A wide consensus had emerged among economists. Capital account liberalization – allowing capital to flow freely in and out of countries without restrictions – was unambiguously good. Good for the debtor countries, good for the world economy. The two-fold case for capital mobility is relatively straightforward: First, capital mobility creates superior insurance opportunities and promotes an efficient allocation of investment and consumption. Capital mobility allows households and firms to insure against country-specific shocks in worldwide markets; households can thereby smooth their consumption and firms better manage their risks. Business cycles are dampened, improved liquidity management boosts investment and promotes growth. Second, besides insurance, capital mobility also permits the transfer of savings from low- to high-return countries. This transfer raises worldwide growth and further gives a chance to the labor force of low-income countries to live better. In these two respects, the increase in the flow of private capital from industrial to developing countries from $174 billion in the 1980s to $1.3 trillion during the 1990s\(^1\) should be considered good news.

That consensus has been shattered lately. A number of capital account liberalizations have been followed by

\(^1\) Summers (2000).
The past twenty years have witnessed large scale crises such as those in Latin America (early 1980s), Scandinavia (early 1990s), Mexico (1994), Thailand, Indonesia, and South Korea (1997), Russia (1998), Brazil (1998–9) and Argentina (2001), as well as many smaller episodes. The crises have imposed substantial welfare losses on hundreds of millions of people in those countries.

Economists, as we will discuss later, still strongly favor some form of capital mobility but are currently widely divided about the interpretation of the crises and especially their implications for capital controls and the governance of the international financial system. Are such crises just an undesirable, but unavoidable by-product of an otherwise desirable full capital account liberalization? Should the world evolve either to the corporate model where workouts are a regular non-crisis event or to the municipal bond model where defaults are rare? Would a better sequencing (e.g., liberalization of foreign direct and portfolio investments and the building of stronger institutions for the prudential supervision of financial intermediaries before the liberalization of short-term capital flows) have prevented these episodes? Should temporary or permanent restrictions on short-term capital flows be imposed? How does this all fit with the choice of an exchange rate regime? Were the crises handled properly? And, should our international financial institutions be reformed?

This book was prompted by a questioning of my own understanding of its subject. Several times over recent years I have been swayed by a well-expounded and coherent proposal only to discover, with striking naivety, that I later found an equally eloquent, but inconsistent, argument just as persuasive. While this probably reflected lazy thinking on my part, I also came to wonder how it is that economists whom I respect very highly could agree broadly on the facts and yet disagree strongly on their implications.

I also realized that I was missing a “broad picture”. An epitome for this lack of perspective relates to international institutions. I have never had a clear view of what, leaving aside the fight against poverty, the International Monetary Fund (IMF) and other international financial institutions (IFIs) were trying to achieve: avoid financial crises, resolve them in an orderly manner, economize on taxpayers’ money, protect foreign investors, respect national sovereignty, limit output volatility, prevent contagion, facilitate a country’s access to funds, promote long-term growth, force structural reforms - not to mention the IMF’s traditional current account, international reserves and inflation objectives. This book is to some extent an attempt to go back to first principles and to identify a specific form of market failure, that will guide our thinking about crisis prevention and institutional design. Needless to say, I will be focusing on a particular take on the international financial system, which need not exclude other and complementary approaches. I believe, though, that the specific angle taken here may prove useful in clarifying the issues.

The book is organized as follows. Chapter 1 is a concise overview of recent crises and institutional moves for the reader with limited familiarity with the.
INTRODUCTION

Chapter 2 summarizes and offers a critique of economists' views on the subject. Chapter 3 provides a roadmap for our main argument. Basically, I suggest that international financing is similar to standard corporate financing except in two crucial respects, which I name the "dual-agency problem" and the "common-agency problem". Chapter 4 therefore provides the reader with a concise review of those key insights of corporate finance that are relevant for international finance. Chapter 5 describes the market failure. Chapter 6 draws its implications for crisis prevention and management. Chapter 7 investigates the lessons of the analysis for the design of international financial institutions. Finally, Chapter 8 summarizes and discusses routes for future research.

FINANCIAL CRISIS, LIQUIDITY, AND THE INTERNATIONAL MONETARY SYSTEM
Many excellent books and articles have documented the new breed of “twenty-first century” financial crises. I will therefore content myself with a short overview of the main developments. This chapter can be skipped by readers who are familiar with Emerging Markets (EM) crises.

