© 1997 International Monetary Fund

III

Onset of the Crisis and Its Evolution

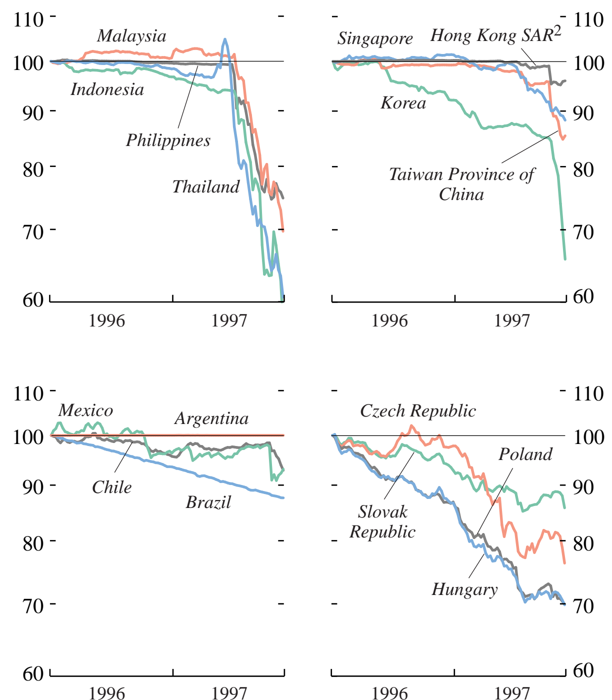
The evolution of the crises in east Asia in 1997, and their broader spillover effects, can be divided into four broad phases in which the ramifications for the world economy became increasingly significant: (1) the lead-up to the exchange market crisis in Thailand; (2) the Thai crisis and its initial spillover effects on emerging market economies with vulnerable external positions in eastern Europe as well as in southeast Asia; (3) the widening and deepening of the crisis among the ASEAN-4 countries; and (4) the spread of pressures to other Asian economies and the emergence of broader effects on world financial markets.

Phase I (January–April 1997): Lead-Up to the Crisis in Thailand

After periodic episodes of speculative attack in 1996, the Thai baht came under renewed downward pressure in late January and early February, as concerns intensified regarding the sustainability of the U.S. dollar peg in the face of a large current account deficit, high short-term foreign debt, the collapse of a property price bubble, and an erosion of external competitiveness resulting in part from the dollar's continued rise against the Japanese yen (Figure 10). As on the previous occasions, the authorities were able to fend off the pressures on the baht through spot and forward exchange market intervention and a temporary rise in interest rates (Figure 11). However, the measures taken were seen by markets to be inadequate, perhaps particularly in their lack of action to address the weaknesses in the financial sector, and equity prices continued the sharp slide that had begun in early 1996 (Figure 12).

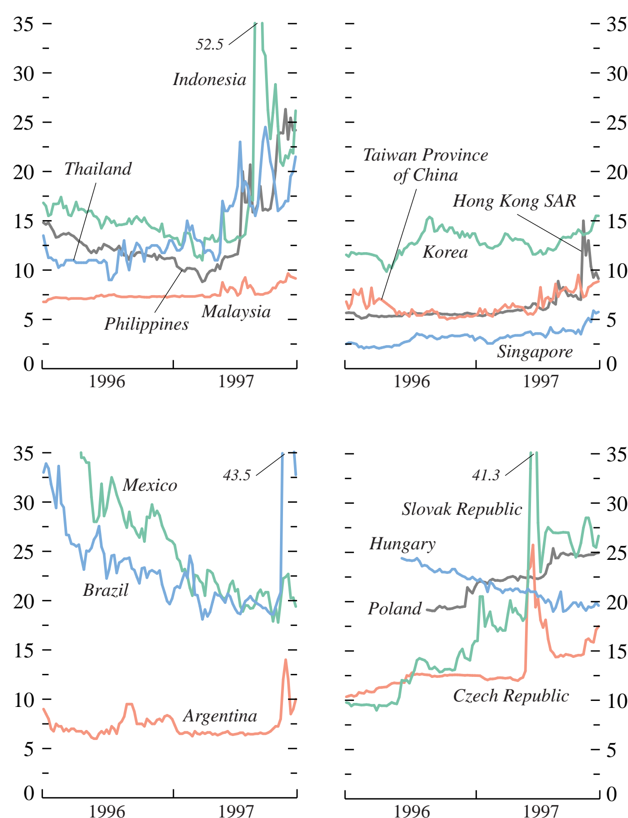
There were at this time few signs of market nervousness about situations in the neighboring ASEAN-4 countries, among which Indonesia and the Philippines had been less seriously affected by the export slowdown that hit the region in 1996, and all of which had significantly smaller current account deficits. Indeed, in the early part of 1997, the currencies of these countries were still subject to upward pressure, and their equity markets were at all-time highs. However, as the situation in Thailand deteriorated, concerns that the financial sectors in these countries also might be exposed to gluts in the property sector

