus being reached among analysts or in the market. Second, the attack on the currency, once it came, was overwhelming. It overpowered the authorities in a matter of hours, forcing them to withdraw from the market. Third, the exchange rate then fell further than required to effect the necessary correction. Once the dust had settled, the currency clearly had become undervalued.

Currency crises are not new. Nor is there much unprecedented about the feeling that markets can turn against a currency without reason and push it too far.[1] Still, the rapid pace of financial integration and liberalisation in recent years has led to a quantitative change in the speed with which markets move. Over the course of the 1980s, many industrialised countries shed their restrictions on the free international movement of financial capital. Developing countries followed their example in the 1990s. These developments, triggered in part by innovations in information processing and communications technologies which make restrictions on international capital movements more difficult to enforce, have created an environment in which the markets can quickly unleash massive speculative attacks.

1. Readers will find very similar criticisms of the operation of foreign exchange markets in, inter alia, Nurkse (1944).

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Economists instinctively regard the liberalisation of international capital movements as a good thing. Like the removal of other restriction on the free play of market forces, international financial liberalisation allows resources to be allocated more efficiently. The integration of financial markets permits investment risks to be almost perfectly diversified. It expands the range of opportunities available to savers and investors in different countries, approaching the ideal in which savings are put to those uses in which their productivity is highest, regardless of the political jurisdiction in which investment takes place.

Curiously, academics and policy makers take a somewhat different view of the operation of domestic financial markets. While acknowledging markets' valuable allocatory role, they are virtually unanimous in agreeing to subject financial institutions and markets to prudential supervision. Intermediaries are required to calculate and maintain risk-adjusted capital ratios and to open their books to government inspectors. Stock markets are required to apply circuit breakers and have brokers impose margin requirements on their clients. Firms whose shares are publicly traded are required to apply standardised accounting practices and meet compulsory reporting requirements.

These regulations are motivated by problems of asymmetric information, insider trading, excess volatility and herd behaviour, and by the belief that large asset price movements can give rise to significant negative externalities. Foreign exchange markets, in contrast, remain wholly unregulated. And yet the experience of recent years makes it harder and harder to pretend that the characteristics that motivate the prudential supervision of domestic financial markets do not also apply to the market for foreign exchange.

In this paper we review what is known about exchange rate crises. We then draw out lessons for the choice of an exchange rate regime. The dilemmas of exchange rate management are particularly acute for small open developing economies. For them, freely floating exchange rates are not tolerable because their markets are thin, their exchange rates would be volatile, and their trade and production would be severely disrupted. But fixed exchange rates are not viable either because they would be highly susceptible to destabilising speculative attack. As a practical matter, such countries do not have available to them an exchange rate regime with the simplicity of a textbook model. In the short run, they will have to pursue a pragmatic policy that involves limited exchange rate management and the imposition of limited restrictions on capital movements. In the long run, they will face strong pressure to contemplate monetary unification with a larger neighbour.

Those larger neighbours, for whom international transactions are less important, will have little reason to contemplate stabilising their exchange rates against one another. This scenario points to eventual emergence of a world organised around three currency zones centred on the United States, Western Europe and Japan. Whatever measures countries take to reform their international monetary

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arrangements in the meantime should be compatible with, or at least should not impede, this long-run tendency toward a tripartite monetary world.

II The Anatomy of Currency Crises

Together with Andrew Rose, we have studied exchange rate crises in a large sample of industrial countries spanning more than three decades.[2] From that analysis we draw four key conclusions.

1. *Exchange rate crises are not always associated with lack of fiscal discipline.* Contrary to popular assumption, countries whose currencies are attacked run do not always run significantly larger budget deficits in the preceding period. More commonly - but not always - the link is rather with excessive monetary expansion which leads to inflation, overvaluation and widening trade deficits.
2. *In some cases - in the EMS in particular - even this link between crises and monetary expansion is absent.* Especially for EMS currencies, but in a surprising number of other cases as well, speculative attacks are not foreshadowed by rapid monetary expansion.
3. *Successful and unsuccessful attacks differ surprisingly little.* The only clear distinction is that attacks are more likely to succeed when unemployment is high. This suggests that countries already in a weak position succumb to attack because they are unable politically to take remedial action.
4. *Capital controls have significant effects.* Notwithstanding scepticism about their enforceability, the evidence suggests that controls are effective in slowing the loss of reserves during speculative attacks.

From these findings a number of implications follow. First, governments which run budget deficits run the greatest risk of exposing their currencies to attack if those deficits are money-financed; bond-financed budget deficits are less likely to provoke speculative attacks. The implication is that the maintenance of a pegged rate regime or a system of bands like the EMS requires monetary policy coordination but not fiscal policy coordination.

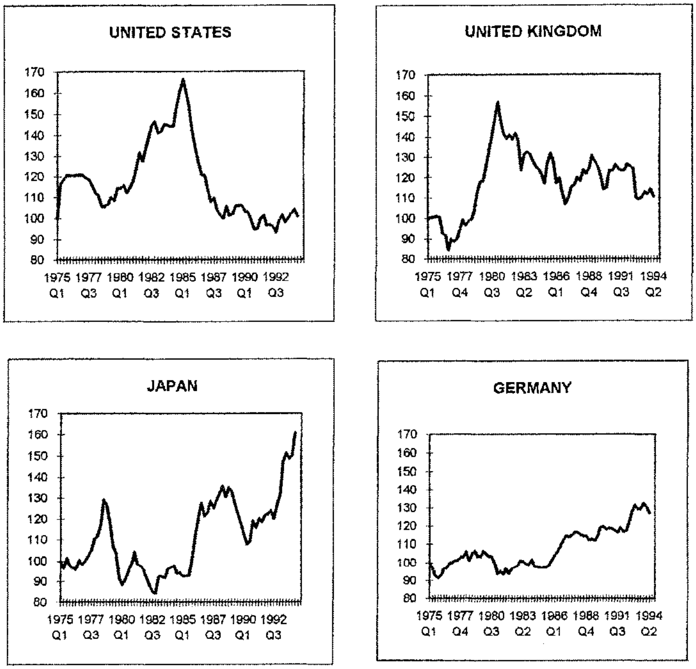
Moreover, crises appear to be of several varieties. While some are the consequence of the pursuit of monetary policies incompatible with the exchange rate peg, others are not obviously explicable in terms of macroeconomic fundamentals and seem to be triggered purely by the belief that a crisis is in the offing.[3]

Finally, the role of capital controls, while limited, can be crucial. Controls do not permit the indefinite pursuit of policies inconsistent with the exchange rate target, nor do they prevent speculative attacks and reserve losses. But they can make the difference between "1990s-style crises" which overwhelm the authorities

2. See Eichengreen, Rose and Wyplosz (1994, 1995a,b).

3. Models of self-fulfilling speculative attacks include Flood and Garber (1984), Obstfeld (1986, 1994), and Ozkan and Sutherland (1995).