The pre-crisis period

No two crises are identical. At best we can identify a set of features common to most if not all episodes. Let us begin with a list of frequent sources of vulnerability in recent capital-account crises.

Size and nature of capital inflows. The new breed of crises was preceded by financial liberalization and very large capital inflows. In particular the removal of controls on capital outflows (the predominant form of capital control) has led to massive and rapid inflows of capital.

Instead of inducing onshore capital to flow offshore to earn higher returns, these removals have enhanced the appeal of borrowing countries to foreign investors by signaling the governments' willingness to keep the doors unlocked.\(^2\)

At the aggregate level, the net capital flows to developing countries exceeded $240 bn in 1996 ($265 bn if South Korea is included), six times the number at the beginning of the decade, and four times the peak reached during the 1978–82 commercial lending boom.\(^3\) Capital inflows represented a substantial fraction of gross domestic product (GDP) in a number of countries: 9.4 percent for Brazil (1992–5), 25.8 percent for Chile (1989–95), 9.3 percent in Korea (1991–5), 45.8 percent in Malaysia (1989–95), 27.1 percent in Mexico (1989–94) and 51.5 percent in Thailand (1988–95).\(^4\)

This growth in foreign investment has been accompanied by a shift in its nature, a shift in lender composition, and a shift in recipients. Before the 1980s, medium-term loans issued by syndicates of commercial banks to sovereign states and public sector entities accounted for a large share of private capital flows to developing countries, and official flows to these countries were commensurate with private flows.

Today private capital flows dwarf official flows. On the recipient side,\(^5\) borrowing by the public sector has shrunk to less than one-fifth of total private flows.\(^6\) As for the composition of private flows, the share of foreign direct investment (FDI) has grown from 15 percent in 1990 to 40 percent, and that of global portfolio bond and equity flows grew from a negligible level at the beginning of the decade to about 33 percent in 1997. Bank lending has evolved toward short-term, foreign currency denominated debt. Such foreign bank debt, mostly denominated in dollars and with maturity under a year, reached 45 percent of GDP in Thailand, 35 percent in Indonesia and 25 percent in Korea just before the Asian crisis.\(^7\)

There are several reasons for the sharp increase in the capital flows in the last twenty years: the ideological shift to free markets and the privatizations in developing countries; the arrival of supporting infrastructure such as telecommunications and international standards on banking supervision and accounting; the regulatory changes that made it possible for the pension funds,

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\(^2\) For such a signal to be credible, though, a government that is committed to capital-account liberalization must find it less costly to lift controls on capital outflows than a government that is not committed. See Bartolini-Drazen (1997) for a formalization of this idea.

\(^3\) World Bank (1997).


\(^5\) See Gourinchas et al (1999) for evidence on lending booms. Among other things, this paper suggests that lending booms are not damaging to the economy, although they substantially increase the probability of a banking or balance of payment crisis. Also, the proportion of short-term debt rises with investment during the build-up phase.


\(^7\) The Economist (1999).

\(^8\) See De Gregorio et al (1999) and The Economist (1999) for a lengthier discussion of the sharp increase in capital flows from developed countries to developing countries. We should note, though, that despite this sharp increase it is still the case that a small amount of capital flows from rich to poor countries. Kraay et al (2000) present useful evidence on "country portfolios". Based on a sample of 68 countries, accounting for over 90 percent of world production, from 1966 through 1997, they show among other things that countries hold small gross asset positions and that these assets are mainly loans. For example, industrial countries hold about 3.3 percent and 3.9 percent of their wealth in foreign equity assets and liabilities. These proportions are about 11 percent for foreign loan assets and liabilities. Relatedly, it is well known that individuals hardly hedge risks across countries. Over 90 percent of US and Japanese financial portfolios (and 89 percent and 85 percent of French and German portfolios) are invested in domestic assets (French–Poterba 1991), which furthermore are positively correlated with the individuals' non-financial wealth (human capital). It is also well-known that consumption is less correlated across countries than output, in contrast to what portfolio diversification would suggest. See Lewis (1999) for a thorough survey of the home bias in equities and consumption.
banks, mutual funds, and insurance companies of developed countries to invest abroad; the perception of new, high-yield investment opportunities in Emerging-Market economies; and the new expertise associated with the development of the Brady bond market.  

