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# THE CAPITAL INFLOWS PROBLEM

Concepts and Issues

Guillermo A. Calvo, Leonardo Leiderman,  
and Carmen M. Reinhart

INTERNATIONAL  
CENTER FOR  
ECONOMIC GROWTH

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## PREFACE

We are pleased to publish *The Capital Inflows Problem* by Guillermo A. Calvo, Leonardo Leiderman, and Carmen M. Reinhart as the fifty-sixth in our series of Occasional Papers, which present reflections on broad policy issues by noted scholars and policy makers.

The move of capital from industrial countries to developing regions this decade has many positive effects, stimulating economic growth and building up international reserves. Capital inflows, however, can trigger problems with inflation, real exchange rate appreciation, and the current account balance. A sudden, short-term capital outflow can threaten a country's financial stability as well.

This paper is an outgrowth of the authors' research for the International Monetary Fund. The authors have studied capital inflows into Latin America in the 1970s and 1990s, and they compare the region's experience to that of Asia. In analyzing current capital inflows into Southeast Asia and Latin America, the authors weigh the benefits and dangers of various policy options.

In comparing financial developments in Southeast Asia and Latin America, this paper enhances the International Center for Economic Growth's interregional publications, which encourage people in different regions to learn from each others' experiences.

Policy makers should find this paper useful to ensure that capital inflows make a positive contribution to development, while providing

valuable information on safeguards that can be installed to correct or at least limit the problems that large capital inflows can bring to a country.

Nicolás Ardito-Barletta

General Director

International Center for Economic Growth

Panama City, Panama

August 1994

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GUILLERMO A. CALVO, LEONARDO LEIDERMAN,  
AND CARMEN M. REINHART

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## **The Capital Inflows Problem**

### **Concepts and Issues**

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 had 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.

Capital inflows, however, 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 produce 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 studies by Calvo, Leiderman, and Reinhart (1992b, 1993), which employ 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 "Definitions and Characteristics." A brief discussion of the causes of capital inflows is presented under "External and Internal Causes." The stylized facts are reviewed in the following section. The role of credit is examined next, while "Macroeconomic Policies" discusses the policy response to the capital inflows. Concluding remarks follow.

## 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 (that is, the current account deficit) *plus* the change in official holdings of international reserves. Thus, increases in capital inflows can be identified with widening current account deficits or reserve accumulation.<sup>1</sup>

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, and is often referred to as the official settlements balance or the overall balance of payments. There are two polar cases of central bank response to increased capital inflows. If there is no intervention, 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 intervene and, more often than not, sterilize part of the capital inflows (see "Final Words").

### **External and Internal Causes**

The incidence of capital inflows varies drastically over time. Capital inflows to developing countries, for example, 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, 1993). Therefore, a central issue for policy making is ascertaining the degree of persistence of the capital inflows. To evaluate the persistence issue, as well as the 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 unrelated to policies followed in the country in question. Examples of such factors for "small" open economies are (1) declines in international interest rates and (2) 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.<sup>2</sup> Examples of policies that would attract long-term capital inflows (possibly, in the form of direct investment) are (1) successful price stabilization programs, as these may be accompanied by improved fiscal policy fundamentals and greater macroeconomic stability, and (2) policies that credibly increase

the rate of return on domestic investment projects (for example, tax credits and debt-equity swaps). But domestic policies may also attract short-term capital of a highly “reversible” nature. Such policies include one of the following: (1) 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 (2) tariff cuts under downward price rigidity, inducing (temporarily) excessively high prices on 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; 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, 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 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 account for why capital inflows have occurred in countries that have not undertaken reforms or for why they did not occur, until only recently, in countries where reforms were introduced well before 1990. The crucial role played by domestic reforms in attracting capital from abroad is evident, however, in the important differences across countries in the orders of magnitudes of the

TABLE 1 Latin America: Balance of Payments, 1985–1992

Year	Balance of goods, services, and private transfers <sup>a</sup> (\$ Billion)	Balance on capital account plus net errors and omissions <sup>a</sup> (\$ Billion)	Changes in reserves <sup>b</sup> (\$ 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

NOTES: Data for Western Hemisphere from International Monetary Fund's *World Economic Outlook*.

a. 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.

b. A minus sign indicates an increase.

SOURCE: *World Economic Outlook*, International Monetary Fund (IMF).

capital inflows. Argentina, Chile, and Mexico (countries with important domestic reforms), for example, have attracted capital in orders of magnitudes well in excess of other countries in the region.