Figure 10. Selected Economies: Bilateral U.S. Dollar Exchange Rates[1]
(Logarithmic scale; January 5, 1996 = 100)



Source: Bloomberg Financial Markets, LP.
[1]In U.S. dollars per currency unit. Last data plotted are for December 5.
[2]Twelve-month forward rate.

Figure 11. Selected Economies: Three-Month Interest Rates[1]
(In percent a year)



Source: Bloomberg Financial Markets, LP.
[1]Interbank rates: Czech Republic, Hong Kong SAR, Indonesia (JIBOR), Malaysia, Philippines, Poland, Singapore, Slovak Republic, Taiwan Province of China, and Thailand. Deposit rates: Argentina, Brazil (30-day), Hungary, and Korea. Repurchase rate: Mexico. Last data plotted are for December 5.

contributed to a downturn in equity prices, particularly in Malaysia and the Philippines. Elsewhere, equity prices continued to fall in Korea, where the current account position had weakened sharply in 1996, domestic demand remained sluggish, and corporate balance sheets were severely strained by debts incurred to finance past expansion. However, Korea's more flexible exchange rate policy—whereby the won had been allowed to decline against the dollar during 1996 and early 1997—and its less open financial sector were seen as reducing somewhat its immediate vulnerability to speculative attack. Equity prices also dropped sharply in the Czech Republic, triggered in part by doubts about the sustainability of its current account deficit. Beyond these isolated areas of weakness, however, financial markets in the advanced and the emerging market economies remained buoyant, although there was a moderate temporary correction in March linked to the Federal Reserve's tightening action and concerns about the possibility of further increases in U.S. interest rates.

Phase II (May–Beginning of July 1997): The Thai Crisis

Severe pressures on the Thai baht reemerged in early May, prompting the central bank initially to intervene heavily in the spot and forward markets, before moving on May 15 to introduce capital and exchange controls, aimed at segmenting the onshore and offshore markets, and to allow interest rates to rise. However, these measures failed to restore confidence in the currency, and strong pressures continued in the second half of May and June. On this occasion, the neighboring ASEAN-4 countries also suffered limited spillover effects, but these pressures abated fairly quickly as the authorities intervened in exchange markets, raised interest rates, and, in the case of Malaysia, introduced limits on swaps by nonresidents not related to commercial transactions. Also, in the first sign of contagion effects spreading beyond the Asian region, the currencies of the Czech Republic and the Slovak Republic came under strong downward pressure in mid-May. As discussed in the October 1997 *World Economic Outlook,* these two countries had several features in common with Thailand—including large current account deficits, heavy reliance on short-term private capital inflows, and relatively inflexible exchange rate regimes—that made them particularly vulnerable to sudden reversals of investor sentiment.