Banking fragility. Up to the 1970s, balance of payment crises were largely unrelated to bank failures. The banking industry was highly regulated, and banking activity was much more limited and far less risky than it is now. It operated mostly at the national level and foreign borrowings were strictly constrained by exchange controls. Various regulations, such as licensing restrictions and interest rate ceilings, kept banks from competing against each other. There were also far fewer financial markets and derivative instruments to play with.

The 1970s and 1980s witnessed a trend toward openness and deregulation, but the subsequent expansion in banking activities and exposure in capital markets made banking riskier. In response, the Basle Committee on Banking Supervision in the past several years has been involved in instituting new banking regulations, concerning minimum capital standards for credit risk (the Basle Accord in 1988), and risk management (the 1996 Amendment to the Accord to account for market risk on the banks’ trading book), and is proposing some further reforms.

A common feature of the new breed of crises is the fragility of the banking system prior to the crisis.  

Often, the relaxation of controls on foreign borrowing took place without adequate supervision. For example, banking problems played a central role in the Latin American crises of the early 1980s. The widespread insolvency of Chilean institutions in 1981–4 resulted in the Chilean government guaranteeing all foreign debts of the Chilean banking system and owning 70 percent of the banking system in 1985. Similarly, the banks of the East Asian countries that suffered crises in 1997 (Thailand, Korea, Indonesia, Malaysia) were very poorly capitalized. [More generally, overleverage was not confined to banks as firms’ balance sheets also deteriorated prior to the crises. For example, leverage doubled in Malaysia and Thailand between 1991 and 1996, according to the World Bank (1997).]

Currency and maturity mismatch. Some of the domestic debt and virtually all of the external debt of EM economies is denominated in foreign currency, with very little hedging of exchange rate risk, a phenomenon labeled “liability dollarization” by Calvo (1998). For example, before the Asian Crisis, Thailand, Korea, and Indonesia created incentives to borrow abroad through implicit and explicit guarantees and other policy-induced incentives. To be certain, banking regulations usually mandate currency matching, but such regulations have often been weakly enforced. Furthermore, even if the banks’ books are formally matched, they may be subject to a substantial foreign exchange risk through their non-bank borrowers’ risk of default. For

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9 Calvo (1998, 2000) argues that the securitization of non-performing sovereign debt under the Brady plan forced financial institutions to learn about the economies’ fundamentals and made them more willing to buy securities in the corresponding countries.

10 This fact is well documented by Kaminsky and Reinhart (1999). See also Goldfajn-Valdes (1997) for an analysis of Chile, Finland, Mexico and Sweden.

11 See, e.g., Diaz–Alejandro (1985) and Harberger (1985).

12 For example, Thailand offered tax breaks on offshore foreign borrowing. In contrast, Taiwan had well-capitalized banks with little currency and maturity mismatches. Despite a contagious attack on its currency, which forced officials to float the rate, the Taiwanese economy suffered little from the 1997 crisis.
example, the Indonesian private sector engaged heavily in liability dollarization, and so the banks faced an important "credit risk" (de facto a foreign exchange risk) with those borrowers who had borrowed in foreign currencies.

The second type of mismatch was on the maturity side. For instance, 60 percent of the $380 bn of international bank debt outstanding in Asia at the end of 1997 had maturity of less than one year. Often, the short-term bias has been viewed favorably and even encouraged by policymakers. Mexico increased its resort to de facto short-term (dollar-denominated) government debt, the Tesobonos, before the 1995 crisis. South Korea favored short-term borrowings and discriminated against long-term capital inflows. Thailand mortgaged all of its government reserves on forward markets. As documented by Detragiache–Spilimbergo (2001), short debt maturities increase the probability of debt crises, although the causality may, as they argue, flow in the reverse direction (more fragile countries may be forced to borrow at shorter maturities).

Macroeconomic evolution. Despite attempts at sterilizing capital inflows in many countries, aggregate demand and asset prices grew. Real estate prices went up substantially.

In contrast with earlier crises, which had usually been preceded by large fiscal deficits, the new ones offered more variation in fiscal matters. While some countries (such as Brazil and Russia) did incur large fiscal deficits, many others, including the Asian countries, had no or small fiscal deficits.

Poor institutional infrastructure. Many crisis countries have been marred by poor governance, low investor protection, connected lending, inefficient bankruptcy laws and enforcement, lack of transparency, and poor application of accounting standards.

