Macroeconomic Management in APEC Economies: The Response to Capital Inflows

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1995

OCCASIONAL PAPER 122

Capital Flows in the APEC Region

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INTERNATIONAL MONETARY FUND
Washington DC
March 1995

III Macroeconomic Management in APEC Economies: The Response to Capital Inflows

Mohsin S. Khan and Carmen M. Reinhart

In recent years, there has been a surge of international capital flows to many Asian countries. During 1990–93, developing economies in Asia received a net capital inflow of $151 billion, more than double the amount recorded for the previous four years. For certain Asian countries, such as Malaysia and Thailand, these inflows have amounted to as much as 15 percent of GDP (Chart 3-1). These developments represent a major turning point from the previous decade, when, because of the debt crisis, little capital flowed to most developing countries. This change is not limited to only a few countries. The number of economies in Asia experiencing a surge in capital inflows has recently expanded; among the more recent recipients of capital inflows are India, Nepal, and Sri Lanka. Other regions, in particular, Latin America and the Middle East, have also been attracting large amounts of foreign capital. While issues pertaining to the management of international debt dominated the policy discussions of the 1980s, the design of effective economic policies for dealing with these capital inflows, and for ensuring their durability, has become a key economic policy issue in recent years.[24]

Capital inflows—or, more generally, access to international capital markets—are often regarded as central to the development process. The historical experience of many industrial countries has shown that external financing helped facilitate investment and growth. The recent Asian experience indicates a similar pattern, as the surge in capital inflows has been accompanied by sharp increases in investment in the recipient countries (with investment/GDP ratios rising anywhere in the range of 2-10 percent during the past five years) and an acceleration in economic growth (Bercuson and Koenig (1993)). At the same time, capital inflows, particularly of the magnitudes currently observed in many Asian and Latin American countries, may pose serious dilemmas for economic policy. Large capital inflows are often associated with a rapid expansion of money and credit, inflationary pressures, a real exchange rate appreciation, and a deterioration in the current account of the balance of payments. In addition, they tend to have a substantial impact on the stock market, the real estate market, and the money market—an impact that may well threaten the stability of these markets and of the financial system as a whole. Furthermore, if the capital inflows are purely short term, these problems intensify as the probability of an abrupt and sudden reversal increases.

This section describes the current episode of capital inflows to several Asian economies, summarizing the principal facts, the impact of the inflows, and policy options.[25] The discussion also covers, when relevant, the similar experiences of Latin American countries, with an emphasis on the policy priorities that could ensure the persistence and sustainability of these flows, as far as possible. The analysis draws heavily on previous work by Calvo, Leiderman, and Reinhart (1993, 1994, and forthcoming, 1995), who used data for ten Latin American countries and eight Asian countries, as well as other recent studies undertaken in the IMF (Goldstein and Mussa (1993), International Monetary Fund (1992 and 1993), and Schadler and others (1993)). The first part of this section describes the main characteristics and macroeconomic consequences of capital inflows to the Asian region. The second part discusses the role of external factors in the present inflows episode, as well as the likely factors that will determine the sustainability of these capital inflows. Finally, the relative merits of various policy responses to the surge in capital inflows are discussed.

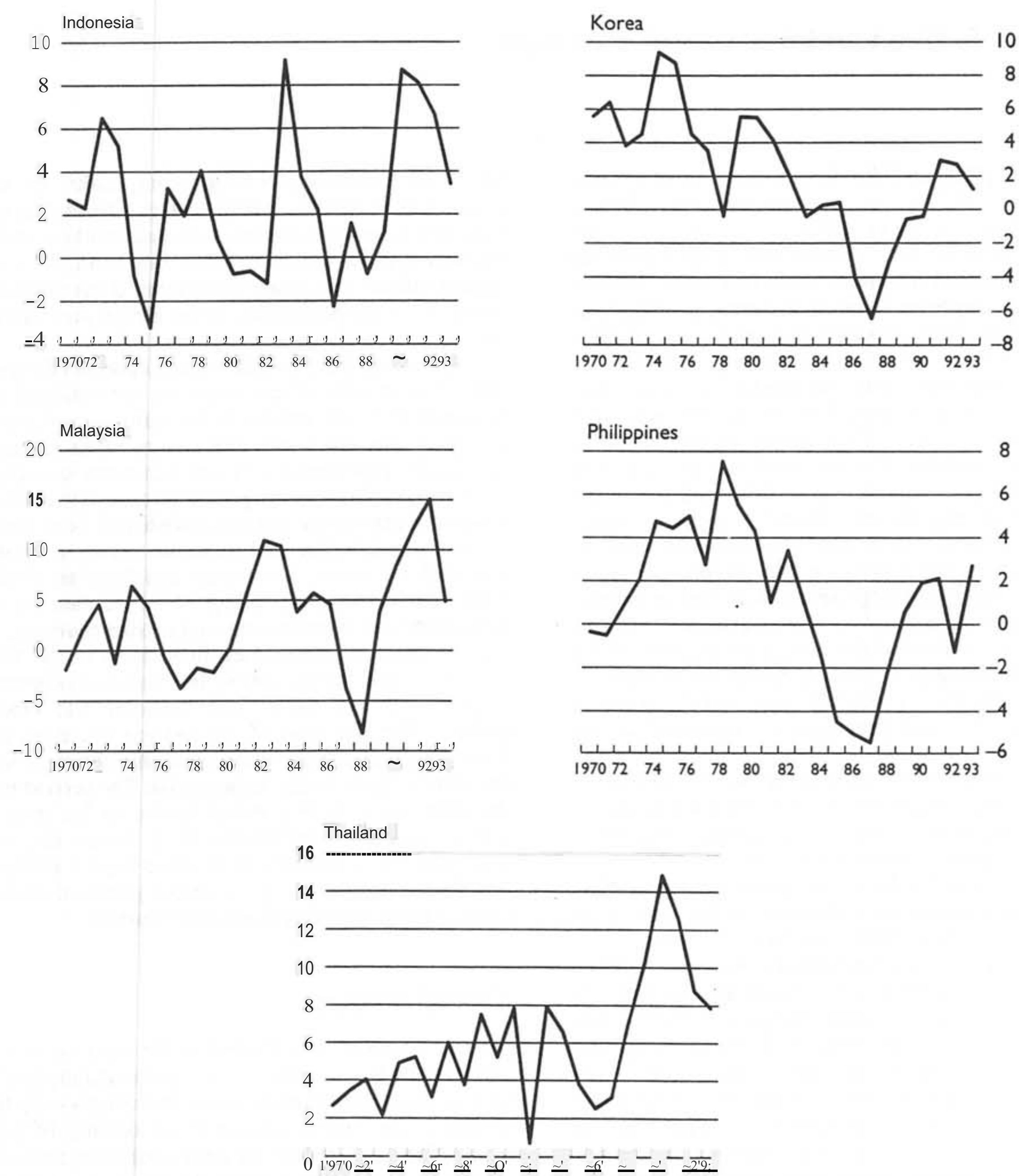
Capital Inflows

Capital inflows are defined as the increase in net international indebtedness of the private and the public sectors and are measured—albeit imprecisely—by the surplus in the capital account of the balance of payments. Therefore, except for errors and omissions, the capital account surplus equals the excess of expenditure over income (which, in turn, is equal to the gap between national investment and national saving) *plus* the change in official holdings of international

[24] This issue is addressed in some detail in Calvo, Leiderman, and Reinhart (1993 and 1994) and Schadler and others (1993).