Underlying these currency attacks was a tightening in global financial conditions resulting from the sudden rise in Japanese bond yields and the sharp rebound in the yen, which reduced the attractiveness of borrowing in Japan to finance investments

in high-yielding markets elsewhere, including Thailand, and signaled potentially more difficult financing conditions for those emerging market economies most reliant on short-term capital inflows. International investors—commercial banks, investment banks, and hedge funds—appear to have played a role alongside domestic investors in taking short positions against the baht, which they viewed as providing a one-way bet given the exchange rate peg, weak fundamentals, and relatively low funding costs.

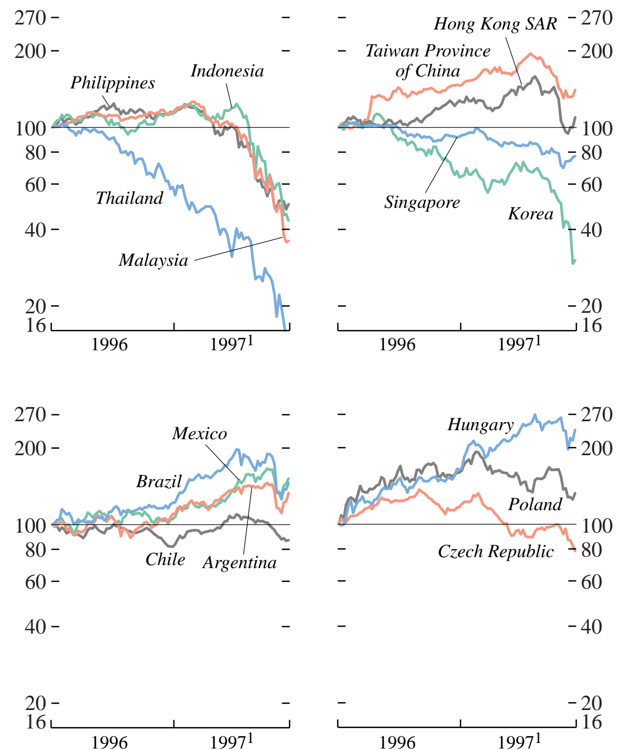
In the Czech Republic, the authorities abandoned the target band for the koruna in late May after a short period of sharply higher interest rates and heavy intervention failed to stem the run on the currency. The decision to abandon the peg at a relatively early stage once the strength of the pressures on the currency became evident, and before the position of the central bank was substantially compromised, helped to lay the basis for an early return to relative exchange rate stability at a moderately depreciated level. The early adoption of supportive adjustment measures, including monetary tightening and additional measures to curb excess demand, also played an important role in this regard. In the Slovak Republic, the authorities were able to avoid a discrete change in their intervention band through tight liquidity conditions and administrative restrictions, although the external position remained vulnerable in the face of an expansionary fiscal stance.

Elsewhere, there were no indications of a more broadly based loss of confidence in global financial markets. Reduced concerns about further U.S. monetary tightening and growing expectations in Europe that Economic and Monetary Union (EMU) would begin on schedule with broad initial participation contributed to a decline in global bond yields (except in Japan) and further gains in equity markets across a broad range of advanced and emerging market economies, including some economies in Asia. In Korea, concerns about corporate bankruptcies persisted, but confidence was buoyed somewhat by a pickup in export receipts and a narrowing of the current account deficit. Equity price gains were particularly strong in Latin America, and spreads on Brady bonds narrowed sharply (Figure 13).

In the face of continued large capital outflows, Thailand on July 2 abandoned its exchange rate peg against the dollar and allowed the baht to float. After dropping initially by about 10 percent, the baht continued to weaken in the succeeding weeks as concerns intensified about the uncertain political situation and the delay in the adoption of a comprehensive economic package to support the new exchange regime and address the weaknesses in the financial system. The fall in the baht immediately raised doubts about the viability of exchange rate arrangements in neighboring countries.