Currency regime. As Stan Fischer (testifying to the Meltzer Commission, 2000) notes, all countries that have lately suffered major international crises had fixed exchange rates (or crawling pegs in the case of Indonesia and Korea).

Summers (2000) usefully summarizes the major sources of vulnerability in recent major capital-account crises. As Table 1 shows, traditional determinants of exchange-rate crises (current-account and fiscal deficits) played a role in only some economies. In contrast, banking weaknesses and a short debt maturity seem to have been present in most of the crises.

The crisis

Crises are usually characterized by the following features (in no particular chronological order):

Sudden reversals in net private capital flows. Large reversals of capital flows in a short time interval had a substantial impact on the economies. The reversal reached 12 percent and 6 percent of GDP in Mexico in 1981–3 and 1993–5, respectively, 20 percent in Argentina in 1982–3, and 7 percent in Chile in 1981–3. In


14 Remember that a non-sterilized intervention is similar to an open market operation except that the assets purchased are foreign assets rather than domestic ones; it therefore impacts the domestic monetary base. To avoid affecting the domestic monetary base, the Central Bank can engage in an offsetting domestic intervention by selling domestic bonds. Thus, in reduced form, a sterilized intervention amounts to purchasing foreign assets by selling domestic ones (or the reverse).

15 World Bank (1997, Figure 1.5).
Indonesia, Korea, Malaysia, Philippines, and Thailand, the combined difference between the 1997 outflows and 1996 inflows equaled $85 bn, or about 10 percent of these countries' GDPs.

Exchange rate depreciation/devaluation. Most countries suffering a crisis were countries with well-integrated capital accounts and with a fixed exchange rate (or crawling peg). The attacks forced the central banks to abandon the peg or more generally to let their currency depreciate. Figure 1 illustrates this in the case of Asian crises. For example, South Korea's won lost half of its value in 1997. Thailand devalued by 15 percent and after the IMF got involved the baht lost a further 50 percent. The Mexican peso lost 50 percent of its value in a week in December 1994 before the IMF intervened. The exchange rate depreciation reduced incomes and spending.

![Figure 1. Asian exchange rate changes, 1997. US dollar per currency, percentage change, 1 January–31 December. (Source Christoffersen–Errunga 2000)](image)
Activity and asset prices. Bank restructuring proved very costly. Fiscal costs associated with bank restructurings averaged 10 percent of GDP and have reached much higher values. Furthermore, whether banks were liquidated or just put on a tighter leash (which was the case for 40 percent of asset holdings in the case of Korean, Malaysian, and Thai banks), restructuring resulted in a credit crunch, which, combined with the firms’ own difficulties, led to severe recessions, in particular in the non-tradable goods sector. Indeed, in Indonesia, Korea, and Thailand, many banks in 1998 not only stopped issuing new loans, but also cut back on trade credit and working capital.

Equity (see, e.g., Figure 2 for Asian countries) and real estate prices tumbled. As stressed by Krugman (1998), the fall in prices resulted in a wave of inward direct investment just after massive flights of short-term capital out of those countries. For example, FDI at fire sale prices occurred in South Korea, whose currency had lost half of its value relative to the dollar, and whose stock market had lost 40 percent of its value in domestic currency. This wave of fire sale FDI in some instances (e.g., in Malaysia) gave rise to political concerns of colonization or recolonization.

Contagion. Some recent crises raised serious concerns about contagion. Contagion occurred in Europe in the ERM crises of 1992–3, in Latin America following the 1994–5 Mexican problems (the Tequila crisis), and in Asia in 1997–8 starting with the crisis in Thailand (the Asian flu). While spillovers have been mostly regional, there are also indications that they can be more widespread. For example, the August 1998 Russian crisis spread to Brazil in the fall, triggering the January 1999 crisis, and started spreading to other Latin American emerging markets. Even though the fundamentals in Brazil were weak (large public deficits and uncertainty about the government’s ability to roll over the public debt), this episode dramatically illustrates the global nature of spillovers.