Figure 1 Real Exchange Rates
(Relative Unit Labour Costs)



Source: International Monetary Fund

and lead to the collapse of the exchange rate regime, and "1980s-style crises" in which the authorities possess sufficient breathing space to organise orderly realignments and ensure the survival of the system.

III Choice of Exchange Rate Regime

A quarter century of experience since the collapse of the Bretton Woods System leaves no question about the volatility of floating exchange rates. The literature has shown beyond a shadow of a doubt that the rise in exchange rate volatility since 1971 has not been accompanied by a commensurate rise in the volatility of underlying economic fundamentals.[4]

In principle, day-to-day or month-to-month fluctuations pose few problems: it is easy and inexpensive to purchase forward and futures contracts that offer protection from exchange risk. The fluctuations that really matter are currency cycles

4. This is most convincingly shown by Rose (1994).

with a periodicity of five to ten years.[5] Figure 1 serves as a reminder that changes of 50 to 100% in the exchange rates of the dollar, the yen and sterling have occurred over the course of a few years and persisted for considerable periods before being reversed.[6] (Strikingly, the same is not true for the German mark, which is a member of the European Monetary System, or even sterling for the period when it participated in the ERM.) Fluctuations of this sort cannot be hedged. They can alter the pattern of trade in ways that persist even after the exchange rate fluctuation has been reversed. A 60% appreciation of the real exchange rate of the yen, as occurred between 1990 and 1995, is no problem if this reflects a permanent improvement in the productivity and competitiveness of the Japanese economy. But if there is no commensurate increase in Japanese competitiveness and the rise of the yen in the first half of the 1990s is then followed by an offsetting fall in the second half of the decade, as has happened before (recall the period of yen depreciation in 1987-90 following the "endaka episode" of 1985-86), then the dislocations to economic activity can be considerable. These costs take the form of factories closing down in one country and starting up in another, a process which may have to be reversed subsequently at considerable political and economic cost, or one which may endure due to hysteresis effects, resulting in a seemingly arbitrary and capricious shift in the location of employment.

What is a serious problem for large countries like those of Figure 1 can be intolerable for small open ones. Because a larger share of production in small countries is typically sold on international markets, the dislocations caused by exchange rate swings can be excruciating. Because the financial sector is small relative to global financial markets, a shift in market sentiment or in the level of interest rates in the United States can cause them to be flooded by capital inflows which lead to a dramatic real appreciation, or to experience massive outflows which cause the exchange rate to depreciate dramatically.

Yet fixing the exchange rate is not feasible either. Historical evidence clearly shows that speculative attacks on pegged exchange rates can occur for a variety of reasons, not all of which are justified by fundamentals. When they occur, attacks can be so powerful as to make it impossible to organise an effective defense. Increasingly, the response to attacks is to float the currency rather than to devalue and continue as before.[7] In a world of liquid markets and efficient financial technologies (which continually reduce the costs of assuming speculative positions), there exist only two durable exchange rate regimes: floating which does not entail the pursuit of an explicit exchange rate target; and monetary unification (which

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5. Gerlach and Petri (1990) contains an illuminating collection of studies adopting this perspective.

6. Evidence that temporary misalignments can have lasting effects on trade is provided by Baldwin (1988).

7. Examples include sterling and the lira in 1992, the abandonment of narrow ERM bands in 1993, and the Mexican peso in 1994-95.

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eliminates the problem of the imperfect credibility of the exchange rate peg by eliminating the exchange rate itself).[8] Intermediate regimes which involve explicit exchange rate targets (pegged but adjustable rates, target zones, currency bands, crawling pegs) invite attack and are at best temporary expedients to be maintained during the transition to these more durable arrangements. If there exist only two feasible options and these are extremes on the continuum between floating and monetary unification, small and large countries will tend to gravitate to the opposite ends of the spectrum. Large economies like the United States, Japan and Germany will continue to float against one another. Smaller economies for which the costs of floating are prohibitive will seek to establish a durable peg vis-à-vis a larger trading partner. The implication is that we are moving willy-nilly toward a world of three currency zones based on the dollar, the yen and the single European currency.[9] If, as is likely, these currency zones are also trade blocs, they will constitute large and relatively closed economies which can afford the vagaries of real exchange rate fluctuations against one another.[10] None of this is to suggest that this new architecture will emerge any time soon. Europe is only able to contemplate monetary unification after more than 40 years of progressive economic and political integration. And even there, considerable resistance remains to proceeding to monetary union because of objections about inadequate governance and accountability. A world of currency blocs will take time to evolve. The question then becomes how to best organise the long transition.

IV A Critique of Popular Proposals

Any scheme for international monetary reform should facilitate the gradual transition toward a world of stable currency zones. None of the alternatives that currently dominate discussion survives this litmus test.

1. *Free floating.* In the wake of recent crises, eminent economists, G-7 leaders, IMF officials and the stewards of the European Monetary System have

8. This point is argued by Eichengreen (1994). A currency board is an alternative to monetary unification, although we will argue momentarily that it is an attractive option only for a limited range of countries.

