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THE CAPITAL INFLOWS PROBLEM:
Concepts and Issues 1/

by

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Abstract

Since 1990 capital has started to move from industrial countries to developing regions like Latin America, the Middle East and parts of Asia. Reentry into international capital markets is a welcome turn of events for most countries. However, capital inflows are often associated with inflationary pressures, a real exchange rate appreciation, a deterioration in the current account, and a boom in bank lending. This paper briefly examines how these inflows have altered the macroeconomic environment in a number of Asian and Latin American countries. The pros and cons of a menu of policy options are discussed.

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2/ When the paper was written, Leiderman, a professor of economics at Tel Aviv University, was a visiting scholar in the Research Department.



I. Introduction

After about a decade in which little capital flowed to the developing nations, the 1990s appear to have launched a new era in which capital has started to move from industrial countries, like the United States and Japan, to developing regions, like Latin America, the Middle East and parts of Asia. For Latin America and the Middle East reentry into international capital markets represents a welcome turn of events, as debt and war prostrated these regions into a virtual income standstill (the case of Argentina), if not a catastrophic collapse (the case of Lebanon). Already preliminary data indicate that, in most countries, the increased capital inflows have been accompanied by a resurgence in economic growth and by a marked accumulation of international reserves.

However, capital inflows are not an unmitigated blessing. Large capital inflows are often associated with inflationary pressures, a real exchange rate appreciation, and a deterioration in the current account (of the balance of payments). In addition, the history of Latin America provides ample evidence that massive capital inflows may also contribute to stock market bubbles and lead to an excessive expansion in domestic credit, placing in jeopardy the stability of the financial system. If the capital inflows are of a short-term nature, these problems intensify, as the probability of an abrupt and sudden reversal increases. Not surprisingly, therefore, effective buttressing of these capital inflows is one of the key economic policy issues of the day.

This paper has two main objectives. The first is to present the principal stylized facts of the current episode of capital inflows to Latin America and Southeast Asia and discuss how these inflows have affected the macroeconomic environment. The analysis draws heavily on Calvo, Leiderman, and Reinhart

(1992b, and 1993), which employs data for ten Latin American countries and eight Asian countries. The second is to summarize, and briefly comment on, the main concepts and issues that have surfaced in the current policy debate. The basic relationships between capital inflows, the accumulation of reserves and the gap between national saving and investment are outlined in Section II. A brief discussion of the causes of capital inflows is presented in Section III. The stylized facts are reviewed in Section IV. The role of credit is examined in Section V, while Section VI discusses the policy response to the capital inflows. Concluding remarks follow.

II. Definitions and Characteristics

Capital inflows are defined as the increase in net international indebtedness of the private and the public sectors during a given period of time, 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 (i.e., the current account deficit) plus the change in official holdings of international reserves. Thus, increases in capital inflows can be identified with widened current account deficits and/or reserve accumulation. 1/

The official reserves account records purchases or sales of official reserve assets by central banks. Thus, this account measures the extent of official foreign exchange intervention by the authorities, which is often referred to as the official settlements balance or the overall balance of

1/ National income accounting implies that the current account is equal to the difference between national saving and national investment. Accordingly, an increase in the current account deficit can be traced to either an increase in investment, a decline in saving, or any combination of these variables that results in an increased investment/savings gap.

payments. There are two polar cases of central bank response to increased capital inflows, which correspond to floating and fixed exchange rate regimes. If there is no intervention, as under a pure float, the increased net exports of assets in the capital account are financing an increase in net imports of goods and services--capital inflows would not be associated with changes in central banks' holdings of official reserves. At the other extreme, if the domestic authorities actively intervene and purchase the foreign exchange brought in by the capital inflow, the increase in the capital account is matched, one-to-one, by an increase in official reserves. In this case, there is no change in the gap between national saving and national investment, nor is there any change in the net foreign wealth of the economy. In reality, the most common response in the current episode has been one where the authorities partially intervene and, more often than not, sterilize (see Section VI) part of the capital inflows.

III. External and Internal Causes

The incidence of capital inflows varies drastically over time. For example, capital inflows to developing countries were relatively large in the late 1970s and early 1980s; such inflows ended abruptly with the onset of the debt crisis in 1982. In effect, private financing to the developing regions was nil or negative during most of the 1980s (see Calvo, Leiderman and Reinhart (1992a and 1993)). Therefore, a central issue for policymaking is ascertaining the degree of persistence of the capital inflows. To evaluate the persistence issue, as well of desirability of the capital flows, it is critical to identify the factors that are behind those inflows.

It is particularly important to distinguish between the external and internal factors that gave rise to the capital inflows. External factors are

those which are outside the control of a given country. Thus, they are unrelated to policies followed in the country in question. Examples of such factors for "small" open economies are: (i) declines in international interest rates and, (ii) a rest-of-world recession, which may be accompanied by reduced profit opportunities in the financial centers. As both of the examples suggest, these factors are likely to have an important "cyclical", reversible component. Internal factors, on the other hand, are most often related to domestic policy.

1/ Examples of policies that would attract long-term capital inflows (possibly, in the form of direct investment) are: (i) successful price stabilization programs, as these may be accompanied by improved fiscal policy fundamentals and greater macroeconomic stability, (ii) major institutional reforms, such as the liberalization of the domestic capital market, and (iii) policies that credibly increase the rate of return on domestic investment projects (tax credits, debt-equity swaps, etc.) But domestic policies may also attract short-term capital of a highly "reversible" nature. Such policies include: (i) not-fully-credible trade liberalizations and price stabilization programs--these are likely to induce a consumption boom and, thus, an increase in international indebtedness in the short run, or (ii) tariff cuts under downward price rigidity--inducing (temporarily) excessively high prices of domestic goods and, hence, a current account deficit on the expectations that the relative price of importables with respect to domestic goods will increase over time.

Available empirical evidence for ten Latin American countries indicates that foreign factors have played an important role in the most recent episode;

1/ Of course, natural disasters and/or wars are part of the internal factors, but these will be excluded from further discussion.