There are several competing hypotheses for the contagious aspect of crises. The portfolio rebalancing hypothesis states that after losing money in one country foreign

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16 Estimates provided by Rojas-Suarez-Weisbrod (1996) put the bill for bank restructuring at 19.6 percent of GDP for Chile and 13 percent for Argentina in the early 1980s, and from 4.5 percent to 8.2 percent of GDP for the Scandinavian countries in the late 1980s-early 1990s. Caprio-Monahan (1999) estimate an average cost of government bailouts in a sample of 59 banking crashes to be 9 percent of GDP in developing countries and 4 percent of GDP in industrialized countries. See also Frydl (1999)’s survey.
investors have to readjust their positions in other countries. For example, when Russian markets collapsed, some large portfolio managers faced margin calls and liquidated their positions in Brazil. Kaminsky et al (2000) argue and offer evidence that mutual fund managers prefer to sell in markets that are mostly liquid, as they incur smaller losses in such markets. Capital adequacy requirements may force banks to adopt similar strategies. Van Rijckeghem and Weder (2000), noting that western and Japanese banks had substantial exposures in the four Asian crisis countries (Korea, Indonesia, Malaysia, Thailand), present evidence for the hypothesis that a crisis in a country may spread to countries with common foreign bank lenders, as in the case of Thailand and maybe Mexico and Russia. It is unclear, though, why investors would deprive themselves of very lucrative arbitrage opportunities by failing to manage their regional risks.

A second hypothesis is the trade links hypothesis, which has two versions. In the first, a crisis in a country has repercussions on countries that are tightly commercially related. For example, the collapse of the Soviet Union had a non-negligible impact on Finland. In the second, competitive devaluation version, crises lead to substantial devaluations and increased competition for countries producing similar exports.

The third hypothesis relates to the existence of common shocks (rise in interest rates, increase in the price of oil, perceived change in the international community's willingness to come to the rescue). Although there is then no systemic effect so to speak, the crises exhibit a strong correlation. The fourth, and final, hypothesis is a change in expectations. The wake-up-call story asserts that investors realize the lack of solidity of certain types of economies or the unwillingness of the IMF to help restructure the debt.\footnote{Still another hypothesis is that contagion is triggered by the correlation of "sunspots" across countries in situations of multiple equilibria (Masson 1999a,b). For example, foreign investors in country B view the fact that there is a run on country A as a signal that there will be a run in country B and engage in a self-fulfilling run.}


**Rescue packages.** The international community, often through the IMF,\footnote{The IMF's role as a crisis manager has expanded over the last few years. Although present, the Fund's crisis management mission was certainly not emphasized in the 1944 Articles of Agreement: "The purposes of the International Monetary Fund are: (i) To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems. (ii) To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy. (iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation. (iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade. (v) To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity. (vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members. The Fund shall be guided in all its policies and decisions by the purposes set forth in this Article." (Article I).} designed rescue packages of an...
The 1995 Mexican rescue package involved $50 bn or 18 times the country's quota (while IMF loans have traditionally been limited to three times a country's quota), and similar size packages were offered in Asia in 1997: $57 bn in Korea, $40 bn in Indonesia, and $17.2 bn in Thailand. It should be borne in mind, though, that despite their huge size, such packages by themselves were unlikely to restrain speculative attacks on the currencies. For example, IMF packages in Thailand, South Korea, and Indonesia were much smaller than the countries' short-term foreign liabilities. Besides, even IMF packages that would have been as large as the countries' short-term liabilities might not have been sufficient to prevent the crises. Jeanne and Wyplosz (2001) present some evidence that capital outflows were typically larger than the decrease in short-term liabilities during the crises.

Investor bail-in. The degree of sharing by foreign investors has been crisis-specific. Under the Brady plan (debt writedowns for Latin American countries), creditors got one-third of the face value of their outstanding claim. Investors cashed out at full value in Mexico in 1995. They lost up to $35 bn in total in Asia in 1997 and Russia in 1998.22 Global solutions have favored bondholders relative to equity investors (foreign direct investment, portfolio investment). Forcing private investors to share the burden has proved hard in the case of sovereign investors.