9. This is not to imply that these three blocs will approach the conditions for an optimum currency area in the short run. Recall Mundell's (1961) two criteria for an optimum currency area: relatively high levels of labour mobility, and symmetric aggregate supply shocks. Bayoumi and Eichengreen (1994) analyse the magnitude and correlation across a wide range of countries of aggregate supply and aggregate demand shocks. They identify a number of country groupings for which the correlation of shocks points to the feasibility of a zone of currency stability: parts of Western Europe, a Northeast Asian bloc (Japan, Korea and Taiwan), and a Southeast Asian grouping (Hong Kong, Indonesia, Malaysia, Singapore and Thailand).

10. What will happen to countries in Africa, Southern Asia and elsewhere that are left out of these groupings? For the time being, they may be able to peg behind the shelter of strict capital controls, but as they liberalise their financial markets, they will find that a pegged exchange rate is increasingly difficult to maintain. Their response will be to move toward greater exchange rate flexibility in the form of a heavily managed float.

embraced the idea of greater exchange rate flexibility. This fallback position merely reflects the recognition that pegged exchange rates are vulnerable to collapse; it is not an enthusiastic endorsement of the virtues of floating.[11] The risk is that the world will now undergo another swing of the pendulum between the proponents of fixed and floating rates. After another decade of painful experience with exchange rate fluctuations and misalignments, policy-makers will rediscover the costs of living with floating rates. The debate over reform will only have been delayed.

2. *Currency boards.* Other authors (Hanke, Jonung and Schuler, 1992) advocate going to the other extreme and fixing the exchange rate once and for all, by statute or constitutional amendment. Countries can establish a currency board, as Argentina and Lithuania have done vis-à-vis the United States and Estonia has done against Germany. But even a formal currency board arrangement may lack credibility in a politicised environment. A parliament that passes a currency board law can also revoke it if capital outflows threaten to exacerbate unemployment or bring down the banking system. The attack on the Argentine peso and the tremors felt in Hong Kong in the wake of the Mexican crisis illustrate this point.[12] Moreover, the costs of currency boards can be prohibitive in so far as they hamstring domestic lender of last resort activity. While currency boards will be attractive for countries which find floating impossible (because of the thinness of domestic markets or political obstacles to the pursuit of coherent policies) and may therefore become more prevalent as the viability of other forms of pegging continues to erode, due to the harsh constraints they impose on domestic policy autonomy, they are likely to be attractive only to countries in special circumstances.[13]
3. *Pegged but adjustable rates.* The difficulties with these extreme solutions motivate the search for compromise regimes that combine the advantages of fixed and floating rates. Thus, the Bretton Woods Commission (1994) recommended the return to a global system of adjustable pegs. This proposal can be dismissed quickly. The evidence clearly shows that such regimes are not viable in a world of political uncertainty and high capital mobility.
4. *Managed floating.* Other authors, also acknowledging the inadequacies of these extreme solutions, advocate managed floating as a compromise. There is no technical obstacle to this exchange rate regime; indeed, there is good reason to suppose that more and more countries, lacking viable alternatives, will move in the short run in the direction of managed floating. The question is whether the managed floating rate will display desirable properties. To increase the likelihood that this will be the case, Goldstein (1995) and others emphasise the

11. There are exceptions: see, for example, Shultz (1995).
12. Estonia and Lithuania are likely to encounter similar problems once their initial undervaluations are eroded by inflation.
13. These circumstances are detailed below.

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need for better coordination of national macroeconomic policies and recommend the development of early warning systems designed to prevent serious, persistent misalignments.

While this objective is admirable, achieving it is easier said than done. An effective early warning system requires agreement on the danger to be warned against. Paul Revere's midnight ride, warning that "The British are coming, the British are coming", could not have taken place had he not known who the enemy was, and it would have been ineffective if his listeners had not shared his view of their identity. Warning against the danger of misalignment requires agreement on when the exchange rate is misaligned. If research on fundamental real exchange rates has established anything, it is that there exists no consensus on when the level of the exchange rate is appropriate.

Surveillance and early warning signals will accomplish nothing unless national authorities are prepared to adapt their policies in response. The problem here is that there is no such thing as an exchange rate policy per se; exchange rate policy is a by-product of monetary policy.[14] The record of monetary-policy coordination among the G-3 countries gives few grounds for hope for significant improvement. The Plaza and Louvre Agreements could work because they exclusively entailed short-run intervention.[15] Coordination over the longer term erodes monetary independence, which is a non-starter in large, relatively closed economies in which monetary policy is dedicated first and foremost to the pursuit of domestic objectives.

In any case, an early warning system is unlikely to operate with the speed and decisiveness of the markets. Every currency trader has an incentive to anticipate the actions of rivals. On the Executive Board of the IMF, in contrast, it is in the interest of participants to delay taking action until consensus is reached. If a systematic analysis of exchange rate crises, like that described in Section II, reveals few regularities in the behaviour of macroeconomic variables in the period leading up to crises, disagreement on the facts will frustrate efforts to reach agreement on whether and when the warning siren should be activated. This is particularly problematic in a setting where issuing the warning can have a seriously adverse impact on the government receiving it, and where the signal may actually provoke the crisis with which officials are concerned.

The Mexican crisis is a case in point. In a sense, warning signals - in the form of low savings rates, large current account deficits, and declining capital

14. The literature on sterilised intervention has not achieved a consensus on whether this technique, which permits the authorities to intervene in the foreign exchange market without altering monetary policy, has significant short-run effects, but its clear conclusion is that changes in monetary policy are required to alter the long-run evolution of exchange rates.

15. Since the targets and instruments were both short-term, that intervention could be sterilised without eliminating its effectiveness, leaving the stance of monetary policy unchanged.

inflows - had been flashing for a year. Yet there was no agreement on when the situation might become unsustainable or whether the authorities would still succeed in heading it off with modest adjustments in policy.[16] Neither market participants nor the authorities anticipated the crisis that was ignited by what was intended to be an orderly realignment of the currency. Would things would have turned out differently had the IMF issued sterner warnings before the fact?