### Evidence from Asia and Latin America

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.<sup>3</sup> Monthly data for individual countries provide greater detail and are also discussed here.

**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: 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 1990–1992. Considering 1990–1992 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.<sup>4</sup> 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 in private consumption.<sup>5</sup> 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. Figure 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.<sup>6</sup>

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; Chuhan, Claessens, and Mamingi 1993). Capital inflows amounted to \$144 billion during the 1989–1992 period (see Table 2). 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.<sup>7</sup> As is the case in Latin America, developments outside the region are frequently credited for contributing to the flow of capital to a 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.<sup>8</sup>

As is the case for most of the Latin American countries, there is a marked accumulation of international reserves during the capital inflow

FIGURE 1 Latin America: Total Reserves Minus Gold

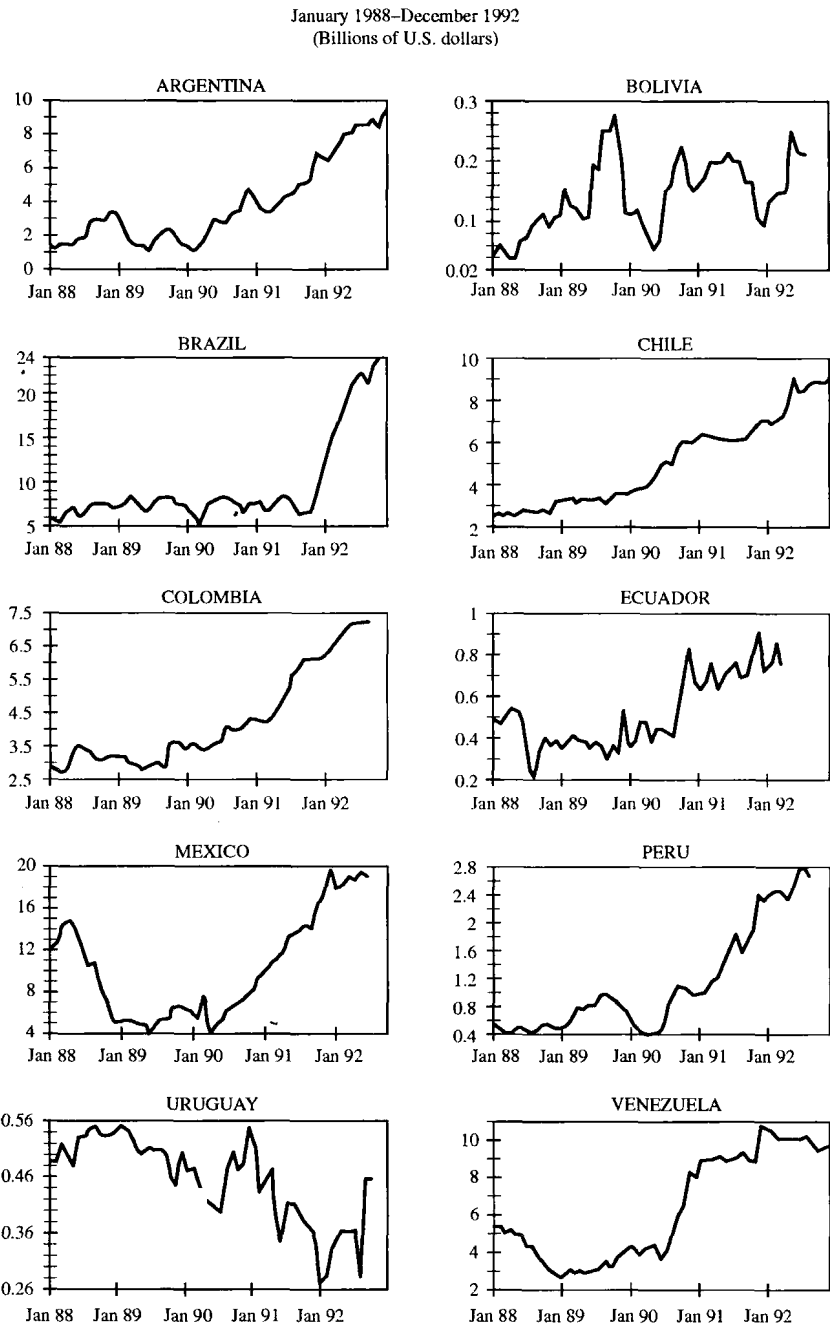


TABLE 2 Asia: Balance of Payments, 1985–1992

Year	Balance of goods, services, and private transfers <sup>a</sup> (\$ Billion)	Balance on capital account plus net errors and omissions <sup>a</sup> (\$ Billion)	Changes in reserves <sup>b</sup> (\$ 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

NOTES: Data for Asia from IMF's *World Economic Outlook*.

a. 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.

b. A minus sign indicates an increase.