[25] The discussion covers all Asian countries as well as selected ones that are members of APEC.

Chart 3-1. Balance on the Capital Account
(In percent of GDP)



Source: IMF, *World Economic Outlook* (various issues).

Table 3-1. Asia: Balance of Payments
(In billions of U.S. dollars)

Year	Balance of Goods, Services, and Private Transfers[1]	Balance on Capital Account Plus Net Errors and Omissions	Changes in Reserves[2]
1985	-16.6	19.5	-2.9
1986	0.9	22.7	-23.5
1987	17.9	23.3	-41.3
1988	5.7	5.9	-11.6
1989	-2.6	12.3	-9.6
1990	-5.8	29.2	-23.5
1991	-4.7	46.3	-41.5
1992	-8.2	30.1	-21.9
1993	-24.0	45.0	-21.0

Source: IMF, *World Economic Outlook* (various issues).
1A minus sign indicates a deficit in the pertinent account. The balance on goods, services, and private transfers is equal to the current account balance less official transfers. The latter are treated in this table as external financing and are included in the capital account.
2A minus sign indicates an increase.

reserves. Thus, increases in capital *inflows* can be identified with *larger* current account deficits and/or an *accumulation* of reserves.

The central bank of the recipient economy can react to increased capital inflows in various ways, depending mainly on the prevailing exchange rate regime. Under a pure float, the increased net exports of assets in the capital account finance an increase in net imports of goods and services. In this case, the authorities do not intervene in the foreign exchange market, and the inflows of capital from abroad are not associated with changes in central banks' holdings of official reserves. At the other extreme, the domestic authorities can actively intervene to maintain a fixed exchange rate. In the presence of a capital inflow, they would purchase the foreign exchange that flows in, and the increase in the capital account surplus would be associated with an increase in official reserves.

Characteristics of the Inflows

Capital began to flow to Thailand in 1988 and to a number of other Asian developing economies in 1989-90 (see Bercuson and Koenig (1993) and Chuhan, Claessens and Mamingi (1993)).[26] Table 3-1 presents a breakdown of Asia's balance of payments into its three main accounts.[27] The capital inflows under consideration appear in the form of surpluses in the capital account of about $29 billion in 1990, about $46 billion in 1991, $30 billion in 1992, and $45 billion in 1993.

As far as composition is concerned, the capital that has flowed to developing countries in the 1990s is radically different from that of the earlier episodes, with commercial bank loans, which dominated the earlier periods, substantially replaced by foreign direct investment (FDI) and bond and equity portfolio flows (see Chart 3-2). It is evident from the data for Asia that an important part of the rise in capital inflows is due to marked increases in FDI, particularly in the early stages of the current episode (Table 3-2). It is well known that FDI is guided more by medium- or long-term profitability considerations than by portfolio investments and hence is probably subject to a smaller degree of sudden reversals than are portfolio flows. Moreover, FDI flows have positive externalities for the recipient economy, such as increased access to foreign markets and increased scope for human capital development and for introduction of top-of-the-line technology. Thus far, the investment flows have been directed mainly to service sectors such as transportation, telecommunications, and banking. Among the countries, FDI has been of greatest importance-relative to total capital inflows-in Malaysia and perhaps Thailand.[28]

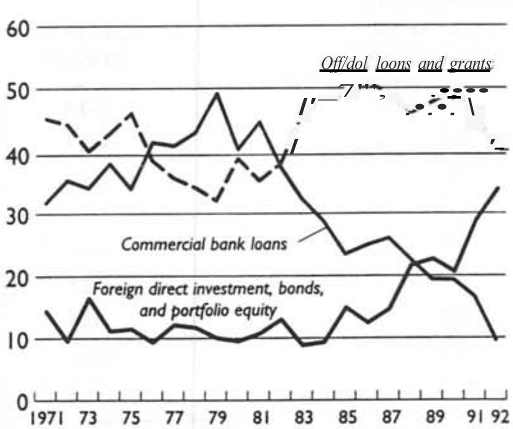
26There are, however, important differences in the orders of magnitudes of the capital inflows among the five Asian countries considered. For instance, despite a substantial rise in 1992-93, capital inflows and investment have been lower in the Philippines than in its neighbors.

27The regional breakdown of developing countries corresponds to the classification used in the IMF's *World Economic Outlook.*

28Thailand's data on the composition of capital flows tend to understate foreign direct investment.

Chart 3-2. Capital Flows in Developing Countries

(In percent of total)



Sources: IMF, *World Economic Outlook, October 1993.*

More recently, portfolio flows to countries in the region have risen dramatically almost across the board as bond and equity portfolios in many of the industrial countries have become more internationally diversified, gaining greater exposure to these countries (see Gooptu (1993)).[29] The growing demand for the equities and bonds of these countries by institutional and private investors in the United States, Japan, and other industrial countries has encouraged and facilitated a surge in bond and equity finance. As Table 3-3 shows, bond issuance nearly quadrupled between 1989 and 1992 and continued to soar during 1993. The trend in equity issuance is similar, although there are signs that the pace slowed somewhat for some countries during 1993. Direct equity portfolio purchases on local stock markets, especially by institutional investors, have become the most important channel for equity inflows into various emerging market economies and have fueled stock market booms (Chart 3-3). In recent years, total returns in Asian and other emerging stock markets have been considerably higher than in the United States and other industrial countries; during 1993, total stock market returns in U.S. dollars were 117 percent in Indonesia, 22 percent in Korea, 111 percent in Malaysia, 154 percent in the Philippines, and 114 percent in Thailand. International investors have clearly viewed Asia as fertile ground for raising their expected returns.

[29]For a few of the countries in the region, as well as for most Latin American countries, part of the surge in capital inflows is undoubtedly due to the repatriation of flight capital. In part, this return has been encouraged by a series of policy measures designed to reverse capital flight-such as amnesties, capital account liberalization, and introduction of domestic instruments denominated in foreign currency (see International Monetary Fund (1992) and Mathieson and Rojas-Suarez (1993».)

Table 3-2. Foreign Direct Investment for Selected Asian Countries

(In percent of GDP)

Year	Indonesia	Korea	Malaysia	Philippines	Thailand
1984	0.25	0.08	2.35	0.02	0.97
1985	0.35	0.21	1.92	–0.03	0.43
1986	0.37	0.31	2.43	0.47	0.53
1987	0.69	0.32	3.15	0.98	0.47
1988	0.71	0.41	3.25	2.59	1.47
1989	0.73	0.21	4.31	1.95	2.04
1990	1.17	–0.04	5.36	1.09	1.90
1991	1.29	–0.09	7.41	1.45	1.30
1992	1.35	–0.10	7.16	1.40	1.45
1993	1.21	–0.15	5.86	1.52	1.04

Source: IMF, *World Economic Outlook* (various issues).