5. *Target zones.* Another compromise solution, due originally to Williamson (1985), seeks to combine the advantages of fixed and floating rates by establishing a system of target zones. Williamson's target zones would limit exchange rate flexibility by establishing a band of plus or minus 10% around a central parity. Those bands would be shifted before their edges were reached in the event of a fundamental disequilibrium (to use a phrase that is anachronistic but fitting). Soft buffers would allow the band to be pierced in the event of unjustified speculative pressure.

Soft buffers and frequent shifts of the band are crucial to the Williamson proposal, since they promise to avoid the one-way bets and build-up of speculative pressure that afflicts systems of pegged but adjustable rates. The problem they create is lack of credibility. Only when the authorities are prepared to defend the target zone and dedicate monetary policy to preventing the exchange rate from violating its limits will they enjoy the stabilising speculation that produces the "bias in the band" characteristic of target zone models (Krugman, 1991). But then their policy is susceptible to attack, requiring a defense that is expensive and ultimately unsustainable politically. Here as elsewhere in economics, there is no free lunch.

V Viable Options

The members of the European Union can finesse this problem by establishing a monetary union. Other large, relatively closed economies like the United States and Japan can afford to ignore it and allow their currencies to float subject to only occasional, discretionary intervention. Small open economies for which neither choice is feasible face a dilemma. Those in special circumstances may be attracted to currency boards. Typically, they will be very small (like the Cayman Islands), their banks will closely tied to institutions overseas and hence can expect foreign support (like Hong Kong), they will possess exceptionally underdeveloped financial markets (like Estonia), or they will have particularly lurid histories of inflation (like Argentina). But for the vast majority of developing countries, the costs

16. With the benefit of hindsight, of course, everyone insists that they saw the crisis coming, yet such admirable 20-20 hindsight was rarely exhibited before the fact. For an exception, see Dornbusch and Werner (1994).

of this arrangement, which takes the form of a total inability of the government to undertake lender of last resort intervention, will be prohibitive.

For want of an alternative, then, developing countries are likely to move in the short run toward some form of managed float. This trend is already under way: the percentage of developing countries which peg their exchange rates has been declining steadily over time. But systems of managed floating that entail an explicit band or target zone for the exchange rate will grow increasingly difficult to operate as international financial transactions are liberalised. Surges and sudden reversals in the direction of international capital flows will make the unilateral maintenance of an "orderly floating rate" progressively more difficult. Chile, Israel and a number of other industrialising economies have widened their exchange rate bands, and others are sure to follow. The next step in this evolution is movement toward a managed float in which there is no formal exchange rate target.

This is an uncomfortable situation which will obtain in the short run only because there is no viable alternative. In the long run, in contrast, governments are likely be attracted to the idea of robust currency areas, in which they first commit themselves to providing multilateral support for one another's exchange rates and eventually contemplate monetary unification. The European example shows, however, that moving in this direction is both time-consuming and difficult. Because efforts at exchange rate stabilisation invite attack, even when limited to the regional level and supported by promises of multilateral support, they tend to be reversed or abandoned.

Additional measures need to be taken, therefore, to buttress the stability of exchange rates over the transition. The analogy with Stage II of the Maastricht process is direct. While the framers of the Maastricht Treaty foresaw a three-stage transition - a first in which national institutions and policies were reformed, a second in which exchange rates were held stable, and a third in which monetary union commenced - it proved impossible to peg intra-European rates within narrow bands during Stage II. This left two options for completing the transition to monetary union: jumping there directly from wide bands, or imposing the equivalent of foreign exchange transactions taxes to slow down the operation of speculative markets.[17] Europe, because of its exceptional political solidarity and because the economic stakes - in the form of the Single Market - are so high, may yet succeed in navigating the second route.

Countries in other parts of the world, in contrast, have no choice but to follow a more evolutionary route. If they are to succeed in holding their exchange rates relatively stable and in cultivating the tradition of multilateral support that is a prerequisite for moving toward the creation of robust currency blocs, they will have to utilise special measures to insulate their financial markets from international capital flows. Following countries like Brazil, they might place a modest tax

17. We identified these options in an early article (Eichengreen and Wyplosz, 1993).

on, or require minimum holding period for, foreign purchases of domestic equities. They might require non-interest-bearing deposits at the central bank of domestic financial institutions borrowing or lending abroad. Thereby insuring themselves against volatile swings in the direction of international capital flows, they can partially insulate their exchange rates from serious disturbances. By giving themselves the breathing space needed to organise orderly realignments they may be able to maintain modest target zones. As in the EMS countries in the 1980s, such controls can support the operation of a system of reasonably stable rates.

This is a clear lesson of the Mexican crisis. Countries like Chile, Colombia, Brazil, Indonesia and Malaysia which adopted measures to restrict capital inflows avoided the splitting headache caused elsewhere by "tequila effect." Similarly, during the 1992 EMS crisis, countries like Ireland, Spain and Portugal, which retained limited restrictions on capital outflows, managed to devalue and remain in the ERM, while countries like Italy, the United Kingdom and Sweden which retained no such controls were forced to abandon their pegs entirely.[18]

Speculative capital flows are motivated by the search for small capital gains whose annualised value is large because they can be obtained over a short span of time. A small tax on the value of each foreign exchange transaction (say, one per cent) can remove the attractions of a 10% devaluation expected with 20% probability.[19] A tax equivalent can be levied unilaterally (by requiring those engaged in such transactions to make non-interest-bearing deposits with the government or central bank) or multilaterally (through the imposition of a global transactions tax).[20]

Economists, trained to appreciate the magic of the market, are instinctively sceptical of such proposals. A few final observations help to place that scepticism in perspective. First, as observed above, there is no similar objection to regulation and prudential supervision of domestic financial markets. Second, the costs incurred by currency traders required to pay a one per cent tax are of the same order of magnitude as the costs incurred by importers and exporters of goods and services who pay to hedge exposure to exchange risk. Third, the losses incurred by governments and central banks who engage in futile efforts to defend a currency peg can be large and are borne by society as a whole.[21] Fourth and finally, a one

18. Fieleke (1994) dismisses as ineffectual the capital controls applied by Ireland, Spain and Portugal in 1993 on the grounds that "all three countries were obliged to devalue within months after imposing or intensifying controls." Leaving aside whether these countries' controls were well-designed, this criticism misses the point that these three countries were well able to realign and stay in the ERM, whereas countries that did not apply controls, like Italy and the United Kingdom, were driven out of the system.