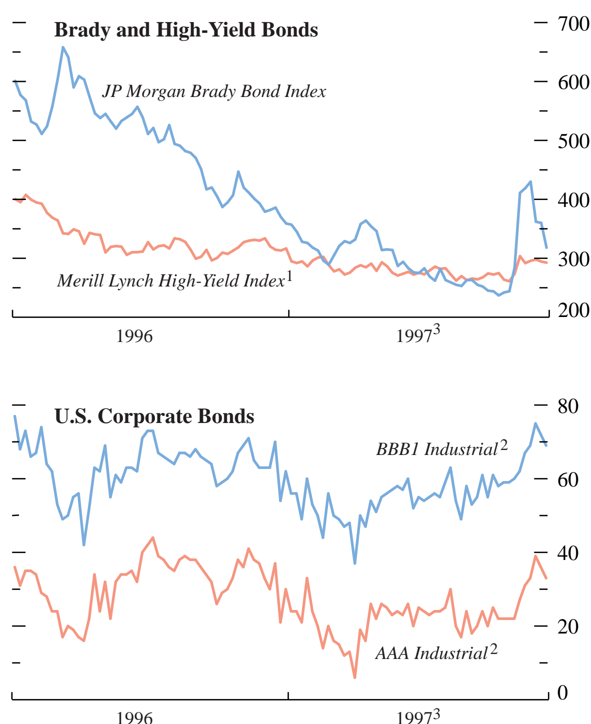
Figure 12. Selected Economies: Equity Prices

(In U.S. dollars; logarithmic scale; January 5, 1996 = 100)



Sources: International Finance Corporation; and Reuters.
[1]Last data plotted are for December 5.

Figure 13. Selected Yield Spreads over U.S. Treasury Bonds
(In basis points)



Source: Bloomberg Financial Markets, LP.
[1]Index of high-yield U.S. corporate bonds.
[2]Ten-year maturities.
[3]Last data plotted are for December 5.

Phase III (Beginning of July–Mid-October 1997): Crisis Engulfs the ASEAN-4

Outside Thailand, the strongest pressures emerged initially in the Philippines, where the authorities had also been maintaining a de facto exchange rate peg to the U.S. dollar. After seeking briefly to defend the peg through interest rate hikes and intervention, the authorities allowed the peso to float on July 11, and subsequently imposed restrictions on the sale of nondeliverable forward contracts to nonresidents in an attempt to limit speculation against the peso. Spillover effects spread quickly to Malaysia, where the authorities opted to allow the ringgit to depreciate rather than raise interest rates, and also to Indonesia, where on July 21 the rupiah fell sharply within the official intervention band.[9] Subsequent measures to tighten liquidity conditions in Indonesia failed to stem the growing exchange market pressures, and the authorities allowed the rupiah to float on August 14. At the time of the rupiah's float, the Thai baht had weakened by a cumulative 18 percent against the dollar, compared with more moderate falls of around 10 percent for the other ASEAN-4 countries. The situation worsened markedly over the next two months, however, reflecting concerns about the effects of currency depreciation and higher domestic interest rates on highly leveraged corporate and financial sector balance sheets, and about the commitment of the authorities to implement policies needed to restore exchange rate stability. The actual or threatened imposition of controls on capital outflows during the crisis may also have served to further undermine investor confidence. Although, as indicated earlier, hedge funds appear to have played a role in the crisis of the Thai baht, they do not appear to have been a major driving force behind the downward pressure on the currencies of the ASEAN-4 countries during this period. Rather, domestic investors, residents seeking to hedge their foreign currency exposures, and, in some cases, international commercial and investment banks appear to have played the most important roles in driving the domestic currencies lower. By mid-October, the cumulative declines of the ASEAN-4 currencies against the dollar exceeded 30 percent for Indonesia and Thailand and 20 percent for Malaysia and the Philippines. Equity markets also recorded further heavy losses in August before stabilizing somewhat (in local currency terms) in September.

As the southeast Asian crisis deepened, spillover effects began to spread to other countries in Asia, mainly reflecting concerns about the adverse effects on growth and export competitiveness of developments in the ASEAN-4 countries and also concerns about the

[9]In a preemptive move, the authorities had widened the intervention band from 8 to 12 percentage points immediately following the float of the Philippine peso.