Table 2  IMF-supported crisis packages of the 1990s: Total financing and outstanding obligations to IMF (in percent of initial GDP) *(Source: Jeanne-Zettelmeyer 2000)*

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of program approval</th>
<th>Financing Commitments Total</th>
<th>IMF</th>
<th>Disbursements under program Total</th>
<th>IMF</th>
<th>Credits outstanding on IMF program b,c</th>
<th>Total 1999 IMF credits outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>Feb-95</td>
<td>18.3</td>
<td>6.3</td>
<td>9.1</td>
<td>4.6</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Thailand</td>
<td>Aug-97</td>
<td>11.5</td>
<td>2.7</td>
<td>9.6</td>
<td>2.3</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Nov-97</td>
<td>19.6</td>
<td>5.2</td>
<td>9.3</td>
<td>4.8</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Korea</td>
<td>Dec-97</td>
<td>12.3</td>
<td>4.4</td>
<td>6.5</td>
<td>4.1</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Brazil</td>
<td>Dec-98</td>
<td>5.4</td>
<td>2.3</td>
<td>3.3</td>
<td>1.4</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.6*</td>
</tr>
</tbody>
</table>

Memorandum Item d

Russia  | 6.6* | n.a  | 4.1  |

a GDP in first year of large package (1997 for Indonesia, Korea and Thailand, 1995 for Mexico and Russia, and 1998 for Brazil)
b IMF disbursements minus repurchases by end-99 related to the program.
c Discounted to the first program year using IMF rate of charge.
d Russia had several consecutive IMF programs during the 1990s. The first large-scale program was a stand-by arrangement approved in April of 1995.
e Total Disbursements in the 1990s.
bonds. For example, Eichengreen and Rühl (2000), in studying the extent of bail-ins in Ecuador, Pakistan, Romania, and Ukraine, conclude that attempts at forcing private investors to share the burden have had limited success overall, but have been a little more successful where renegotiation-facilitating collective action clauses were appended to the bonds (Pakistan and Ukraine).

A typical debt restructuring proceeds in the following manner: some fiscal and other adjustment is demanded from the country while bilateral official creditors (the Paris Club) agree to rollover or reschedule some debt claims, and multilateral creditors (the IMF, the World Bank (WB), and other multilateral development banks) bring in new money. The rest of the external financing gap is meant to be covered by the private creditors through "private sector involvement" (PSI). The level of multilateral support is relatively well determined. IMF and WB lending receives priority. The claims of bilateral creditors are junior, and last come private claims. Roubini (2000) argues, though, that Paris Club claims are definitely not senior to private creditors' claims: unlike the latter, they are not subject to litigation risk or acceleration or formal default. Accordingly, some countries have kept access to financial markets even though they were in arrears with bilateral official creditors.

**Conditionality.** Besides the general prohibition of actions such as the introduction of new exchange restric-

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23 "Acceleration" refers to the possibility for a category of debtholders to demand early reimbursement if there is default on another claim.

24 See Roubini (2000) for a broad discussion of PSI, including the issue of which claims ought to be included (should PSI include bonded debt, short-term interbank loans, Euro bonds, domestic debts?) and that of whether PSI should be accompanied by exchange rate and capital controls.

25 In this respect, demands such as improvements in tax collection (Russia) and the reduction in local spending (Brazil) are traditional ones.

26 See World Economic Outlook (1998, p105) for a broader list.
Even observers favorable to conditionality, such as Goldstein (2001), have wondered whether the IMF was not suffering from a "mission creep". And a number of economists, including Feldstein (1998a,b), have advocated a return to the old mandate of pursuing macroeconomic and currency stabilization.

A different type of criticism leveled at IMF conditionality relates to the programs' credibility. IMF policy conditions are often renegotiated, sometimes (as in Asia) within a few weeks of the programs being agreed. For example, Indonesia, Korea, and Thailand were quickly allowed to incur a small budget deficit, and capital adequacy and bank closure requirements were relaxed for Indonesia and Thailand.27

**IMF reforms, regulatory changes, and private sector innovations**

Besides the new emphasis on microconditionality, IMF policy has undergone a number of changes:

- **Code of good practices**: The IMF has issued a code of good practices for fiscal and monetary policies.

- **Information collection and surveillance**: The IMF has launched a Special Data Dissemination Standard (SDDS), which provides a checklist of the country's financial and economic data. In collaboration with the WB, and in consultation with supervisory agencies, central banks, and the private sector, the IMF collects and analyzes information published in the reports on the Observance of Standards and Codes.


28 For longer-term (say, over three years) adjustments of macroeconomic imbalances, the IMF can use different programs: the Extended Fund Facility (EFF), and the Enhanced Structural Adjustment Facility (ESAF, at low interest rates for low-income countries).