19. The expected value of the transaction is 2% (10% * 0.2), which is exactly offset by a 1% tax paid on each leg of a round trip.

20. The issue of implementation raises a number of practical issues which space does not permit us to address here. See Eichengreen, Tobin and Wyplosz (1995) for an extended discussion.

21. For example, in defending the krona in the autumn of 1992, the Riksbank spent a staggering US$3,500 for each Swedish citizen. Bank for International Settlements (1993), p.188.

per cent tax on currency transactions will do more to discourage short-term speculative round-tripping than long-term foreign investment; amortised over the long horizon relevant to productive investments, the costs of such measures is negligible.

VI Conclusion

It is important to stress what this argument does not imply. Capital controls are not a long-run solution to currency crises. What must be eliminated is the crises themselves. This can be achieved by letting the exchange rate float or by eliminating it entirely. The first option fits economies which trade little with other countries. The second fits small open economies that trade heavily with a particular partner. If both groups respond as predicted, we should see the emergence decades down the road of an international system organised around a triad of currency zones. Most proposals for international monetary reform hold out little promise because they fail to acknowledge and accommodate these tendencies. Some advocate floating without realising that this is not a feasible long-term solution except for large, relatively closed economies like the United States, Japan and the European Union, and that an interlude of exchange rate volatility will only delay the eventual transition to a world of stable currency zones. Others advocate pegging without admitting that this will only consign countries to chaos comparable to that which recently afflicted the countries cited in our opening paragraph. Our proposal, in contrast, recognises that there are both economic and political arguments for a world of three stable currency zones and that in other parts of the world, as in Europe today, special steps may have to be taken to arrive there.

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Comment on the Wyplosz/Eichengreen Paper

Coen Voormeulen

The paper by Wyplosz and Eichengreen is intellectually challenging and to a considerable extent appealing. It almost convinced me that the introduction of restrictions on capital flows in general might not be a bad idea after all. Yet, after giving it some further thought, I came to an old conclusion: restrictions on outflows will not be a useful device. Sure, markets do react occasionally in an unsatisfactory way - I'll come back to that later on - but restrictions on capital outflows will not make markets function better. On the contrary, they make matters worse.

What the paper says, in fact, is that exchange rate policy is too difficult. So you'd better get rid of it, either by operating a fully flexible system or by total monetary unification. The paper acknowledges that the search for monetary unification takes time. Meanwhile, countries should give themselves some breathing space by the introduction of a small tax or minimum holding period on foreign exchange transactions. Rightly, it is said that economists are instinctively sceptical. I will try to explain this instinct.

A Transactions Tax Delays a Crisis

First of all, Wyplosz and Eichengreen put the scepticism into 'perspective': they note that economists who are sceptical of capital restrictions do not, in general, evince the same attitude towards, for instance, prudential supervision. I would argue that this is something different. Prudential supervision is meant to protect the proper functioning of the banking system and its clients. Because of the interlinkages between banks, bank failures bear the risk of spreading to other banks. In the case of investors, this is not the case. What can be considered a threat is that a country, confronted with a sudden and considerable outflow of capital, would be forced to undergo such excessive adjustment that its domestic economy would be unduly hurt. One could argue that preventing the destruction of a particular economy is at least as good a reason for supervision as the protection of the banking system.

In principle, this might be true. But the introduction of capital restrictions, for instance in the form of a transaction tax, as a means to prevent that risk, implies

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that one considers such a tax as an effective instrument for preventing undue speculation. That, I think, it is not.

We all know the standard objections: the allocation of capital would be disturbed, the tax would have to be implemented worldwide, there will always be possibilities of circumvention, etc. Although justified in themselves, I will leave these objections aside for the moment.

Let us suppose that the transaction tax *is* effective and that it *does* reduce the number of transactions. What would be the effect? Would it decrease volatility? I am not sure. It might. But reducing the number of transactions would make markets thinner, so that every single transaction would - other things being equal - have a stronger effect on the exchange rate.

Even if short-term fluctuations are reduced, I still feel we are addressing the wrong problem. The main problem is medium-term: misalignments built up over time by some form of myopia of the markets. Then, at some point in time, markets enforce a crisis-like correction when they finally take a realistic view of the underlying economic problems of a country.

The Wyplosz-Eichengreen paper correctly points out that up to a certain level markets can be prevented from acting on expected devaluations as the result of a transaction tax. But my expectation would be that, as long as the exchange rate remains unchanged, the underlying problems (large current account deficits, undue expansionary policies, etc.) would continue as well. At a certain point in time, the gains an investor could expect from selling a particular currency have increased to such an extent that the tax will no longer be sufficient to prevent speculation against the currency. In that case, what the tax ultimately does is to delay the correction of the exchange rate. Proponents of such a tax might argue that this delay would give the authorities a breathing space enabling them to take corrective measures. I would argue that it is far more realistic to expect that this delay would imply the continuation of inappropriate policies. It is hard to believe that the tax - reducing as it does the urgency of correction - is an incentive for governments to take corrective action. Therefore, a transaction tax would delay a currency crisis, thus making it even more severe when it finally erupts.

This reasoning might be countered by the argument that crises also occur in situations where fundamentals are strong. I don't believe this. France is often cited as a country where fundamentals did not diverge from those in Germany, whereas the French franc still came under heavy pressure. I would not contest the fact that the traditional fundamentals of France were sound. Yet unemployment was rising, and markets doubted whether the French authorities would be prepared to pursue strict enough policies to keep the parity with the German mark unchanged. Whether markets were right in this perception is a question I cannot answer, but it is hard to believe that investors based this perception on anything other than what they thought to be likely, probably based on past experience.