Calvo, Leiderman, and Reinhart (1993) find that foreign factors accounted for 30 to 60 percent of the variance in real exchange rates and reserves, depending on the country. More recently, Chuhan, Claessens, and Mamingi (1993) find similar results for bond and equity flows from the United States, with foreign factors explaining about half of such flows for a panel of six Latin American countries. Their results also indicate, that while foreign factors also played a significant role in stimulating bond and equity flows to several Asian countries (a panel of seven countries was used in the study), external developments were much less important than domestic factors in that region. Specifically, their results indicate that domestic variables are three to four times more important than external variables in explaining the behavior of capital flows.

Lower short-term interest rates in the United States (the lowest since the early 1960s), decreasing returns in other investments, and a recession in the United States as well as in other industrial countries have converged to stimulate capital flows to regions where ex-ante returns are higher. In addition, the decline in U.S. interest rates has reduced the external debt servicing costs and increased the solvency of developing debtor countries.

Domestic reforms alone cannot explain why capital inflows have occurred in countries that have not undertaken reforms or why they did not occur, until only recently, in countries where reforms were introduced well before 1990. However, the crucial role played by domestic reforms in attracting capital from abroad is evident in the important differences across countries in the orders of magnitudes of the capital inflows. For example, Argentina, Chile, and Mexico (countries with important domestic reforms) have attracted capital in orders of magnitudes well in excess of those recorded for other countries in the region.

This section summarizes some of the major aspects of the current episode of capital inflows to Latin America and Southeast Asia. To document the regional aspects of this phenomenon we aggregate annual data. 1/ Monthly data for individual countries provide greater detail and are also discussed here.

1. Capital inflows: Orders of magnitude

Table 1 presents a breakdown of Latin America's balance of payments into its three main accounts. The capital inflows under consideration appear in the form of surpluses in the capital account, of about \$24 billion in 1990, about \$39 billion in 1991, and \$53 billion in 1992. Thus, in the past three years Latin America has received as much capital as it had during the entire 1982-1989 period. It can be seen that a substantial fraction of the inflows has been channelled to reserves, which increased by about \$52 billion in 1990-92. Considering 1990-92 as a whole, the net capital inflow was almost equally split into a widening in the current account deficit and an increase in official reserves. 2/ The former suggests that capital inflows have been associated with an increase in the gap between national investment and national saving. In some countries an important part of the inflows has financed increases in private investment; yet, in a number of countries there has been a marked rise

1/ For the purposes of the present section, Latin America includes the same set of countries included under Western Hemisphere in IMF's World Economic Outlook and International Financial Statistics.

2/ For Latin America as a whole, 45 percent of the inflows went into reserve accumulation, with the remainder financing wider current account deficits. For Asia, during the 1989-92 period the proportion of capital inflows channelled into reserve accumulation was 62 percent.

in private consumption. 1/ The sharp increase in official reserves, in turn, indicates that the capital inflow was met with a rather heavy degree of foreign exchange market intervention by the various monetary authorities. Chart 1, which depicts monthly data on international reserves for the countries in our sample, shows that for most of the countries, there is a pronounced upward trend in the stock of official reserves starting from about the first half of 1990. Part of the increased capital inflows represent repatriation of previous flight capital, but there are also new investors in Latin America. 2/

Latin America has not been the only region receiving sizable capital inflows in recent years. In effect, capital began to flow to Thailand in 1988 and to a broader number of Asian countries sometime in 1989-1990 (see Bercuson and Koenig, 1993 and Chuhan, Claessens and Mamingi (1993)). As Table 2 shows, capital inflows amounted to \$144 billion during the 1989-92 period. While access to international credit markets was not as severely limited for most of the Asian countries as for their more indebted Latin American counterparts, the pace of inflows, particularly to southeast Asia has accelerated appreciably in the past four years. 3/ As is the case in Latin America, developments outside the region are frequently credited for contributing to the flow of capital to a

1/ These figures, which are available from the authors, express investment and consumption as shares of GDP and rely on preliminary national income accounts data for 1991. In the case of Mexico, the total investment ratio, which has increased only modestly, masks an important change in composition; private investment has increased sharply, but this has been largely offset by a decline in public investment.

2/ On the role of various policy measures to reverse capital flight -- such as amnesties, capital account liberalization, and introduction of foreign-currency denominated domestic instruments -- see Collyns et. al. (December 1992) and Mathieson and Rojas-Suarez (1992).

3/ During the prior four years total inflows to the region amounted to \$81 billion.

group of countries that are, by and large, pursuing very diverse policies and have considerable differences in their macroeconomic environment. Specifically, it is argued that declining profit margins in Japan and in the United States have induced Japanese, and, to a lesser extent, American firms to reallocate to areas where lower wages prevail. 1/

As is the case for most of the Latin American countries, there is a marked accumulation of international reserves during the capital inflow period of 1989-91 (see Chart 2). The sharp buildup in international reserves in the eight Asian countries considered suggests that also in these countries the capital inflow was met with a heavy degree of intervention. 2/

2. Macroeconomic effects

Several interesting similarities emerge from comparing the empirical regularities of the Latin American and Asian experience. First, as Table 3 illustrates, the swing in the balance on the capital account (as a percent of GDP) is of a similar order of magnitude for the countries under study in the two regions. For the Latin American countries in our sample the change in the capital account amounts to 3.3 percent of GDP; for the Asian countries the capital account surplus widens by 2.7 percent of GDP. Second, as discussed, an important effect of the increased capital inflows, across countries and across regions is the observed marked accumulation in international reserves. Third, during the early phases of the surge in capital inflows there are sharp increases in stock prices. During 1991 stock prices (in U.S. dollars)

1/ For a comparison of labor earnings in some of these Asian countries with the United States and Japan see Bercuson and Koenig (1993).