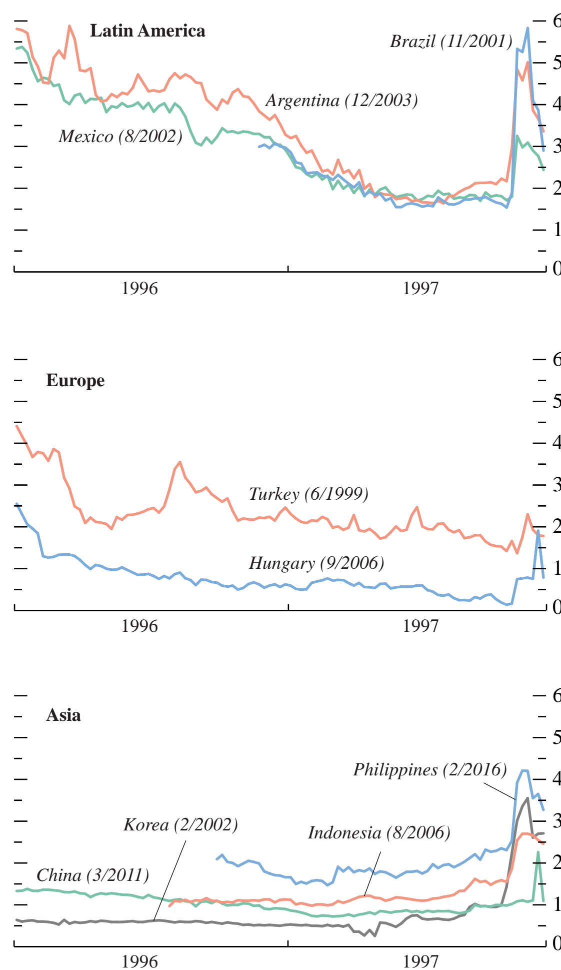
soundness of financial systems. The Singapore dollar and the New Taiwan dollar weakened moderately in July, and the Hong Kong dollar came under temporary attack in early August. Equity prices in Hong Kong SAR and Taiwan Province of China peaked in August before turning down as interest rates were raised to counter exchange rate pressures, and equity prices in China also weakened sharply. In Korea, interest rates were raised somewhat in August as exchange market pressures reemerged and the stock market resumed its earlier downward path. Also, yield spreads on international bonds issued by Asian borrowers, including the ASEAN-4 countries and Korea, widened significantly (Figure 14).

Spillover effects beyond the Asian region remained fairly limited. Some emerging equity markets that had recorded very strong gains before July—notably, Brazil, Hungary, and Russia—suffered moderate downward corrections, and there was a modest widening in Brady bond yield spreads. The currencies of emerging market economies in eastern Europe also came under further downward pressure in July. In the mature markets, equity prices continued to rise (except in Japan), and bond yields fell further before a moderate reversal in August that was sparked by indications of continued above-potential growth in the United States and by concerns about a possible interest rate hike in Germany. This rise in global bond yields proved to be short-lived, however, and most major equity markets rebounded to reach new peaks by early October, raising further concerns that equity market valuations had become overextended in some cases. On the whole, global financial markets remained buoyant, and the effects of the worsening crisis in southeast Asia were still largely contained within the region.

Phase IV (Mid-October–Mid-December 1997): Spillovers Across Global Financial Markets