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By the way, if anything, the pressure on the franc did strengthen French policies. Thus the crisis did have beneficial effects. This is an important point. If we look back, the exchange rates of the lira and of sterling were overvalued in 1992. A correction *had* to take place. The challenge should have been to ensure an early correction rather than delaying it. Therefore, the beneficial disciplinary effects of speculation, or hedging, or arbitrage, or whatever term one wishes to use, would be reduced by a transaction tax, while, if anything, these beneficial effects should be strengthened.

Four Alternative Measures

How could this strengthening take place? Let me review some possible measures, although none of them will give any hard and fast guarantees.

The *first* that is now often mentioned is a better provision of (statistical) information - the IMF is working on a proposal in this area. To some extent this may be of help; markets would be better able to assess the underlying situation in a country, thus preventing excessive capital inflows, and authorities may feel forced to anticipate the possible reaction of the markets by taking appropriate measures.

A *second,* and related measure would be the publication by the IMF of its Article IV reports, in particular its staff appraisals. The view of the Fund can provide markets with a sound basis for their judgements. Admittedly, this would also involve a risk. The frankness of the discussions between Fund staff and the monetary and political authorities might suffer, and a critical assessment by the Fund might even trigger exchange rate problems. But the risk is well worth taking.

A *third* possibility would be to try to diminish moral hazard, particularly for creditors, by providing an alternative to bail-outs. It is clear that, in the case of Mexico, investors strongly believed that Mexico would be bailed out, and they were right. Perhaps with other countries, investors would have felt less comfortable, but any reduction in expectations of a bail-out would be helpful.

A possible alternative to a bail-out is, of course, a situation where the international community would refrain from action. This would, however, entail heavy costs to the countries involved and markets might consider this unrealistic. Another alternative would be a work-out arrangement, as is now being discussed within the G-10. Making such a work-out a very formal procedure is probably not realistic as this would involve too many legal difficulties, but a somewhat more informal approach could be helpful. One could envisage that the international community would make clear - in some way - that a financial package would not in general be extended. Then, a country faced with a liquidity shortage may have to declare a temporary standstill after which debt restructuring, also extending to bonds, would be negotiated. Attached to such a restructuring could be a quick disbursement of IMF credit, possibly in the framework of the newly established

Emergency Financing Mechanism, and in certain instances the credit could even be of exceptional size.

Such a package would entail a substantial number of problems, and it might even be seen as a bail-out as well. However, the essential difference is that a work-out would have as its inevitable complement some kind of debt restructuring, thus ensuring that creditors accept a loss.

There is a *fourth* possibility for addressing large capital inflows into countries experiencing undue difficulties in handling their monetary policies in those circumstances. I am referring, with some reluctance, to capital restrictions on inflows. In the Mexican case it was clear that the initial level of capital inflow was excessive; it contributed to an increasing current account deficit for which no correction was in sight. And Ariel Buira mentions that the inflow of money went hand in hand with a 'rapid growth of non-performing loans', clearly indicating that the level of inflow was unsustainable.

- There are several reasons why capital inflow restrictions are less problematic than restrictions on outflows.
- The mouse-trap argument (reluctance to invest in a country for fear of the impossibility to get out again) is not applicable, so in that sense such restrictions do not hurt the long-term development of an economy.
- These restrictions might be seen as a sign of strength rather than of weakness, as they may be perceived as an element of sound monetary policies.
- Circumventing the restrictions is unlikely, because there will undoubtedly be a second-best investment for an investor with comparable returns, eliminating the incentive for circumvention.

For developed economies restrictions on inflows do not constitute a realistic device. There, they are also less needed. Capital markets are more mature and sterilisation will be easier. Likewise, the other suggestions which I just made would probably not help to prevent possible crises in Western Europe. In the ERM the best way of preventing a currency crisis from re-emerging is, in the reasoning of the Wyplosz-Eichengreen paper, by attuning policies to convergence, thus paving the way for monetary union. A narrowing of the present wide bands for countries not showing enough convergence is probably unwise, but for countries where fundamentals are in line with those of the anchor currency, stabilising the exchange rate is by no means impossible - as has been proved by the Netherlands and Austria. But it requires an unlimited preparedness to defend the currency, not (only) by intervention, but by appropriate and early adjustments of domestic interest rate levels. In that sense one could argue that these countries could just as well form a monetary union. In principle, they could. And they will, but within the framework of the Maastricht Treaty. Implementing the Treaty will be the best way to make sure that currency crises within Europe will no longer occur.

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Floor Discussion of the Wyplosz/Eichengreen Paper

Johannes Witteveen observed that Charles Wyplosz had not mentioned two major problems of the current international monetary system. "First, I think that the climate in which these volatile capital movements originate and in which this overshooting happens is an inflationary climate in which capital is often financed without reducing the supply of money in the capital-exporting countries. That is why these flows so easily reach such high levels. There is a major problem confronting the world economy as a whole, namely how to develop a better management of total international liquidity. The other problem which Mr. Wyplosz fails to see or denies the importance of is these very big fluctuations in real effective exchange rates of the major countries. You say that this is not important to the United States. I doubt that. But it is certainly of enormous importance for Japan. Every day we read about the enormous difficulty this is causing the Japanese economy. I think such changes in real exchange rates have a very deep effect on the real economy and cause major disturbances. The problem is not only what to do with exchange rates in smaller open economies, but also in major economies."

Regarding the solution to these major problems, Witteveen referred to a paper he had presented to the Dutch Economic Association in December 1994 on 'Fifty Years After Bretton Woods'. "In the first place, I suggested in that talk that it would be a good idea if the international community - the IMF, the BIS, the central banks of the major countries - surveyed the developments in international liquidity from time to time, and assessed what the sources of increases in liquidity had been. If the creation of international liquidity had been excessive (which is often the case), one should then see what could be done to manage it. Now, as we all know, one of the major sources of international liquidity has been and still is the US balance of payments deficits, including capital exports from the United States to Mexico and other emerging economies. It is a major flaw of the dollar standard that US deficits are paid in dollars which somehow have to be held by other central banks or commercial banks. So, to me it seems a rather logical idea (at least if the United States sees the importance of a little better management of the dollar rate, which ought to be the responsibility of a reserve currency country) that, if the exchange rate of the dollar reaches a certain level where it becomes clear that there is a deficit which is bringing the exchange rate up or down (I think of approaching the wider band that the Bretton Woods Commission had in mind), then measures are taken to attract capital flows which could finance the US deficit in a better way. I mean, not finance the US deficit just by forcing central banks

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to accumulate dollars, but by attracting money on world capital markets in non-dollar currencies, thus making it clear that the US administration would really work to stabilise the dollar within that wider band. At the same time, of course, the United States would then be looking at the possibility of adjusting its policies. This would yield both an instrument for better management of international liquidities and for greater stability in real exchange rates. Both issues are certainly a very serious problem in the present monetary system, or non-system as it perhaps could better be called.