2/ As of 1992, international reserves stood \$247 billion, for the region as a whole, compared to \$151 billion in 1988.

registered gains of 400 percent for Argentina and gains of about 100 percent for Chile, Colombia, and Mexico. Similarly, during 1988-89 a number of the emerging stock markets in Asia outperformed U.S. and Japanese stock markets by considerable margins. The IFC Asia composite, which includes Korea, Malaysia, Taiwan, and Thailand registered total returns (in dollars) of 83 percent and 57 percent in 1988 and 1989, respectively. 1/ Fourth, in both regions the capital inflows have been accompanied by an acceleration in economic growth.

There are, however, differences between Asia and Latin America in the macroeconomic impact of the capital inflows. As Chart 3 illustrates, in Latin America in the majority of countries in our sample, capital inflows have been accompanied by a real exchange rate appreciation 2/; in Asia such an appreciation is less common (Chart 4). 3/ 4/

While the reasons why the real exchange rate responds differently to the inward flow of capital in the two regions are likely to be numerous, important differences in the composition of aggregate demand may play a key role in determining whether the real exchange rate appreciates or not. As Table 3 summarizes, for the Asian countries investment as a share of GDP increases by about 3 percentage points during the capital inflows period. For the Latin

1/ Most of the Latin American stock markets have recently given up some of the earlier gains. Similarly, the Asian markets weakened during 1990 and 1991 after the earlier surge.

2/ Exceptions among our sample are Bolivia, Brazil, and Ecuador; the last of these has only experienced a very modest improvement in its capital account.

3/ The appreciation of the Won during 1988-89 predates the surge of capital inflows.

The IMF indices of the real effective exchange rate are used, hence an appreciation is represented by an increase in the index.

American countries, on average, (there are marked differences across countries 1/) investment falls--the inflows during the 1990-92 are primarily associated with a decline in private saving and higher consumption. 2/ It has often been the case for these countries that the increase in investment falls primarily on imported capital goods. On the other hand, relative to investment, the increase in consumption is less tilted toward traded goods. Other things equal, the above observation would suggest that a real exchange rate appreciation is more likely when capital inflows finance consumption than when these finance investment. 3/ The behavior of public consumption is another element influencing the real exchange rate by affecting both the level and composition of aggregate demand. In some of the Asian countries, most notably Thailand, the capital inflows coincided with a contraction in fiscal expenditure. 4/ A number of Latin American countries have also had major fiscal adjustment programs, however, these predate the surge in capital inflows. These expenditure cuts may reduce or eliminate the real exchange rate pressures through two channels: First, the fiscal contraction tends to reduce aggregate demand; second, public consumption may be more biased toward nontraded goods than

1/ For example, both Chile and Mexico have posted increases in investment during 1990-92. More recently, there are early signs that investment is rising in countries like Argentina and Colombia.

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

3/ This of course does not explain Chile and Korea, where there has been a real exchange rate appreciation alongside a sharp rise in investment.

4/ This early contraction, however, was not sustained (see Bercuson and Koenig (1993)).

private sector consumption. ^{1/} Yet another reason that may explain why a real exchange rate appreciation failed to materialize was the conduct of monetary policy. Sterilization policies had limited success in reigning in monetary growth in a number of Latin American countries. For the Asian countries the experience with sterilization policies is mixed. In some countries, like Malaysia, the aggressive open market operations that characterized the efforts to sterilize had the effect of driving short-term interest rates higher and attracting greater short-term inflows (as was the case of Colombia in 1991) (see Koenig and Bercuson (1993)). In countries, like Singapore, there is some evidence that sterilization policies were more successful in limiting the expansion in the credit and monetary aggregates (see Reisen (1993) ^{2/}). If the acceleration in the growth of credit is successfully limited, aggregate demand is curtailed and the pressure on the price of nontraded goods is dampened. Another factor which may have helped limit the expansion in the monetary and credit aggregates in the Asian experiences is the fact that, as will be subsequently discussed, a higher share of the inflows is in the form of foreign direct investment. Since the latter is not usually intermediated through the domestic banking system, there is no accompanying expansion in domestic credit (see Section V).

Another marked difference between Asia and Latin America is in the composition of capital inflows. While in the Asian countries 44 percent of the increase in capital inflows came in the way of foreign direct investment, for

^{1/} This does not suggest that fiscal adjustment has not taken place in a number of Latin American countries, but rather that its timing did not coincide with the capital inflows.

^{2/} The conclusions reached in that paper about the experiences of Malaysia and Indonesia are debatable.

the Latin American countries direct investment accounted for 17 percent of the increase in inflows. This difference may help explain why concerns over "hot money" and a sudden reversal are more prevalent among Latin American policy circles than among their Asian counterparts. It may also, in part, explain why the increase in investment is much greater for most of the Asian countries.

V. The Role of Credit

While the impact of capital inflows on the real exchange rate, and therefore, international competitiveness is a major source of concern to policymakers, there are other areas of the economy that are particularly vulnerable to changes in flows of capital which receive less attention. Specifically, the banking or financial system, which intermediates part of these inflows. This section examines some of the links between the capital inflows, domestic credit creation, and the current account and highlights some of the problems that may arise in the presence of surges in capital inflows.

By their very nature, capital inflows require the operation of credit markets. In principle, domestic intermediation is not strictly necessary. A domestic consumer or investor, for example, could borrow in international markets, and use the proceeds to purchase the desired goods and services. In addition, foreign direct investment rarely relies on domestic intermediation. However, in practice, domestic credit markets (in particular, banks) play a key role in connection with capital inflows.

The role of domestic banks ^{1/} is enhanced if they are allowed to offer competitive interest rates, and reserve requirements are not large. A typical

^{1/} By domestic banks we refer to banks operating in the country in question, although their headquarters may be located elsewhere.

example where banks play a central role is that in which the monetary authority sterilizes, all or part of, such inflows by issuing treasury bills. The bills could be sold outside the banking system. However, banks' intermediation endows such bills with "liquidity." This is clearly the case if treasury bills were bought with the proceeds of transferable deposits. Not surprisingly, then, there are many sterilization examples in which banks ended up being the major investors in treasury bills.