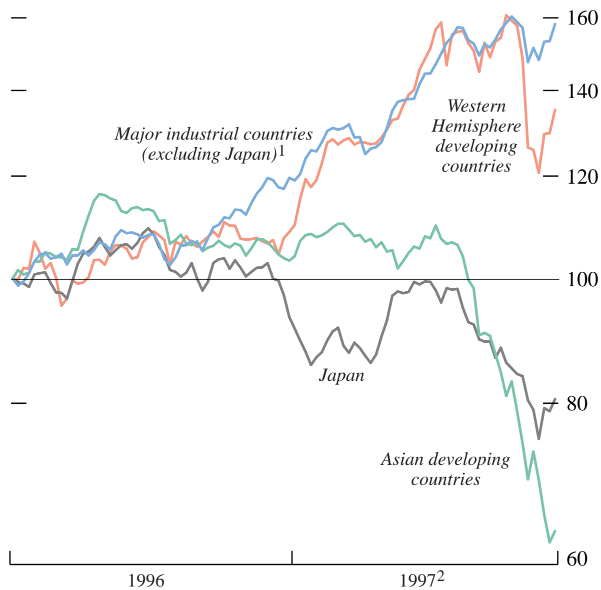
Financial markets in Asia came under further downward pressure in mid-October, but on this occasion the spillover effects were much more far-reaching. Several factors contributed to the renewed weakness within the ASEAN-4 countries, including mounting political uncertainty and concerns about the adequacy of financial sector restructuring measures in Thailand, and concerns about the absence of stronger measures to cut government-sponsored infrastructure spending in Malaysia. These concerns were compounded by an intensification of exchange market pressures elsewhere in the region, including in Taiwan Province of China, where the authorities stopped intervening to support the exchange rate on October 17, allowing the New Taiwan dollar to depreciate by about 6 percent, and in Hong Kong SAR, where interest rates rose and forward premiums on the Hong Kong dollar widened amid strong pressures on the fixed parity against the

Figure 14. Selected Economies: Secondary Market Yield Spreads on U.S. Dollar-Denominated Eurobonds[1]
(In percent a year)



Sources: Bloomberg Financial Markets, LP; and Reuters.
[1]Maturities (shown in parentheses) are not comparable. Last data plotted are for December 5.

Figure 15. Selected World Equity Prices
(In U.S. dollars; logarithmic scale; January 5, 1996 = 100)



Sources: International Finance Corporation; Bloomberg Financial Markets, LP; and IMF staff estimates.
[1]GDP-weighted aggregate.
[2]Last data plotted are for December 5.

U.S. dollar under the currency board arrangement. These pressures triggered a three-day equity price decline of more than 23 percent in Hong Kong SAR, culminating in a 10 percent drop on October 23. With most major equity markets at or near all-time highs, and potentially vulnerable to downward corrections, prices fell moderately in the succeeding two days before continued weakness in Asia prompted a 7 percent drop in U.S. equity prices on October 27 amid steep one-day declines in equity markets around the world (Figure 15).

Following this initial sell-off, global financial markets remained highly volatile through November, and risk spreads widened across the board, particularly affecting the flow of funds to emerging markets. In Asia, downward pressures on the Korean won intensified in the last week of October, and equity prices fell sharply, reflecting diminished confidence about prospects for an orderly workout of the corporate debt overhang and the growing difficulties encountered by the financial sector in rolling over external loans. After intervening heavily to defend the won, the authorities widened the daily fluctuation band from 4½ to 20 percent on November 20 and subsequently requested financial support from the IMF. Among the ASEAN-4 countries, exchange rates have suffered further large declines since late October, and equity prices have also generally continued to lose ground.