29 The Meltzer Commission report of February 2000 argues that, together with the existence of other channels for IMF money, the application requirement explains why no country had yet applied at the date of the report. The commission's argument is that an application would be interpreted as a signal of an impending crisis. In September 2000, the IMF tried to enhance the appeal of the Contingent Credit Line by getting rid of the commitment fee, by reducing the interest rate penalty, and by relaxing conditions for prequalification.

**New forms of lending**: The Supplemental Reserve Facility (SRF), created by the IMF in December 1997 and first used in Korea, allows the IMF to make large short-term loans at rates higher than it normally charges. SFRs have quickly developed into a major form of IMF lending. In April 1999, the IMF established a no-penalty-rate Contingent Credit Line (CCL) to facilitate a rapid disbursement to pre-qualified members. The drawing of the line is contingent on the IMF's judgement about whether the country has contributed to its problems. The country must apply in advance for a CCL.29

Besides IMF reforms, experiments are underway that aim at providing private solutions to country-level problems. While the credit lines involved are relatively small and therefore very unlikely per se to prevent a crisis, these experiments are worth considering. The pioneer in the area was Argentina (Mexico, Indonesia, and South Africa have reached similar agreements). Argentina had been badly hurt by the Mexican Tequila crisis, with a drop in deposits of the order of 18 percent during a three-month period and a 5 percent drop in GDP. On December 20, 1996, the Central Bank agreed with fourteen international banks on a firm commitment $6.1bn (8 percent of the deposit base) liquidity option.
There was overcollateralization: Argentinian bonds had to exceed by 25 percent the value of funds delivered. WB/IDB resources are used to cover further margin calls, making the contingent liquidity facility not a purely private arrangement.

The credit line was meant to be a last line of defense to prevent a run on the banking system. Banks were subject to a remunerated liquidity requirement in international reserves equal to 20 percent of deposits. Adding the Central Bank’s excess international reserves (10 percent of the deposit base), the credit line with private financial institutions was at the time of the agreement meant to step in only in case of a liquidity shock exceeding 30 percent of the deposit base.

As Giannini (2000) points out, however, we should not expect such arrangements to be a perfect substitute for public money. First, and as we have already noted, the amounts involved are relatively limited. Second, they must remain proper credit lines. If such credit lines are secured with high-quality collateral and, further, are subject to margin calls, they do little to enhance a country’s liquidity. That is, the credit line substitutes for the collateral as a source of liquidity; and margin calls eliminate some of the insurance that

is the essence of a credit line. Third, and importantly, the banks involved in the arrangement may wish to hedge their exposure, for example by selling government securities short. Such behavior may undo country risk management, as country borrowing is the sum of private and government borrowings from foreigners.

Finally, prudential supervisors are changing the rules that regulate the financial institutions’ investments in Emerging Market countries. Designing good prudential rules is in general quite difficult, and particularly so in the case of cross-border investments. For example, the 1988 Basle Accord, which harmonizes capital adequacy requirements for banks, requires an equity level of 8 cents per dollar (a risk weight of 100 percent) invested in a loan (with maturity over a year) to a non-OECD bank or sovereign, 0 cents for an investment in an OECD sovereign bond, and 1.6 cents (risk weight of 20 percent) for a loan to an OECD bank. Clearly, the binary criterion “OECD-non OECD” poorly accounts for individual situations. Ironically, Mexico and Korea became OECD members just before their respective crises, which further fueled bank loans to those countries.

The creation of new derivative instruments and the banks’ ability to take indirect exposures through interactions with hedge funds that are highly exposed to interest rate and exchange rate fluctuations (such as Long Term Capital Management during the 1998 Russian crisis) raises new challenges for prudential regulation. For example, while there is no reason to regulate hedge funds, which in particular are not backed by public money, the banks’ portfolio, credit, and counterparty

There was overcollateralization: Argentinian bonds had to exceed by 25 percent the value of funds delivered. WB/IDB resources are used to cover further margin calls, making the contingent liquidity facility not a purely private arrangement.

The Mexican government has arranged an overdraft facility for about $3 bn. Amusingly, the government’s decision to draw $2.66 bn in September 1998 aroused much controversy among lending banks (the market interest rates had gone up since the writing of the arrangement).

According to the Bank for International Settlements, bank loans to developing countries totaled $931 bn, of which $520 bn was in short-term loans in December 1997.