However, banks may also play an important role in non-sterilization episodes. Bank deposits are attractive to short-term investors who, typically, "park" their funds in a local bank waiting for better opportunities abroad or, on occasion, at home. Banks, in turn, invest those funds abroad or at home. External investment is unlikely because domestic banks cannot compete with foreign banks in foreign markets. Therefore, these funds are likely to be loaned at home for short-term projects.

The two major concerns about the intermediation of international capital flows through the domestic banking system are (i) that interest rates reflect "country risk," and (ii) unpaid-for explicit or implicit insurance on bank deposits. The first factor normally implies domestic interest rates that are far higher than international ones. If the funds go to buy treasury bills, the proceeds of which are invested in international reserves (e.g., U.S. Treasury Bonds), then such an operation increases the deficit of the public sector. The associated fiscal cost could be substantial when massive sterilization of capital inflows takes place, as the recent experiences in Egypt and Colombia illustrate. On the other hand, if funds are lent to the private sector, much of that may not find its way into physical or human capital investment at home.

Free implicit bank deposits' insurance, point (ii) above, is a cause of concern because, among other things, it induces banks increase their risk exposure, for example, to pay little attention to matching the maturities of deposits with that of loans--the former being normally shorter than the latter. A surge in lending may thus create or exacerbate a maturity mismatch between banks assets and liabilities. Hence, a sudden burst of capital outflows may result in a financial crisis. This is particularly so if capital inflows are not sterilized and are, thus, lent by banks to the private sector which, as pointed out above, is likely to invest them in non-liquid assets or use them to finance current expenditures. Free implicit insurance is even more harmful when accompanied by poor bank supervision. However, insurance has to be financed by someone in society, which probably means that such schemes increase country risk--and, thus, prevent domestic interest rates from converging to their international levels.

1. Credit and the current account

There are other reasons besides banking sector vulnerability why inadequate intermediation is a source of concern. For example, the private sector may overborrow for one of the following three reasons: first, static distortions (e.g., wage rigidity, imperfect competition); second, dynamic (or capital market) distortions, which include unpaid-for deposit insurance (as discussed) and lack of credibility in policy announcements; and third, income distribution considerations. The role of distortions in inducing inadequate financial intermediation is straightforward. Static distortions may lead to a wrong choice of technology, its deleterious effects being magnified by access to foreign credit. In turn, dynamic distortions directly induce the wrong kind of

intermediation. The last point corresponds to the case in which the market outcome is not optimal from the policymaker's point of view because of unwanted effects on income distribution (either across members of the same generation, or across different generations).

In sum, any deleterious effects of domestic intermediation are likely to increase in the face of massive capital inflows. And these effects are likely to be greater if the inflows are primarily of a short-term nature.

VI. Macroeconomic Policies

The optimal policy response to capital inflows is very much a function of the anticipated persistence of capital inflows and the nature of domestic credit markets. In addition, the prevailing "policy environment," (e.g., whether or not the economy is undergoing a price stabilization program) and the extent of credibility enjoyed by the authorities are also key determinants of the form and timing of the appropriate policy response.

The rationale for policy intervention emerges from the main concerns of policymakers: (1) since capital inflows are often associated with real exchange rate appreciation and with increased exchange rate volatility, it is feared these may adversely affect the export sector; (2) as previously discussed, capital inflows--particularly when massive--may not be properly intermediated and, therefore, may lead to a misallocation of resources (see point (i) in the previous section) and, possibly, excessive current account deficits; (3) capital inflows--especially when of a "hot money" variety--could be reversed on short notice, possibly leading to a domestic financial crisis. ^{1/} These

^{1/} As point (ii) in the previous section highlights, this crisis could emerge from a serious maturity mismatch between banks' assets and liabilities.

concerns have often led the authorities to react to the capital inflows by implementing a broad variety of policy measures. The remainder of this section examines the relative merits of some of those policies. ^{1/}

1. Monetary and Exchange Rate Policy

If a country is like a State in the United States, then a regime of fixed exchange rates and no sterilization of capital inflows is feasible, and possibly desirable. On the other hand, with poorly functioning domestic credit markets, a country undergoing an exchange-based stabilization program, for example, is likely to prefer sterilization unless, or until, the fiscal costs become exorbitant. This is so, because sterilization may allow a tighter grip on liquidity (see Calvo and Végh (1992)), and a sudden burst of capital outflows can be painlessly met by a corresponding loss of reserves without affecting credit to the private sector. In addition, if the credibility of the monetary authorities is not well established and is directly linked to the performance of the monetary and credit aggregates, there may be grounds for sterilizing in order to curb the growth of these aggregates. In effect, sterilized intervention (in varying orders of magnitude) has been the most common policy response to the surge in capital inflows in both Asia and Latin America.

A serious difficulty arises when the fiscal costs of sterilization are large and international funds are highly volatile. In addition, in some instances (the cases of Colombia and Malaysia) sterilization policies have driven up domestic interest rates, further stimulating capital inflows. Under those circumstances, there are three major monetary policy options: (i) allow

^{1/} For a discussion of these issues from the perspective of Chilean monetary and exchange rate policies, see Zahler (1992).

the exchange rate to float, (ii) increase marginal cash/deposit requirements, and (iii) resort to unsterilized intervention.

Option (i), floating exchange rates, has the advantage of making money supply and domestic credit exogenous with respect to capital inflows. While none of the countries discussed have switched to a floating exchange rate system, some countries such as Chile and Mexico have widened the bands in which the exchange rate is allowed to fluctuate. The greater exchange rate uncertainty, it is argued, may discourage short-run speculative 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. The latter may hurt strategic sectors of the economy, like non-traditional exports. This is clearly the case if the real appreciation is persistent. But, even when the latter does not hold, the greater real exchange rate volatility may have negative effects on tradable-goods sectors, to the extent that futures markets are in their infancy. To avoid the exchange rate volatility associated with a pure float while still limiting the impact of capital inflows on the money stock, several countries (Colombia, Malaysia, Singapore and Taiwan Province of China) have allowed for some appreciation of the nominal exchange rate. This policy has the advantage that, to the extent that there is an appreciation in equilibrium real exchange rate, it allows the real appreciation to be effected all at once through the nominal appreciation of the exchange rate rather than gradually through increases in domestic inflation.