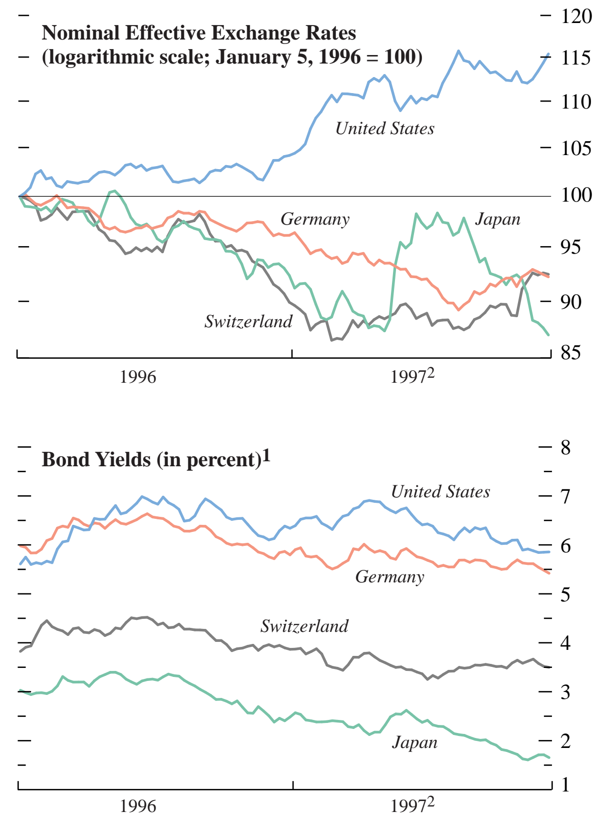
In emerging markets more generally, there were sharp equity market declines in many countries in late October and early November, the largest being in markets that had recorded substantial gains earlier in the year. Emerging bond markets also suffered heavy losses, with the spreads on Brady bonds widening to levels not seen since late 1996. In Latin America, the Brazilian *real* came under intense downward pressure as developments in Asia contributed to increased market concerns about competitiveness and the external accounts. The authorities moved swiftly to double official interest rates and in mid-November announced a strong package of fiscal measures, helping to calm market pressures somewhat. Interest rates also rose in Argentina and, to a lesser extent, in Mexico, where the peso weakened by about 7 percent against the dollar. Reflecting the broad nature of the spillover effects, exchange market pressures emerged also in a number of other countries, including Greece, Russia, and Ukraine, in all cases prompting sharp interest rate hikes to defend the domestic currency. Direct spillover effects resulting from the withdrawal of funds by Korean financial institutions may have contributed to the pressures in some cases. In Russia, official interest rates were raised by 7 percentage points in early November as the ruble came under downward pressure in the wake of a 20 percent fall in the stock market on October 28. The authorities also announced that the intervention band for the ruble would be widened from 10 to 30 percentage points in 1998 and would no

longer move in line with targeted inflation differentials. Interest rates rose sharply again at the beginning of December as pressures on the ruble intensified.

In the industrial countries, the stock market corrections in late October were fairly short-lived, and by early December major markets (except in Japan) had recovered most of their earlier losses. Reflecting a generalized flight to safety, bond yields in mature markets have declined significantly, particularly in the United States, notwithstanding indications that the U.S. economy continues to expand at a rapid pace and in spite of increases in official interest rates in Canada and a number of European economies. In addition, the Swiss franc strengthened significantly in late October, reflecting traditional safe haven demand, and yield spreads on higher-yielding U.S. corporate bonds have widened moderately (Figure 16). In Japan, bond yields dropped to new all-time lows, and equity prices fell 15 percent in the three weeks ended November 14 as the widening crisis in neighboring countries compounded existing concerns about the bad-debt overhang in the Japanese banking sector and the sluggish recovery in domestic demand (see Chapter IV). These developments called attention to the importance of financial linkages, whereby the deteriorating economic situation in the region could, directly or indirectly, further weaken the financial position of Japanese banks, which in turn could make them less willing or able to roll over maturing loans and thereby exacerbate the external financing constraint faced by a number of other Asian economies. On November 24, the failure of Japan's fourth-largest brokerage firm sparked a further sell-off in Asian stock markets.