Table 3-3. Bond and Equity Issues
(In millions of U.S. dollars)

	1989	1990	1991	1992	1993
International bond issues					
China	—	—	115	359	3,048
Hong Kong	193	66	100	185	657
Indonesia	175	80	369	493	485
Malaysia	425	—	—	—	954
Philippines	—	—	—	—	1,293
Singapore	—	105	—	—	—
Korea	258	1,105	2,012	3,208	5,864
Taiwan Province of China	100	—	160	60	79
Thailand	—	—	17	610	2,247
International equity issues					
China	—	—	II	1,049	1,908
Hong Kong	—	—	140	1,250	1,264
Indonesia	—	633	167	262	604
Korea	—	40	200	ISO	328
Malaysia	—	—	—	382	—
Philippines	—	53	159	392	64
Singapore	—	214	125	272	613
Taiwan Province of China	—	—	—	543	72
Thailand	—	100	209	145	466

Source: IMF staff estimates based on information from *International Financing Review* Equibase, *Euroweek*, and *Financial Times*.

A substantial proportion of the inflows has been channeled to reserves, which have increased by about $85 billion in the last four years. At the end of 1993, the stock of reserves for the Asian region stood at about $261 billion, well in excess of the combined stock of reserves of *all* developing countries (including economies in transition) outside the region. Overall, the sharp increase in official reserves indicates that in the face of the capital inflows, the monetary authorities in the region intervened quite heavily in the foreign exchange market to keep nominal exchange rates from appreciating significantly. Chart 3-4, which depicts monthly data on international reserves for a selected group of countries, confirms that all of the countries considered have experienced a pronounced upward trend in the stock of official reserves in recent years. However, the pace of accumulation of the reserves out of a given capital inflow is recently showing some signs of slowing (see Table 3-1). In part, this development may reflect the mounting opportunity costs associated with holding a large and rising stock of low-yield official foreign securities, particularly when interest rates on existing external and domestic debt are substantially higher. In part, the slower pace of reserve accumulation may also be due to the monetary authorities' greater willingness to accept a more appreciated nominal exchange rate as the inflows continue.

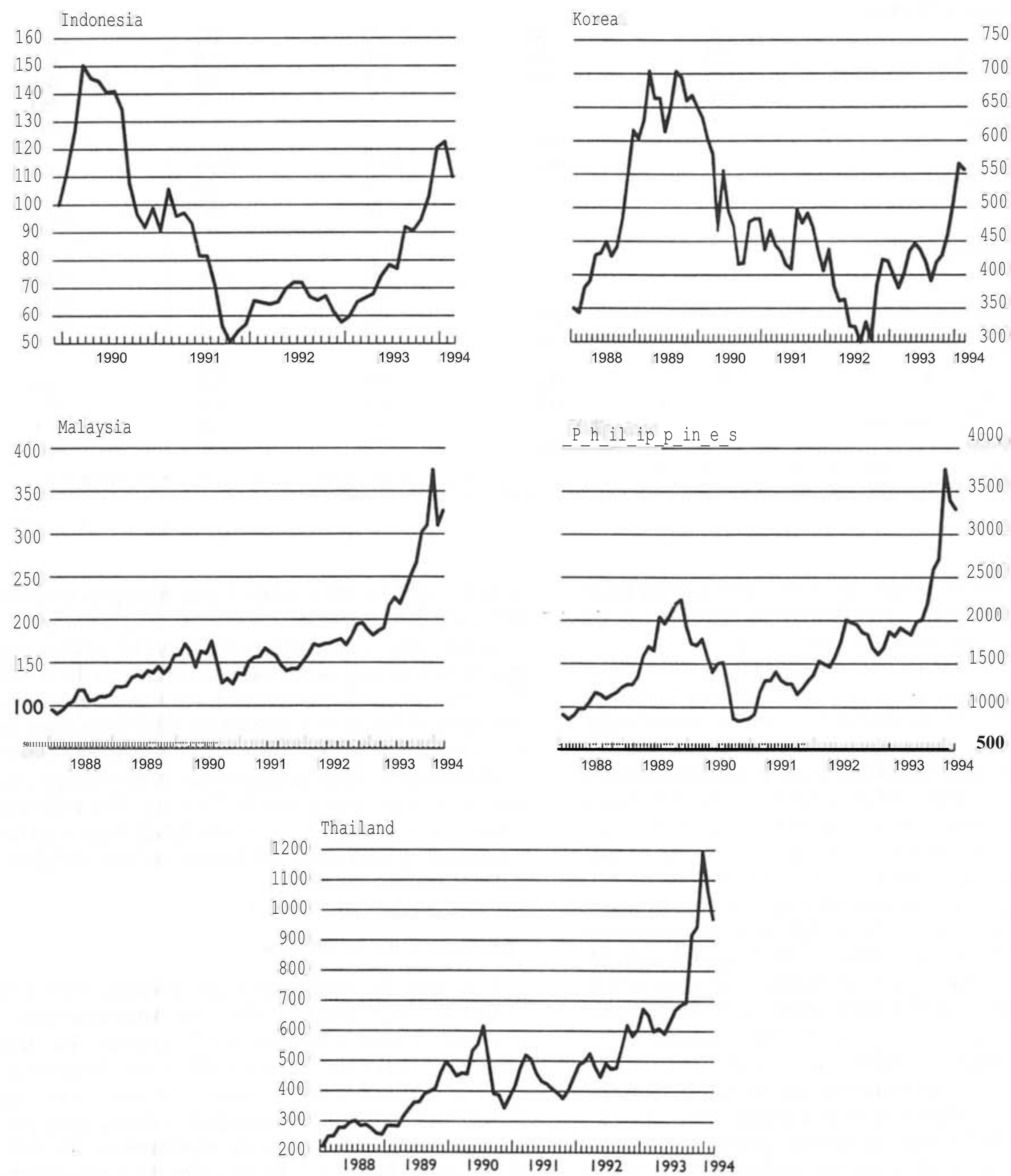
The rest of the capital inflows helped to finance a marked increase in the region's current account deficit-that is, an increased gap between national investment and national saving. As noted earlier, an important part of the inflows has financed increa:;r:s in private investment. Since 1987, according to the *~()rld Economic Outlook* (International Monetary Fund (various issues)), ratios of investment to GDP have risen by 6 percentage points in Korea, by 10 percentage points in Malaysia, by 5 percentage points in the Philippines, and by 7 percentage points in Thailand. The high and rising investment ratios, it is often noted, bode well for the growth prospects of the region and the countries' ability to service its debt.