Option (ii), increasing marginal reserve requirements, which has been used by Chile and Malaysia, lowers the capacity of banks to lend. Consider the case in which marginal reserve requirements are set at 100 percent of deposits in

excess of a given benchmark. Thus, once the benchmark is reached, banks would have no incentive to pay interest on deposits. Let us assume that the exchange rate is fixed. Then, the new capital inflows that do not go directly to finance a deficit in the current account, are exchanged for domestic currency at the fixed exchange rate. If the monetary authority does not sterilize those funds, the latter will not be lent through the banking system (because of the 100 percent requirement)--thus, avoiding the expansion of bank credit associated with unsterilized intervention. Furthermore, since deposit interest rates will drop to zero if the stock of deposits exceeds the above-mentioned benchmark, increasing marginal reserve requirements will act as a deterrent on capital inflows. A drawback of this reserve-requirement policy is that over time it may promote disintermediation, as new institutions may develop so as to bypass these regulations. Eventually those institutions could grow so large that they end up being under the insurance umbrella of the central bank (by the principle that they are "too large to fail"), recreating all the problems associated with non-sterilized intervention. Therefore, increasing marginal reserve requirements is unlikely to be effective beyond the short run.

Option (iii), non-sterilized intervention, runs the risk of generating a vulnerable financial system, as pointed out above. Also, the expansion in credit and money implied by the capital inflows may raise doubts on the credibility of previously announced policy targets for money growth and inflation by the authorities. Thus, such an option becomes more attractive, the smaller the capabilities of the banking system to increase loans to the private sector. As we approach the limit case, in which the banking system is unable to intermediate more funds, further capital inflows through the banking system will

exert a strong downward pressure on interest rates. This will have the advantage of slowing down capital inflows and of lowering the fiscal cost of the outstanding domestic credit. Argentina represents the case where a policy of nonsterilized intervention has been followed.

2. Fiscal policy

Taxes on short-term borrowing abroad were imposed in some countries--Israel in 1978 and Chile 1991. Although this policy is effective in the short run, experience suggests that the private sector is quick in finding ways to dodge those taxes through over- and under-invoicing of imports and exports and increased reliance on parallel financial and foreign exchange markets.

Another policy reaction to capital inflows could be to tighten fiscal policy. This policy was adopted by Thailand. While this policy is not likely to stop the capital inflow, it may lower aggregate demand and curb the inflationary impact of capital inflows. 1/ In that context, higher taxes may be less effective than lower government expenditure. Often when credit is widely available--as is the case when the country is subject to massive capital inflows--individuals' expenditures can be largely independent of their tax liability. This is especially true if higher taxes are expected to be transitory--a somewhat plausible expectation since higher taxes would be associated with transitory capital inflows. In contrast, lower government expenditure--particularly when this expenditure is directed to the purchase of nontraded goods and services--has a direct impact on aggregate demand, which is unlikely to be offset by an expansion of private sector demand. However,

1/ In addition, to the extent that it reduces the government's need to issue debt, a tighter fiscal stance is also likely to lower domestic interest rates.

contraction of government expenditure is always a sensitive political issue. Overall, it is hard to provide a strong case for adjusting fiscal policy--which is usually set on the basis of medium or long-term considerations--in response to what may turn out to be short-term fluctuations in international capital flows. However, if the authorities had envisioned a tightening of the fiscal stance, the presence of capital inflow may call for earlier action in this respect.

3. Trade policy

Trade policy measures can help to insulate the export sector from real exchange rate appreciation. A possibility is higher export subsidies. However, this policy distorts resource allocation between exportables and importables and the fiscal cost could be substantial. Alternatively, the authorities could increase both export subsidies and import tariffs in the same proportion--so as to avoid creating further relative discrepancies between internal to external terms of trade--and announce that those subsidies/tariffs will be phased out in the future. Indeed, if the private sector perceives these measures as transitory, agents are likely to substitute future for present expenditure, contributing to cool off the economy and to attenuate the real exchange rate appreciation. The fiscal cost of this package need not be large, particularly if the trade deficit is small. Furthermore, static distortions are not increased, since such trade policy does not change initial relative price distortions between exports and imports. However, this policy can be criticized on several grounds. First, its effectiveness depends on the private sector believing that those subsidies/tariffs will be phased out in the future.

Second, this policy--as the previous one involving only subsidies--deviates from the worldwide trend towards commercial opening and free-trade agreements. And as past experiences have shown, such protectionist moves have often led to retaliation and reductions in welfare.

4. Banking regulation and supervision

As discussed earlier, attempting to insulate the banking system from short-term capital flows is an attractive goal in cases where most of the inflows take the form of increased short term bank deposits. Regulation that limits the exposure of banks to the volatility in equity and real estate markets could help insulate the banking system from the bubbles associated with sizable capital inflows. In this vein, risk-based capital requirements in conjunction with adequate banking supervision to insure such requirements are complied with could help insulate the domestic banking system from the vagaries of capital flows.

V. Final Words

The above discussion has probably erred on the pessimistic side, by emphasizing the risks associated with capital inflows. The overall picture, however, is less bleak. As argued earlier, several Asian countries have experienced capital inflows similar to those in Latin America without associated sizable appreciations of the real exchange rate. Part of the reason for the latter seems to be the fact that a large share of capital flows into these Asian countries has taken the form of direct investment. This, of course, renders moot many of the concerns raised above. The key question, however, is how to achieve this favorable composition of capital flows. In this connection, we feel there are no policy "tricks" that can do the job. In order to induce investors to bolt down their capital in a growth-starved country, policymakers

must be able to muster a high degree of credibility, and be prepared to support clear, simple, and market-oriented policies. Even then, it may be a while before substantive direct investment takes place.