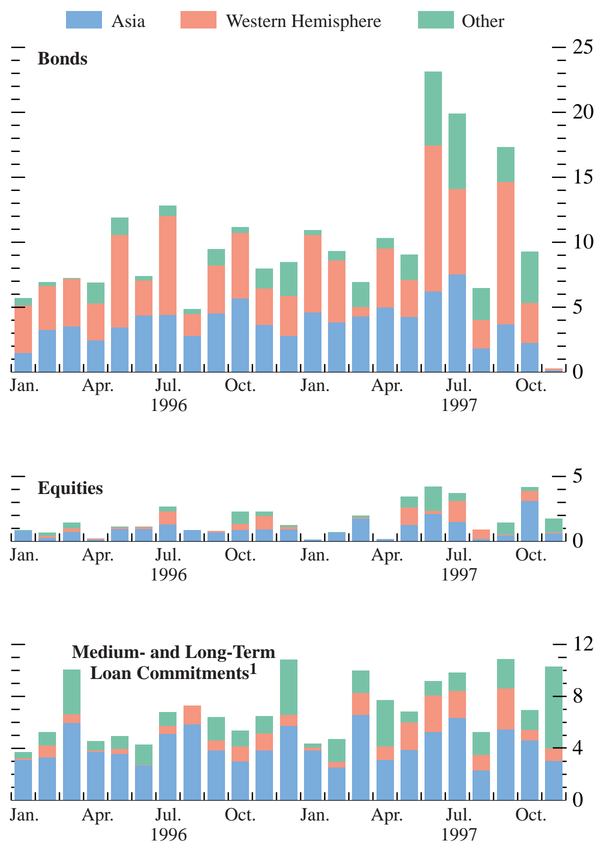
As discussed in Chapter II, private capital flows to emerging market economies surged in the early to mid-1990s. Monthly data on gross financing flows suggest that the total volume of new financing peaked in the second and third quarters of 1997, before new bond issuance by the Asian economies dropped off markedly as the crisis deepened (Figure 17). The volume of new bonds issued by countries outside Asia remained buoyant until October, consistent with the picture that, up until that point, the Asian crisis had not significantly affected developing countries' access to international capital markets. However, preliminary data for November show a marked drop-off in capital flows to developing countries in all regions, with new bond issues dropping to practically zero. Looking forward, the coming months are likely to see net capital flows to emerging markets remain at significantly lower levels than in 1996 and the first three quarters of 1997, as investors remain cautious and as emerging market borrowers postpone new issues in view of the increased cost of accessing international capital markets. Thus the baseline projections described in Chapter V assume that total net private capital flows to developing countries and the newly industrialized economies in 1997 and 1998 will be well below the

Figure 16. Selected Advanced Economies: Exchange Rates and Bond Yields



¹Yields on government bonds with residual maturities of ten years or nearest.
²Last data plotted are for December 5.

Figure 17. Emerging Market Economies: Private Market Financing
(In billions of U.S. dollars)



Source: Developing Country Bond Equity and Loan Commitments database.
[1]Data for the most recent months are preliminary.

record 1996 level and similar to the level recorded in 1995. The geographical composition of flows in 1997–98 is, however, likely to be quite different from 1995–96, with net flows to Asia likely to slow substantially while net flows to Latin America should remain larger than in 1995, when they were depressed as a result of the Mexican crisis. Moreover, as discussed elsewhere, these projections assume that the Asian crisis and its spillover effects will be quickly contained, and that its effects on net capital flows to developing countries outside Asia will be relatively transitory. Clearly, if the crisis deepens further or spreads beyond Asia, the adverse effects on developing countries' access to international capital markets will be more far-reaching.

* * *

As this Interim Assessment was being finalized, Thailand, the Philippines, Indonesia, and Korea were in the process of implementing programs of stabilization and reform supported by IMF financing. In Thailand, 56 of the 58 previously suspended finance companies have been closed, and interest rates have been raised somewhat after being allowed to fall to excessively low levels in October. In the Philippines, the Congress approved comprehensive tax reform legislation in early December, while in Indonesia, 16 insolvent banks have been closed and others have been placed under intensive supervision. In Korea, 14 merchant banks have been suspended, the exchange rate has been allowed to float freely (the limits on daily movements having been eliminated), and the authorities have raised the interest rate ceiling from 25 to 40 percent and brought forward measures to liberalize financial markets. In Malaysia, the authorities announced an emergency economic package in early December, including further expenditure cuts and a slowing of infrastructure spending.