Macroeconomic Effects

It is useful to compare the macroeconomic effects of capital inflows to Asia with the Latin American experience and focus on a broader set of countries. The main similarities between the two regions can be summarized as follows: First, as Table 3-4 illustrates, the swing in the balance on the capital account (as a percentage of GDP) is of a siffiilar magnitude for the sample countries in the two regions. For the Latin American countries, the change in the capital account amounts to 4 percent of GDP; for the Asian countries, the capital account surplus increases by 2.7 percent of GDP. Second, as discussed, capital inflows in both regions have been associated with a marked accumulation of international reserves, indicating a heavy degree

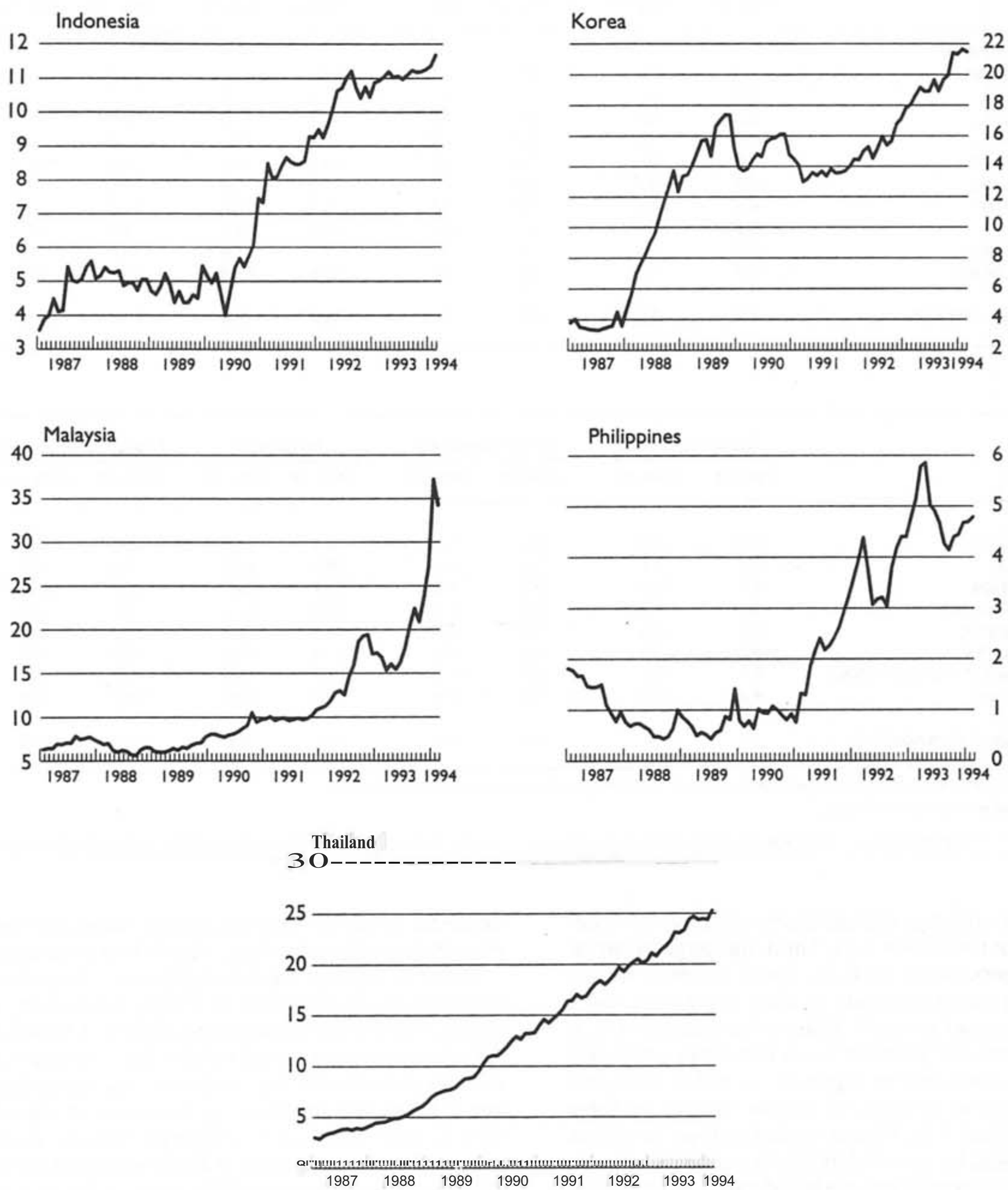
Chart 3-3. Share Prices for Emerging Markets in [illegible]

(IFC investable price indices in U.S. dollars; December 1988=100)



Source: International Finance Corporation.

Chart 3-4. Official Reserves for Selected Asian Countries
(In billions of U.S. dollars)



Source: IMF. *International Financial* Statistics (various issues),

Table 3-4. Key Indicators for Selected Latin American and Asian Economies
(In percent of GDP)

	Capital Account[1]		Direct Investment		Investment		Public Consumption	
	1984–89	1990–93	1984–89	1990–93	1984–89	1990–93	1984–89	1990–93
Latin America								
Argentina	-2.2	2.5	0.7	1.4	18.8	15.2	13.7	7.5
Bolivia	2.2	5.1	0.5	1.2	10.1	13.5	11.2	11.6
Brazil	-2.3	-0.4	0.5	0.2	17.1	15.3	11.1	12.1
Chile	-3.0	5.9	0.7	1.9	15.8	19.5	10.9	8.8
Colombia	1.7	0.7	1.5	1.5	16.0	14.6	9.2	10.1
Ecuador	-7.2	-3.7	0.5	1.4	19.2	18.8	11.6	7.8
Mexico	-0.4	6.1	0.8	1.6	16.8	20.6	11.5	10.3
Peru	-6.5	0.7	—	0.3	20.0	22.9	9.8	11.1
Uruguay	-2.9	-0.7	—	—	9.9	11.8	14.4	9.1
Venezuela	-2.9	-0.2	0.1	1.6	16.5	11.8	10.4	14.2
Average of ten countries	-2.4	1.6	0.5	1.1	16.0	16.4	11.4	10.2

	Capital Account		Direct Investment		Investment		Public Consumption	
	1984–88	1989–93	1984–88	1989–93	1984–88	1989–93	1984–88	1989–93
Asia								
Indonesia	0.9	6.7	0.5	1.1	24.3	27.8	10.0	10.0
Korea	-2.6	1.6	0.3	—	28.9	36.0	9.8	9.8
Malaysia	0.4	10.1	2.7	6.0	25.9	33.7	16.0	14.4
Philippines	-3.7	1.4	0.8	1.5	18.3	21.3	6.8	11.4
Singapore	8.1	-6.3	9.4	7.4	38.9	38.7	12.8	10.9
Sri Lanka	5.0	4.2	0.6	0.5	23.0	19.5	9.8	9.7
Taiwan Province of China	0.1	-3.5	-0.3	-1.5	19.3	23.5	15.0	16.1
Thailand	4.6	11.0	0.8	1.5	21.8	28.4	13.6	9.9
Average of eight countries	1.6	3.2	1.9	2.1	25.1	28.6	11.7	11.5

Source: IMF, *World Economic Outlook* (various issues), and *International Financial Statistics* (various issues).
[1]Includes errors and omissions.

of foreign exchange market intervention by the monetary authorities (Table 3-5). Third, the surge in capital inflows (particularly portfolio flows) has been accompanied by sharp increases in stock prices and, more generally, asset prices.[30] Share price indices in U.S. dollar terms for selected Latin American and Asian emerging markets were higher at the end of 1993 than at the time of renewal of capital inflows to these regions (Chart 3-3). Fourth, capital inflows have been accompanied by an acceleration in economic growth. Finally, reflecting in part the broad trend toward capital market liberalization and the greater sophistication of domestic private enterprises, private bond and equity financing has played an increasingly important role.