I know that in the past, when this idea was brought up (of letting the United States borrow in other currencies), it was suggested that this would undermine the credibility of the dollar. It seems to me that after what happened recently with this enormous fall of the dollar, a stabilisation of the exchange rate of the dollar within reasonable bands as proposed by me and others would rather restore credibility.

These ideas may go beyond what we are discussing today. I nevertheless thought that I might put them on the table."

Peter Kenen saw major difficulties with some of the proposals in the Wyplosz/Eichengreen paper.

"First a small point, Charles. The Bretton Woods Committee did not propose a return to fixed but adjustable exchange rates. As one who negotiated for hours the language of that report, I can tell you that what we proposed was an 'eventual adoption of a system of flexible currency bands'. Managed floating? Maybe, I don't know. But certainly not 'fixed but adjustable exchange rates'.

Second, there is the rather coy footnote 20 in your paper on the practical difficulties of administering a foreign exchange tax. Let me point out that it has not only to be administered globally, I mean everywhere, including the Cayman Islands, but it has to be administered in respect of spot, forward and swap transactions, and futures and options. If not, you have a problem. You and I will cross swords on this at another place and another time and over a different basic issue. I have been told by many people that if one imposes a tax much in excess of 5 basis points, the incentive to invent synthetic currency transactions through the options market will be enormous, and therefore evasive of such a tax.

Finally, on the question of capital controls, in particular the idea that you can limit volatility by deposit requirements, I'm sympathetic to the idea of using those to limit inflows, but as I have said before, I don't think you can use them to prevent massive outflows, except in so far as you can use them to prevent financial institutions from going short the domestic currency or financing short positions by others. You cannot use these controls to prevent non-banks, including foreigners, from liquidating existing long positions in domestic currency. Would you say to a holder of Tesobonos: 'If you choose to sell them, you must then deposit a portion of the proceeds with the Central Bank in Mexico before you can sell the peso proceeds for dollars?' What about a non-bank holder of pesos who simply

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takes his bank account and crosses the foreign exchange market? The leaks here are enormous. I grant that controls can prevent very large transactions by financial institutions and very large-scale borrowing from the banking system. But it would be harder to track and control the very large number of transactions by nonfinancial institutions and individuals."

Stephany Griffith-Jones answered Charles Wyplosz' question why careful regulation of domestic banking systems is perfectly acceptable, whereas any kind of similar regulation internationally is not accepted. "Part of the answer is that - and if one reads Kindleberger again one can see that - there have been a lot of very costly domestic banking crises, and people have paid the cost, again and again. As a result, they decided that the least bad option was to have the kind of arrangements that we now have on the domestic front. And similarly, I would argue that a lot of the international regulation that now exists on banks was imposed after problems arose, after the Mexican crisis, after the Herstatt crisis. Regulation tends to move after a crisis, after the costs have been borne. I think it would be nice if we could learn from history - of course, nobody does - and sometimes try and have developments on the regulation front to stop costly crises before they happen. But even if one follows this hypothesis, there may be a case, now that we have had our first crisis of the 21st century as Camdessus said, for some regulation or some other kinds of measures, like those discussed by Charles Wyplosz, that would diminish these risks."

Charles Siegman was struck by the notion in the Wyplosz/Eichengreen paper that all the countries that are potentially subject to the powerful impact of surges of capital should rely on the development of a currency union.

"It isn't clear from the example in the paper whether Mexico should join the United States eventually or some other currency union. And if the geographical location is not the justification for committing itself to a union, e.g. Malaysia or Saudi Arabia, where should the country go? There is a whole range of countries that are subject to exchange market fluctuations. One would have to start identifying what the natural location for them would be.

Good policies will generate stability in economies and prevent those countries from experiencing serious payments problems. We have not sufficiently addressed the problem of how countries can create the self-discipline to pursue policies that are good for themselves and eventually good for the collective system. That has been the constant battle which the IMF has had with its clients, and that the G-7 has had in its dialogues. I do not have the answer. But I think that focusing attention on sound monetary and fiscal policies in the context of global cyclical developments is not to be dismissed. That is the best preventive, both for internal impacts of surges - you won't get them - and outflows that are disruptive, and even for tackling the fluctuations that Mr. Witteveen is concerned about.

The other issue which I think one has to start mentioning at this point is that of self-discipline, not just with regard to policies, but also with regard to official

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borrowing. Official borrowing is something which is in the control of the governments. It is not regulation, it is a matter of not being tempted to supplement reserves to protect a fixed exchange rate which may not be able to be protected over time, or avoiding the domestic policy adjustments that are inevitable. That is not regulation, it is a matter of not going to the market and issuing new government securities. Some European countries in the 1950s and 1960s - Italy and others - utilised the international markets to supplement reserves aggressively, and typically got into trouble by over-borrowing. So it is not just limited to the case of Mexico.

I will not comment on Mr. Witteveen's suggestion on the role of the dollar and the various policies, but I think there's an undertone that there are national authorities who are forced to hold reserve currencies. They are not obliged to do so. The role of the dollar as an international currency has been selected by the market. The United States did not impose that role. The US current account deficit is large and the United States should pursue policies that would bring it down for its own good. Eventually, that will be good for the global economy. I appreciate the suggestions of adjusting the various policies in order to create more global stability. It is certainly in our collective interest. The United States is not immune; it is not that only other countries must have good policies - the US needs them as well."