Therefore, until credibility is achieved, countries are well advised to be cautious about the intermediation of capital flows, especially if these are perceived to be primarily short-term and subject to quick reversal. A reasonable sequencing of policies would consist of initially limiting the intermediation of those flows--by sterilized intervention, greater exchange rate flexibility, and/or increasing marginal reserve requirements. This could be followed by a gradual monetization of these flows (i.e., non-sterilized intervention), accompanied perhaps by an appreciation of the currency. The step to non-sterilized intervention, though, could 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.

Table 1. Latin America: Balance of Payments, 1985-92 1/

Year	Balance of goods, services, and private transfers <u>2/</u> \$ Billion (1)	Balance on capital account plus net errors and omissions <u>2/</u> \$ Billion (2)	Changes in reserves <u>3/</u> \$ Billion
1985	-5.5	6.5	-1.0
1986	-19.8	13.2	6.6
1987	-11.8	15.0	-3.2
1988	-13.4	5.7	7.7
1989	-10.1	12.7	-2.6
1990	-8.5	23.6	-15.1
1991	-20.5	38.9	-18.4
1992	-34.6	53.4	-18.8

1/ Data for Western Hemisphere from IMF's World Economic Outlook.

2/ A 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.

3/ A minus sign indicates an increase.

Table 2. Asia: Balance of Payments, 1985-92 1/

Year	Balance of goods, services, and private transfers <u>2/</u> \$ Billion (1)	Balance on capital account plus net errors and omissions <u>2/</u> \$ Billion (2)	Changes in reserves <u>3/</u> \$ Billion
1985	-18.7	22.7	-4.0
1986	-1.1	25.5	-24.4
1987	14.8	24.7	-39.5
1988	2.6	8.7	-11.3
1989	-8.1	17.1	-9.0
1990	-10.0	31.7	-21.7
1991	-10.2	48.9	-38.7
1992	-25.2	46.3	-21.1

1/ Data for Asia from IMF's World Economic Outlook.

2/ A 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.

3/ A minus sign indicates an increase.

Table 3. Key Indicators for Selected Latin American and Asian Countries

(As percent of GDP)

Latin America

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Mexico	Peru	Uruguay	Venezuela	Average of 10 countries
Capital Account <u>1/</u>											
1984-89	-1.6	0.6	-2.3	-1.7	2.0	-6.3	-0.4	-5.3	-2.5	-3.1	-2.1
1990-92	2.2	3.3	-0.3	5.9	1.0	-5.1	6.2	-0.3	0.5	-1.0	1.2
Direct Investment											
1984-89	0.9	0.5	0.5	0.5	1.5	0.6	0.8	--	--	0.1	0.5
1990-92	1.8	1.0	0.3	1.9	1.2	0.8	1.6	0.2	--	1.8	1.1
Investment											
1984-89	18.1	10.1	17.2	16.0	19.7	18.7	20.1	19.4	12.2	17.7	16.9
1990-92	15.1	13.5	15.8	20.1	17.7	20.2	21.7	16.4	13.8	14.1	16.8
Public Consumption											
1984-89	12.4	11.3	11.1	10.9	10.3	11.6	11.1	9.6	13.7	10.4	11.2
1990-92	14.2	11.6	12.4	8.8	10.1	8.4 <u>2/</u>	10.3	9.0	13.3 <u>2/</u>	11.1	10.9

Asia

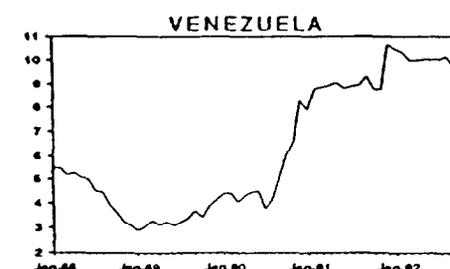
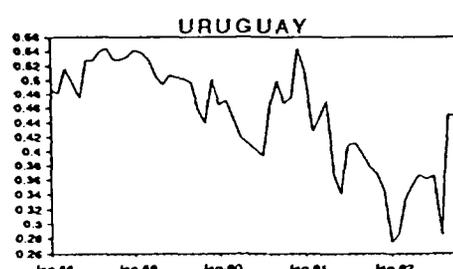
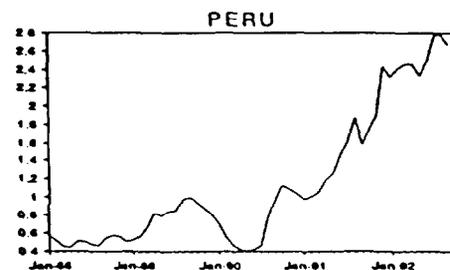
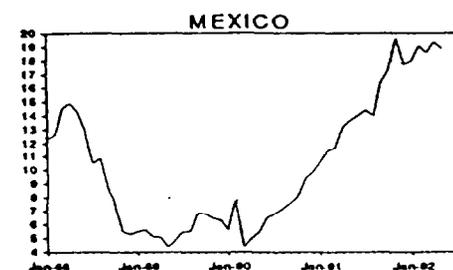
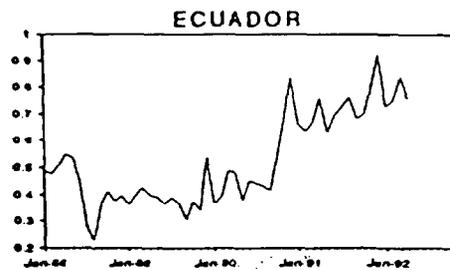
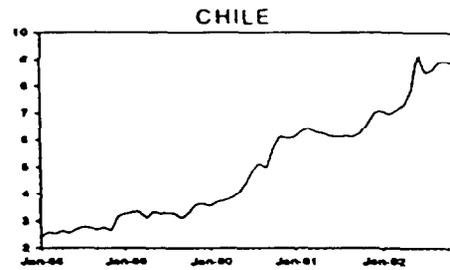
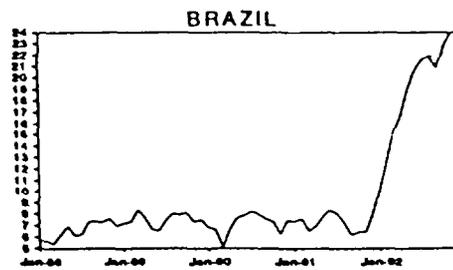
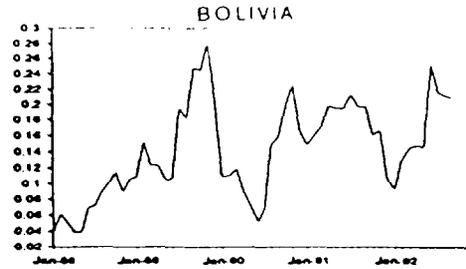
	Indonesia	Korea	Malaysia	Philippines	Singapore	Sri Lanka	Taiwan Prov. of China	Thailand	Average of 8 countries
Capital Account									
1984-88	2.2	-2.0	-0.4	-3.8	5.0	4.6	0.1	4.2	1.2
1989-92	5.0	1.3	8.7	1.9	3.3	4.8	-4.9	11.0	3.9
Direct Investment									
1984-88	0.5	0.3	2.7	0.8	9.4	0.6	-0.3	0.8	1.8
1989-92	1.2	--	6.2	1.7	11.3	0.5	-1.7	1.5	3.0
Investment									
1984-88	23.8	28.9	26.0	18.3	38.9	23.0	19.3	21.8	25.0
1989-92	25.4	36.3	32.8	20.8	39.0	19.5	22.7	28.2	28.1
Public Consumption									
1984-88	10.0	9.8	12.5	6.8	12.8	9.6	15.0	13.6	11.3
1989-92	10.2	9.7	10.6	8.0	10.9	7.6	16.5	9.9	10.4