But there are also important differences between the two regions. As discussed in Calvo, Leiderman, and Reinhart (1994 and forthcoming, 1995), in most Latin American countries capital inflows have been associated with considerable real exchange rate appreciation; yet as Chart 3-5 illustrates, in Asia such an appreciation is less common.[31] Although various reasons account for the variations in the response of the real exchange rate, important differences in the composi-

[30]Land prices have also posted strong increases in several countries; for a discussion of the case of Korea see Park and Park (forthcoming, 1995).

[31]For example, based on data from the IMF Information Notice System, the real exchange rates for Argentina, Mexico, and Uruguay appreciated by 169 percent, 35 percent, and 47 percent, respectively, during January 1990–October 1993. Of course, the appreciation of the real exchange rate can be a result of many factors.

Table 3-5. Latin America: Balance of Payments
(In billions of U.S. dollars)

Year	Balance of Goods, Services, and Private Transfers[1]	Balance of Capital Account Plus Net Errors and Omissions[1]	Changes in Reserves[2]
1985	-5.5	6.5	-1.0
1986	-19.9	12.9	7.0
1987	-12.9	16.2	-3.2
1988	-13.5	5.7	7.9
1989	-10.3	12.6	-2.3
1990	-7.7	23.3	-15.7
1991	-21.0	39.2	-18.2
1992	-36.3	59.4	-23.1
1993	-39.7	44.3	-4.5

Source: IMF. *World Economic Outlook* (various issues).

1A minus sign indicates a deficit in the pertinent account. Balance on goods. services. and private transfers is equal to the current account balance less official transfers. The latter are treated in this table as external financing and are included in the capital account.

2A minus sign indicates an increase.

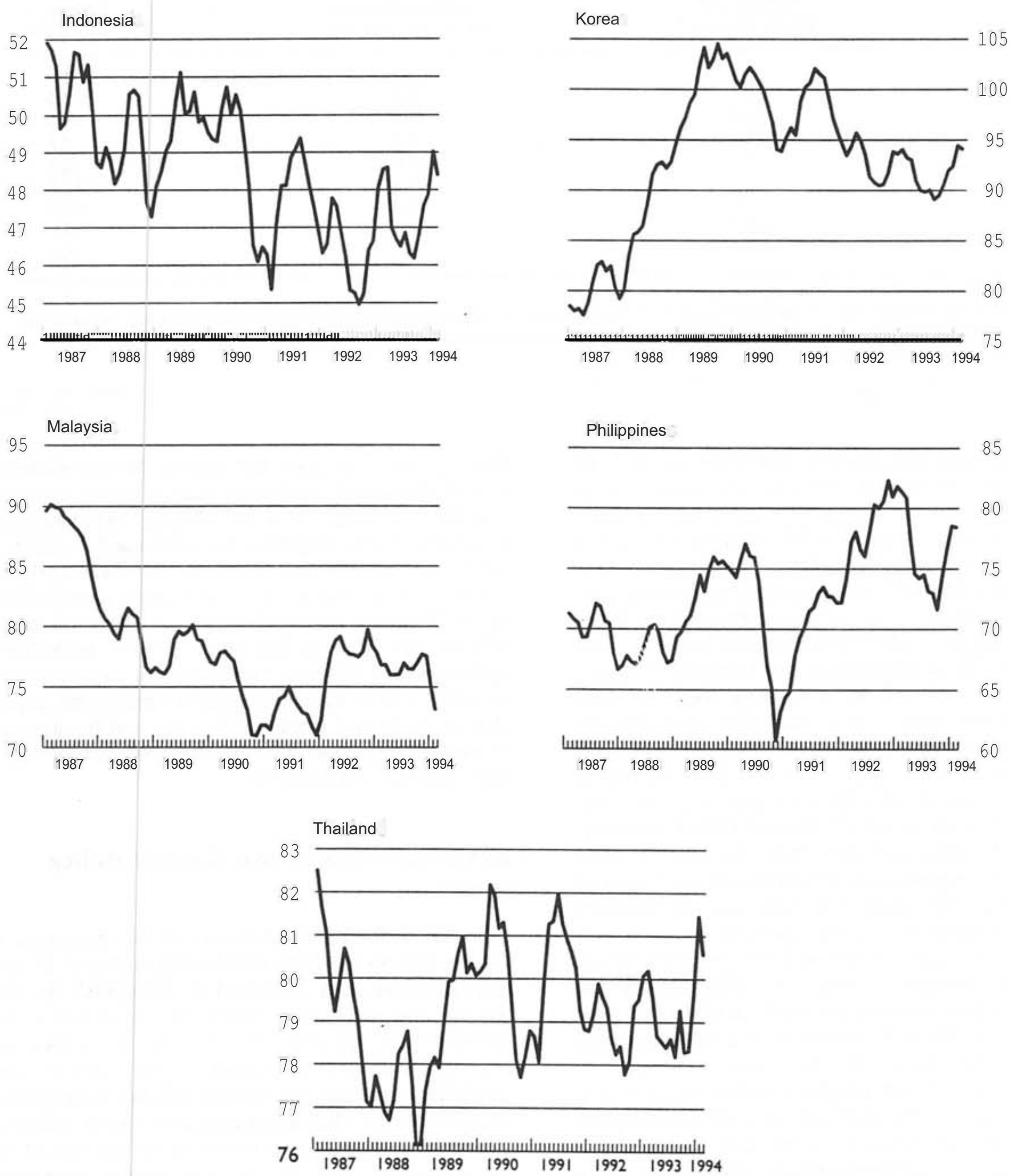
tion of aggregate demand may playa key role in determining whether the real exchange rate appreciates or not. As Table 3-4 summarizes, for the Asian countries, investment as a share of GDP increased by about 3V2 percentage points during the capital inflows period, but the investment ratio remained stagnant for the Latin American region. There are, however, marked differences among the Latin American countries. For example, both Chile and Mexico posted increases in investment during 1990-93. More recently, there are signs that investment has also been rising in Argentina, Colombia, and Peru. However, for the Latin American region, the inflows-particularly in 1990-91 during the initial stages of the surge-are primarily associated with a decline in private saving and higher consumption.[32] If the increased investment (in Asia) is tilted more toward imported capital goods and the increased consumption (in Latin America) has an imported domestic component, other things being equal, the real exchange rate appreciation in Latin America would tend to be stronger. In addition, differences in the domestic policy response are likely to playa key role in explaining the differences in real exchange rate behavior in the two regions. Specifically, the behavior of public sector consumption influences the real exchange rate by affecting both the level and composition of aggregate demand (Table 3-4). Other things being equal, the more restrained the fiscal stance at the time of capital inflows, the weaker the real exchange rate appreciation. Although several Latin American countries (notably, Chile and Mexico) have had major fiscal adjustment programs, these predated the surge in capital inflows. By contrast, there were fiscal spending contractions in several Asian economies, most markedly in Thailand during 1988-91, at the time of the inflows (see Schadler and others (1993)). In addition, comparatively effective sterilization of capital inflows in Asia-which was successful in limiting the expansion in credit and money aggregates and in aggregate demand-may have contributed to the differences in real exchange rate behavior.