Bernd Goos reacted to Siegman's last remark about the 'free will' of other countries and banks to hold US dollars. "I don't think it is as simple as that - that other countries are holding the dollar because they like to. After all, the dollar is the leading currency, and if the dollar declines because of huge fiscal and current account deficits in the United States, and other currencies correspondingly appreciate against the dollar, it has of course an impact on the economy of these other countries. So you are not totally free to buy or not to buy the dollar. I think the Japanese behaviour to some extent reflected this economic consequence."

Reply by Charles Wyplosz

"Let me go back to where I left off, which was asking for better solutions. I was not surprised that most people did not like the ideas put forward in our paper. One of the solutions I heard was that of Bill White, who essentially said 'All is fine'. Countries which have floating exchange rates are very happy with them. Even Krugman sees no problem with real exchange rate swings, so that's fine. But I also heard an attack from the opposite side, Mr. Witteveen saying 'you should worry about dollar undervaluation and yen overvaluation, as this is a serious problem'. Yes, I agree with you that it is a serious problem. I was trying to go a little bit in the direction of where I expected trouble with Bill White saying 'It's fine, it's fine'. I think when you say it's fine, you at least should concede that this is not a unanimous view, no matter what Paul Krugman says. Some people who are not

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that unreasonable think it is a problem and it is creating difficulties, so I don't think that is the solution.

The other solution came from Charles Siegman, who was saying that 'good sound monetary policies' would do it, and the self-discipline by borrowers - that's fine. I don't know what kind of politicians you talk to. The ones I see operating, including in the US Congress - maybe with the exception of the Netherlands, which has managed to have a fixed exchange rate for a long, long time - are not the ones I would rely upon to pursue a sound monetary policy and to impose upon themselves the self-discipline needed. If you admit that politicians are prone to making mistakes, then again we return to the question of how much of a price we want countries to pay for the policy mistakes made by politicians. And we can go back to Mexico. We had a long discussion this morning about whether there was a policy mistake and if so, how big it was. I think the agreement was that there was some policy mistake, but nothing really huge. The price paid by Mexico for this policy mistake has been terrible. So it is not enough to say, 'yes policy mistakes happen now and again but let's just educate the politicians'. We have to accept that politicians make mistakes, or that markets believe that politicians make mistakes. And that is enough to create fairly awful situations.

My discussant mentioned France, and the attacks on the franc as an example. Perhaps something which has not been explained about self-fulfilling crises is that it is a very subtle concept. It says that when there is an attack, for good or bad reasons, governments need to have the resolve to resist the attack and that is hard enough. It is already hard enough to have politicians with good policies. When an exchange rate crisis occurs for reasons that may or may not be justified, it becomes harder to have resolve. When the market starts running really quickly and the reserves are being drained and the interest rates have to be raised to a fairly high level, it is hard to do that. And if the attack is of the kind we had in Mexico, which was completely overwhelming, beyond the ability of any central bank in the world to manage, it just becomes impossible. And that is the idea of self-fulfilling attacks - attacks which may or may not be justifiable are just overwhelming, and even if you have good politicians but bad luck, bad expectations, when something goes wrong or the markets rightly discover that the politicians are not the angels we expect them to be, then we can have these kind of attacks. (The Netherlands is the exception in this case.) The costs of these things are very high. So the idea of a self-fulfilling attack is something that requires deep thinking: it happens because people believe that it will happen.

Let me now turn to the point raised by Bill White that in the end international financial markets are regulated indirectly. What I do not see on the exchange rate market is what we see in many markets, namely the circuit breakers. When the markets start going crazy, we stop the batterings in Wall Street and people are told to go and have a drink and think it over. If the peso or pound sterling

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plummet within the span of minutes, nobody arises to say: 'let's stop and think about it'. That's the big difference.

There was an argument earlier about why should we care about international financial markets. It is said that we need to protect the domestic markets for good reasons. But I would argue that in the game on the international financial markets, the stakes are much higher. These are policies, not just a few investors who take their risk and may lose. It is a whole policy setting that goes down the drain, which is far more dangerous. At stake in the Mexican crisis was not only whether the Mexican government could survive, and not only whether Mexico would stay the course of liberalising its goods market and financial market - it was whether all of Latin America would stop taking Mexico as an example. So the stakes on the international financial markets are much higher in my view than the stakes on the domestic financial markets."

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Appendix

List of Participants in the Seminar on "Can Currency Crises Be Prevented or Better Managed? Lessons from the Mexican Crisis," Amsterdam, 18 September 1995

Mr. Walter Baars	Executive Vice President, ABN AMRO Bank
Mr. Jack Boorman	Director, Policy Development and Review Department, International Monetary Fund
Mr. Ariel Buira	Deputy Governor, Banco de México
Mr. Giorgio Gomel	Head of the International Division, Research Department, Banca d'Italia
Mr. Bernd Goos	Head of International Relations Department, Deutsche Bundesbank
Ms. Stephany Griffith-Jones	Senior Fellow, Institute of Development Studies, Sussex
Mr. Peter B. Kenen	Walker Professor of Economics and International Finance, Princeton University
Mr. Frans van Loon	Director, Emerging Markets Group, ING Group
Mr. Godert A. Posthumus	Member of the Council of State of the Netherlands; former Executive Director of the IMF
Mr. Jean-Jacques Rey	Executive Director, National Bank of Belgium
Mr. Charles J. Siegman	Senior Associate Director, Division of International Finance, Board of Governors of the Federal Reserve System

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Mr. Jan Joost Teunissen	Director, Forum on Debt and Development
Mr. Coen Voormeulen	Deputy Manager, Monetary and Economic Policy Department, De Nederlandsche Bank
Mr. William R. White	Economic Adviser and Head of the Monetary and Economic Department, Bank for International Settlements
Mr. H. Johannes Witteveen	former Managing Director of the IMF
Mr. Charles Wyplosz	Professor of Economics, INSEAD (European Institute of Business Administration), Fontainebleau

Observer

Mr. Rein Zunderdorp	Chairman of the Executive Board, Forum on Debt and Development

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