Source: World Economic Outlook; Staff Reports (various issues).

1/ Includes errors and omissions.2/ Data available only through 1991.

Chart 1. Latin America: TOTAL RESERVES MINUS GOLD

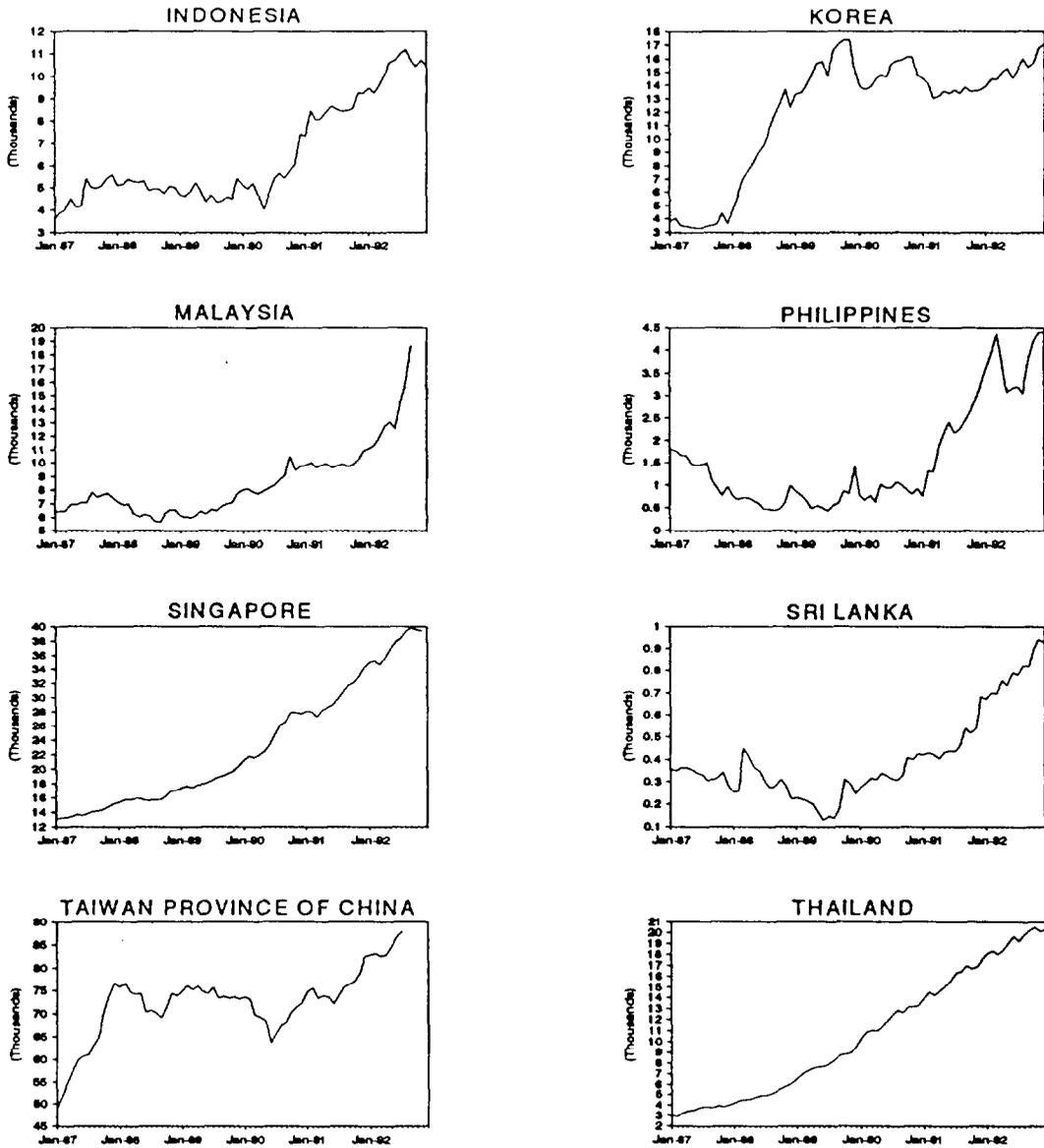
January 1988 - December 1992
(Billions of U.S. dollars)



Source: International Financial Statistics, IMF

Chart 2. Asia: TOTAL RESERVES MINUS GOLD

January 1987 - December 1992
(Billions of U.S. dollars)