32Very disparate initial conditions in excess capacity between the two regions may help explain why investment surged in Asia and not in Latin America. Most Asian countries entered the capital inflow episode closer to full capacity utilization than their Latin American counterparts (an exception is Chile), where growth had been sluggish.

External Factors and Sustainability Issues

To determine the main causes of the resurgence of capital inflows to many developing countries in Asia and elsewhere, it is important to distinguish between the external and internal factors that gave rise to this development. External factors are those that are beyond the control of a given country and are thus unrelated to policies the country follows. Examples of such factors for small open economies are a decline in world interest rates and recession in the rest of the world, both of which may be accompanied by reduced profit opportunities in the industrial countries. A similar effect would arise from regulatory changes that provide incentives for further international diversification of investment portfolios at main financial centers. Some of these external factors are likely to have an important cyclical, or reversible, component. Internal

Chart 3-5. Real Exchange Rates for Selected Asian Countries



Source: IMF. Information Notice System.
Note: An increase in the index denotes a real exchange rate appreciation.

factors, on the other hand, are most often related to domestic policy. For example, countries can attract long-term capital inflows (possibly in the form of direct investment) by successfully implementing an inflation stabilization program; introducing major institutional reforms, such as the liberalization of the domestic capital market and the opening of the trade account; and instituting policies that result in credible increases in the rate of return on investment (such as tax credits). But domestic policies may also attract short-term, reversible capital, especially when these policies are not fully credible. Thus, partial credibility about inflation stabilization or trade liberalization programs can result in relatively high returns on short-term investments in view of the probability that these programs will collapse. Foreign investors could obtain relatively high profits under these circumstances if they managed to reverse their original inflows after they produced high yields and before the collapse of these policy programs.

Causes of the Inflows

Several events and underlying trends interacted in the late 1980s to make Asia potentially attractive for the renewal of capital inflows from abroad. First, there was a steep acceleration in the trends of institutionalization, globalization, and international diversification of investments in North America and other financial centers (see El-Erian (1992) for a discussion of key regulatory changes). This transformation is seen in the increasing amounts of funds being managed by mutual funds, pension funds, and life insurance companies. These entities began trying to raise expected returns and/or reduce overall risks by taking advantage of investments in emerging markets. Because the total assets of institutional investors are very large, even rel-,Hively small portfolio shifts that increase the weight attached to emerging markets can represent sizable capital inflows for the recipients.[33] In addition, regulatory changes in the United States have made it easier for foreign private issuers of equity to place their issues under conditions that are more attractive to investors. Second, several countries in Asia made significant progress toward improving relations with existing external creditors and reducing concerns about debt servicing. Third, and perhaps most important for long-term investment, several countries adopted sound monetary and fiscal policies, as well as market-oriented structural reforms that have included liberalizing trade, deregulating domestic financial markets, and eliminating capital account barriers. Fourth, and of the least importance to Asian countries, especially when compared with Latin America, repatriation of flight capital facilitated the re-entry of capital to the region. Last, the relocation of labor-intensive industries from Japan, Korea, and Taiwan Province of China has played a key role in attracting capital flows to Southeast Asia (see Bercuson and Koenig (1993)). All these underlying factors helped re-establish credibility with foreign investors and provided the necessary conditions for the potential return of external capital to the region. Among the key external factors behind the current episode of capital inflows are the unusually low interest rates that have prevailed in the United States and Japan for the last four years. These low rates, combined with the persistent recessions in most industrial countries (which have also depressed returns in real estate and equity markets), have attracted investors to the high-investment yields and improving economic prospects of developing economies, such as those in Asia and Latin America. As shown by Fernandez-Arias (1993), low world interest rates have also improved creditworthiness indicators for various developing countries, especially those with considerable debt-service obligations.

For the Asian experience, Chuhan, Claessens, and Mamingi (1993) indicate that, while foreign influences played a significant role in stimulating bond and equity flows to several Asian countries, external developments were much less important than domestic ones in that region, accounting for about one- third of bond and equity flows to Asia. However, as the composition of capital inflows to Asia shifts more toward portfolio investment and proportionally less is accounted for by FDI, the sensitivity of flows to external financial variables may well increase .

Available empirical evidence for Latin American countries indicates that foreign developments have played a somewhat greater role in the most recent episode, accounting, according to Calvo, Leiderman, and Reinhart (1993), for 30-60 percent of the variance in real exchange rates and reserves. Similarly, Chuhan, Claessens, and Mamingi (1993) find that external factors explain about half of the bond and equity flows from the United States to a group of six Latin American countries.

The emphasis on external factors does not imply that domestic factors, such as structural reforms and stabilization, have played a negligible role. As discussed above, domestic policies have been essential for the re-entry of international capital. However, domestic factors alone cannot explain why capital inflows have also occurred in countries that have not undertaken reforms and have not stabilized, or why they did not occur in countries where reforms were introduced well before 1990.

Sustainability of the Capital Inflows

A critical question in most of the countries that experienced a surge in capital inflows is: To what

33For example. it is estimated that the assets of pension funds and life and casualty insurance companies reached 55.6 trillion in 1992.

extent will external and internal developments combine to make the flows endure? Part of the answer to this question depends on the continuation of underlying trends in the international financial system-that is, the globalization of markets and the diversification of investment portfolios. The growing interest of institutional investors in Asia (and other emerging markets) could continue throughout the rest of the 1990s in the form of a large portfolio shift. The movement of international capital into emerging markets has been based not only on high expected returns, but also on the idea that diversification can reduce overall risk in portfolios. The result is that Asian and Latin American securities are increasingly sold in the United States and other markets. Over time, individual countries have been able to rely less on returning flight capital and have achieved a broader investor base. Cementing these portfolio trends is a step in the direction of regional trade agreements.

Nevertheless, other factors work in the opposite direction. In particular, the prevailing global environment of low interest rates and weak activity in the industrial countries will change. As the global economy recovers, international interest rates may increase and capital market conditions may tighten. The tightening of monetary policy in the United States in February 1994 may be an early signal of that change. Furthermore, new competitors are likely to emerge as economic and political conditions in Eastern Europe and the former Soviet Union and other parts of the world improve. Such developments raise the possibility of reversals-especially in markets characterized by bubbles and in countries where the inflows are mostly short term.[34] In the face of heavy sales of domestic securities by foreign investors, the liquidity of financial markets in various countries would be put to a difficult test.