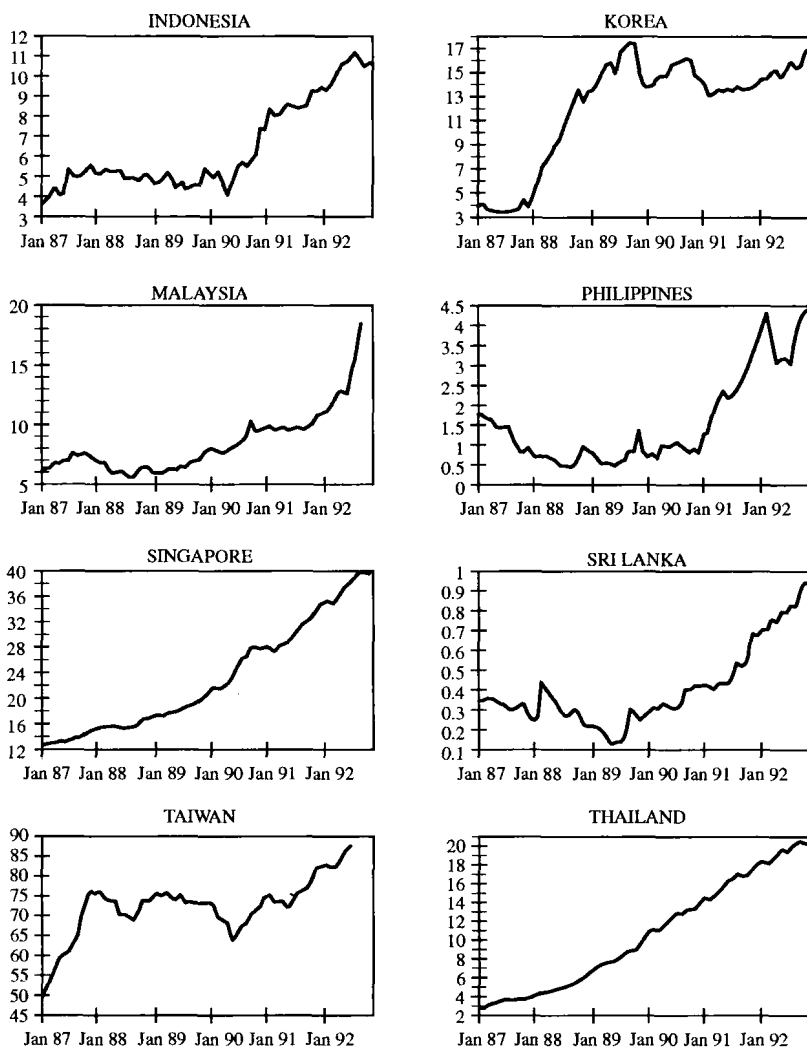
SOURCE: *World Economic Outlook*, IMF.

period of 1989–1991 (see Figure 2). The sharp buildup in international reserves in the eight Asian countries considered suggests that in these countries the capital inflow was also met with a heavy degree of intervention.<sup>c</sup>

**Macroeconomic Effects** Several interesting similarities emerge from comparing the empirical regularities of the Latin American and Asian experience. First, the swing in the balance on the capital account (as a percent of gross domestic product [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 (see Table 3); for the Asian countries the capital account surplus widens by 2.7 percent (see Table 4). 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) registered gains of 400 percent for Argentina and gains of around 100 percent for Chile, Colombia, and

FIGURE 2 Asia: Official Reserves Minus Gold

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



SOURCE: *International Financial Statistics*, IMF.



TABLE 3 Key Indicators for Selected Latin American Countries (percentage of GDP)

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Mexico	Peru	Uruguay	Venezuela	Average of IQ countries
Capital account <sup>a</sup>											
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	11.4	5.4	17.2	16.0	16.1	19.2	19.0	19.6	10.9	16.5	15.1
1990-92	10.0	5.8	15.8	19.2	16.1	11.9	21.7	21.8	7.7	14.9	14.5
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 <sup>b</sup>	10.3	9.0	13.3 <sup>b</sup>	11.1	10.9

Notes: Dash = 0.0

a. Includes errors and omissions.

b. Data available only through 1991.

Source: *World Economic Outlook*, IMF.