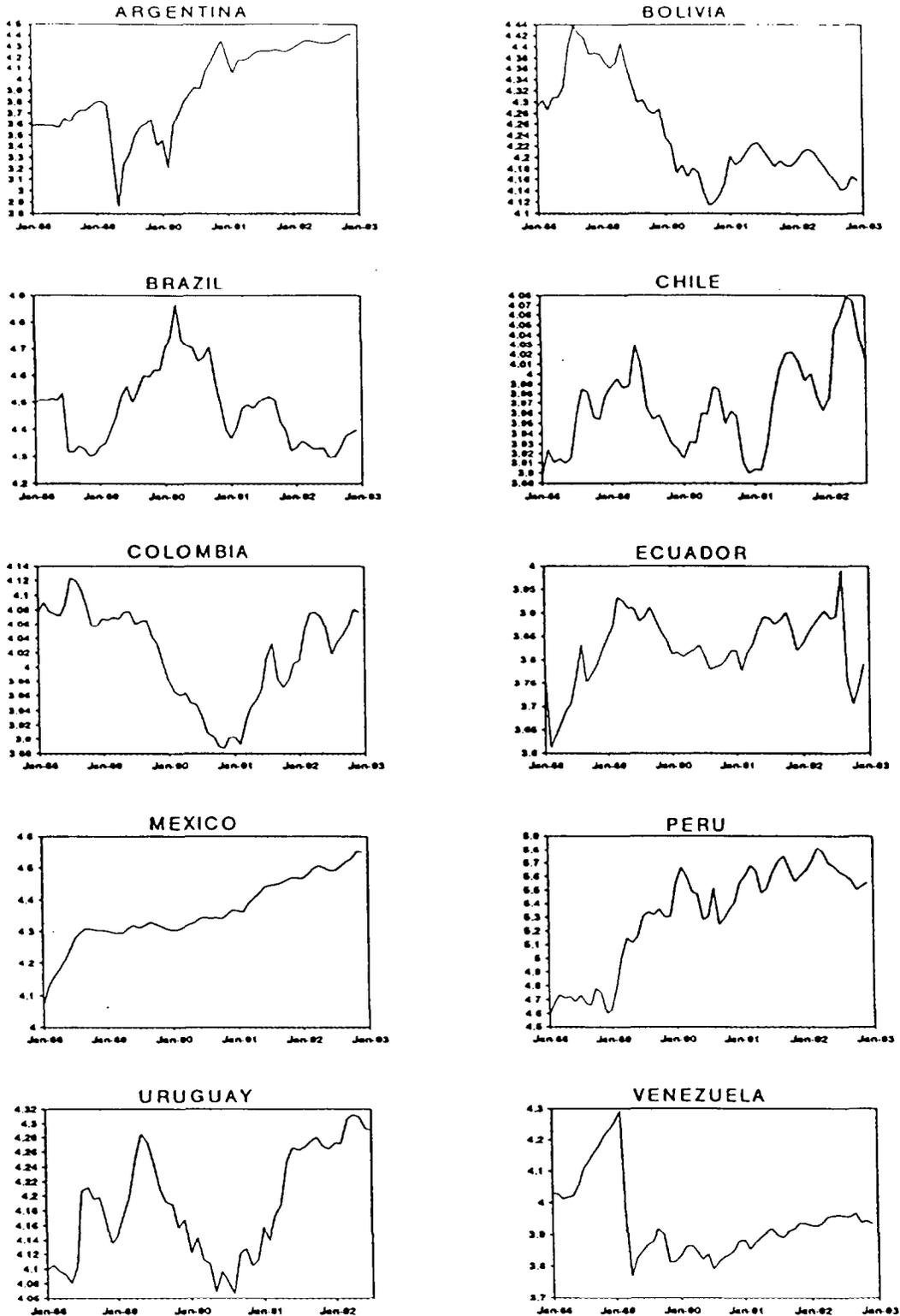


Source: International Financial Statistics, IMF.



Chart 3. Latin America: REAL EXCHANGE RATE

January 1988 - December 1992

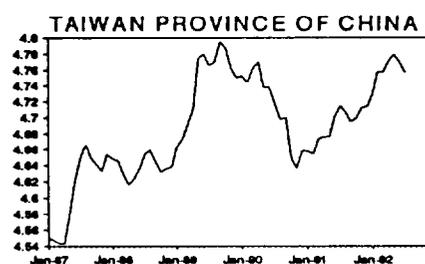
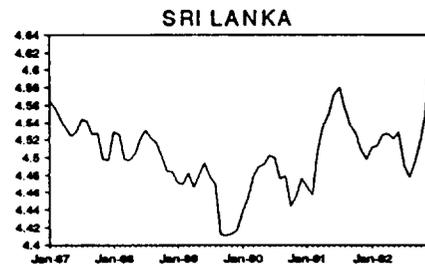
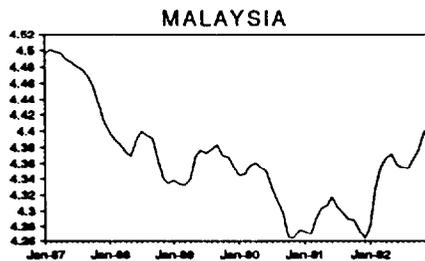
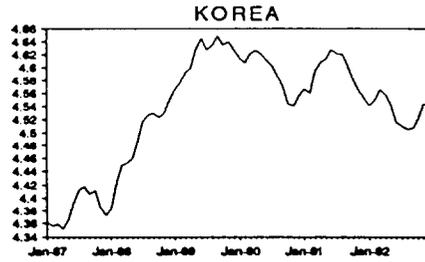


Source: Information Notice System, IMF.

Note: An increase in the index denotes a real exchange rate appreciation.

Chart 4. Asia: REAL EXCHANGE RATE

January 1987 - December 1992



Source: Information Notice System, IMF.

Note: An increase in the index denotes a real exchange rate appreciation.

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