Sustainability and durability also depend on internal conditions. Sound macroeconomic policies, a strong commitment to market-oriented reforms, and outward-oriented trade strategies are likely to enhance the credibility of a country's policymakers from the standpoint of international investors. Economically, countries make the most efficient use of capital inflows if the investment return on these resources is higher than their cost. Policies that promote high domestic saving and adequate returns on domestic investment would be beneficial in this context. As noted earlier, in some countries, the financial intermediation of capital inflows is a source of concern. For the individual investor, the possibilities for hedging against these risks are limited in developing countries. Under these conditions, it is necessary to ensure adequate regulation and supervision of the banking system to avoid currency or term-structure mismatches and excessive credit creation, which could damage the ability of the financial system to deal with a reversal of capital flows.

Policy Response

The appropriate policy response to capital inflows clearly depends on the composition of the inflows (that is, whether they are short or long term), the availability and flexibility of various policy instruments, and the nature of domestic financial markets.[35] In addition, the prevailing policy environment and the extent of policymakers' credibility are key determinants of the form and timing of the appropriate policy response.

The rationale for policy intervention emerges from concerns that capital inflows can lead to inflationary pressures, real exchange rate appreciation and loss of competitiveness, and a deterioration of the current account. In addition, the inflows can destabilize domestic financial markets. These concerns have often led the authorities to react to the capital inflows by implementing a variety of policy measures. The role and relative merits of some of those policies are examined below.

Monetary and Exchange Rate Policy

Most of the recipient countries have implemented monetary and exchange rate policies in response to the shifting patterns of international capital flows. However, the policies have been quite varied.

Greater *Exchange* Rate *Flexibility*

A country that experiences a capital inflow may opt to let the nominal exchange rate appreciate. This option has three main virtues. First, it insulates the money supply, domestic credit, and more generally, the banking system from the inflows; this is particularly desirable if the inflows are perceived to be reversible. Second, because of a pass-through from the exchange rate to domestic prices, it may help reduce inflation-precisely at a time when achieving price stability is high on the policymakers' agenda. Third, allowing the exchange rate to fluctuate introduces uncertainty, which may well discourage some of the purely speculative (and highly reversible) inflows. The main disadvantage of a pure float is that massive capital inflows may induce a steep nominal *and* real appreciation of the domestic currency, which, in turn, may damage strategic sectors of the economy, like nontraditional

34Many emerging markets, including several in Asia, have witnessed historic highs in price-earnings ratios.

35Unfortunately, the policy choice is often complicated by data that do not reliably differentiate between short-term and long-term inflows.

exports. Damage would be inevitable if the real appreciation were to persist. But, even if the appreciation did not persist, the greater real exchange rate volatility could have negative effects on tradable goods sectors (see, for instance, Grobar (1993)) to the extent that financial markets do not provide enough instruments to hedge against such uncertainty.

There have been wide differences among countries in the degree of exchange rate flexibility in the present episode. However, the common ground appears to be that all central banks intervene in the foreign exchange market to some degree and that no country has operated under a free float. Among the Latin American countries, Chile and Mexico have allowed some degree of exchange rate flexibility in the context of their exchange rate bands. In Chile especially, the exchange rate has been allowed to fluctuate extensively within the band. (For various aspects of exchange rate bands in Chile and Mexico, see Helpman, Leiderman, and Bufman (1994)). Among the Asian countries, Korea intends to further widen the margins for daily exchange rate fluctuations, with the aim of moving toward a free float in two to three years.[36] Other countries, such as Colombia, Malaysia, Singapore, and Taiwan Province of China, have allowed for some appreciation of the nominal exchange rate. As indicated, one advantage of allowing nominal exchange rate appreciation is that to the extent that market fundamentals call for a real exchange rate appreciation, the latter can be effected all at once through the nominal appreciation of the exchange rate rather than gradually through increases in domestic inflation.

Sterilized Versus Nonsterilized Intervention

Once the decision is made to intervene in the foreign exchange market, the next policy question is whether intervention should be sterilized. Sterilization-the exchange of domestic securities for foreign exchange-can help attenuate the impact of capital inflows on money and credit. Sterilized intervention is essentially an attempt to insulate the domestic economy from the macroeconomic effects of capital inflows. Curtailing the growth of the monetary aggregates may be desirable for a variety of reasons: as the availability of credit increases, the quality of the loans made may well decline, placing the banking system at higher risk; a too-rapid expansion may cause the economy to "overheat" and fuel inflationary pressures; if the monetary authorities have announced monetary targets, growth in excess of those targets may damage their credibility. However, at a minimum, sterilized intervention will keep domestic interest rates higher than they would have been in the absence of sterilization. At worst, this measure may well raise domestic interest rates and provide incentives for further short-term inflows-as occurred in Colombia in 1991 and Malaysia in 1991-92. In addition, sterilization results in an increase in the public debt and entails quasi-fiscal costs to the extent that the interest rate on domestic bonds is higher than that on foreign exchange reserves. Estimates of these costs in Latin American countries range from 0.25 percent to 0.50 percent of GDP a year (Kiguel and Leiderman (1993)). The cross-country evidence reveals that sterilized intervention (in varying orders of magnitude) has been the most common policy response to capital inflows in both Asia and Latin America.

Nonsterilized intervention may be desirable if the demand for money is perceived to increase owing, for example, to a successful inflation stabilization program that the authorities wish to accommodate. Under those circumstances, rapid monetary growth is not necessarily inflationary, and no quasi-fiscal burdens are generated. However, nonsterilized intervention, as noted, runs the risk of increasing the vulnerability of the financial system, especially if there is a system of explicit or implicit deposit insurance and banking supervision is poor. It is important to note that in many Asian countries the domestic banks are losing their "preferred" corporate clients, who are finding it more attractive to tap the international bond and equity markets directly. From an overall macroeconomic perspective, nonsterilized intervention is a more attractive option for a banking system with less capability or willingness to increase loans to the private sector, particularly for consumption purposes.[37] When the banking system is unable to intermediate more funds, additional capital inflows through the banking system will exert a strong downward pressure on interest rates, slowing the pace of inflows and lowering the fiscal cost of the outstanding domestic credit. However, most of the countries considered are not currently in this situation.

Reserve Requirements

A viable policy option that limits the expansion of money and credit associated with the surge in capital inflows is to increase bank reserve requirements and curtail access to rediscount facilities. This option would be especially relevant in those countries where capital inflows have taken the form of substantial increases in local bank accounts. Increasing marginal reserve requirements-an option exercised by Chile and Malaysia-dearly lowers banks' capacity to lend, thus diminishing some of the risks associated with

36During 1991-92. Korea's exchange rate policy was characterized by significant exchange rate intervention in response to capital inflows.

37Malaysia, for instance. has attempted to curb consumer credit by imposing restrictions on loans for purchases of motor vehicles and adopting stricter guidelines on the issuance of credit cards.

nonsterilized intervention without incurring quasi-fiscal costs. A drawback of this reserve requirement policy is that it is a onetime measure, and it may ultimately promote disintermediation, as new institutions may develop so as to bypass the regulations. Eventually, these institutions could grow until they are considered too large to fail and end up under the insurance umbrella of the central bank, re-creating all the potential problems associated with nonsterilized intervention. Therefore, increasing marginal reserve requirements is unlikely to be effective beyond the short run. Moreover, increasing bank reserve requirements amounts to a reversal of the underlying trend of financial liberalization that has been occurring in developing countries, under which these requirements have recently been sharply reduced toward the levels observed in industrial countries.

Banking Regulation and Supervision

A major concern about the intermediation of international capital flows through the domestic banking system is that individual banks are subject to free or subsidized deposit insurance. In other words, there is an implicit commitment by the authorities that banks-especially the large ones-will not be allowed to fail. It is well known that free implicit deposit insurance induces banks to increase their risk exposure. In several Latin American countries, there has been a sharp expansion of bank loans to finance private consumption. There is evidence that in some of these countries the percentage of nonperforming loans has recently increased over time. In addition, banks may pay little attention to matching the maturities of deposits against those for loans-the former being typically shorter than the latter. Similarly, there could be a mismatch between the currency denomination of bank loans and the currency denomination of profits and incomes of the borrowing sector, for example, if a producer of a nontradable good borrows in U.S. dollars. All these factors increase the vulnerability of the financial system to reversals in capital flows-reversals that have the potential to end in financial crisis.

Effective bank regulation and supervision can diminish some of these risks. As discussed earlier attempting to insulate the banking system from short~term capital flows is a particularly important goal in cases where the inflows are predominantly in the form of short-term bank deposits. Regulations that limit banks' exposure ,'-' the volatility in equity and real estate markets could help insulate the banking system ~ro~ the potential bubbles associated with sizable capItal Inflows. In this vein, risk-based capital requirements in conjunction with adequate banking supervision to ensure such requirements are complied with could help insulate the domestic banking system from the vagaries of capital flows.

Fiscal Policy

Some countries have complemented monetary and exchange rate policies with fiscal measures, such as the taxation of capital inflows anc‌llor a reduction in public expenditure.

Taxing Short-Term Inflows

. Taxes on short-term borrowing abroad were imposed In some countries-Israel in 1978 and Chile in 1991. This policy conveys the powerful message that the authoriti~s a:e concerned with short-term, potentially speculatIVe Inflows. Such policies can coexist with poli~ies that encourage a different type of inflow, speCIfically foreign direct investment. . Unlike other measures, such taxes attack the problem at the source. However, although they can be effective in the short run, experience shows that the private sector is quick to find ways to circumvent the taxes through over- and underinvoicing of imports and exports and increased reliance on parallel financial and foreign exchange markets. Further, initial conditions are not always conducive to a policy that adds barriers to international capital movements. If a country has recently undertaken an adjustment program and the authorities enjoy less-than-full credibility, imposing a capital account barrier may be interpreted as signaling a policy reversal and may thus undermine the success of the pr,?gram.

Fiscal Tightening

Another policy reaction to capital inflows has been to ~igh~en fis.cal policy; the clearest example of this pohcy IS ThaIland during 1988-91. The idea is to use fiscal restraint, especially in the form of spending cuts on nontradables, so as to lower aggregate demand and curb the inflationary impact of capital inflows.[38] Lower g?vernment expenditure on nontraded goods and serVIC~Sc?uld have a direct impact on aggregate demand, whIch IS unlikely to be offset by an expansion of private sector demand. However, contraction of government expenditure is always a sensitive political issue and cann~t be undertaken on short notice. Delaying fiscal res~aI~t, howev~r, increases the risk that, ex post, the pohcy ISprocychcal. . Moreover, fiscal policy is usually set on the basis of medium- or Iong-term consideratIOns rather than in response to what may turn out to be short-t~rm f1uctuat!ons in international capital flows. ThaIland exemphfies this policy dilemma. The combination of booming growth and the substantive fiscal restraint of the past few years has generated a

[38]In addition. to the extent that it reduces the aovemment's -need to issue debt. a tighter fiscal stance is also likel; to lower domestic Interest rates .

perceived need to improve the current infrastructure, which is no longer adequate if rapid growth is to be sustained. At the same time, the pressures on the real exchange rate that accompany the surge in inflows would warrant fiscal restraint. However, in cases where the authorities had envisioned tightening the fiscal stance, a surge in capital inflows may call for earlier and, perhaps, more aggressive action.

Structural Measures

Various countries have adopted structural measures to indirectly or directly diminish the size, or the potential adverse effects, of capital inflows. Several of the Asian and Latin American countries have either undertaken or are considering undertaking capital account liberalization. For instance, in 1993 Thailand removed most of the controls on capital outflows, while Chile adopted similar, but more modest, measures in March 1994. These countries have followed the general principle that allowing domestic agents to hold foreign assets generates some offsetting capital outflow following the liberalization. However, the net impact of these measures on the capital account is not yet conducive. In some cases, as the recent experience of Colombia highlights, the liberalization measures increased the confidence of foreign investors and, in so doing, further stimulated inflows.

In some cases, the presence of capital inflows and the stronger economic activity were used to implement trade liberalization and domestic financial reforms more rapidly. In principle, the surges in capital inflows present countries with a good opportunity to liberalize trade, which would tend to dampen the impact of the capital inflows on the exchange rate. Colombia, Indonesia, and Thailand are among the countries that undertook important steps toward liberalizing trade. While the trend is toward integrating goods and capital markets, some countries have experienced pressure to increase export subsidies to mitigate the effects of a sustained real exchange rate appreciation, a policy that is known to result in substantial fiscal costs and in deeper economic distortions. Overall, with regard to structural policies, it appears these should be designed so as to be consistent with longer-term objectives, rather than as a response to short-term capital inflows.

Policy Mix and Sequencing

The above discussion has highlighted that the risks associated with capital inflows create policy dilemmas. However, the overall picture is much more positive, as many Asian countries and a smaller number of Latin American countries have used these inflows to finance productive investment and achieve higher growth. There are no policy "nicks" for managing the inflows; the appropriate policy mix will depend on the nature of the inflows (in particular, their reversibility), their causes, and the macroeconomic and policy climate of the recipient country. To reduce the probability of a sudden reversal, policymakers must be able to maintain a high degree of credibility and be prepared to support clear market-oriented policies. Althou~h no single policy recipe exists for all countries, to limit some of the risks associated with short-term flows, a reasonable sequencing of policies would consist in initially limiting the intermediation of those flows through sterilized intervention, greater exchange rate flexibility, and/or increased marginal reserve requirements, followed by a gradual monetization of these flows (that is, nonsterilized intervention), accompanied perhaps by an appreciation of the currency. The step to nonsterilized intervention can be speeded up if credit availability is limited and/or if the quasi-fiscal costs are high and if the implied creation of credit and money does not constitute a strong force toward an acceleration of inflation.

Last, it seems essential for countries to have flexible policy instruments that can respond quickly to adverse events, such as an abrupt reversal of capital flows. Holding an adequate level of reserves and allowing for some degree of exchange rate flexibility, possibly through an exchange rate band or similar mechanism, can work in this direction.

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