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Capital Inflows to Latin America: The 1970s and the 1990s 1/

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Abstract

During the past two years Latin America has received sizable international capital inflows. This paper compares the recent experience with that of the late 1970s. The analysis examines differences and similarities between the two episodes in three broad areas: domestic macroeconomic conditions in the recipient countries at the outset of both episodes, the behavior of the external factors that influence the international allocation of capital, and the response of key macroeconomic variables, such as the real exchange rate, reserves, and stock prices. The paper aims at assessing how vulnerable these economies are to an unexpected and swift reversal in capital inflows, and whether there are signs that the vulnerability has changed appreciably over time.

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I. Introduction

For first time since the onset of the debt crisis in the summer of 1982, capital has begun to return to Latin America during 1990 and 1991; see Calvo, Leiderman, and Reinhart (1992). In general, Latin America's re-entry into the international capital markets has been perceived as a positive development, see El-Erian (1992). However, policymakers in the region have also begun to voice concerns about the less favorable side effects of these capital inflows. First, it is feared that the real exchange rate appreciation that often accompanies these inflows will adversely affect the international competitiveness of the export sector. Second, there is concern that the inflows could be abruptly reversed, possibly doing considerable damage to the domestic financial system in the process. The fear of reversal is based on the experience of the debt crisis, which followed on the heels of the "capital bonanza" of 1978-1981.

This paper compares the recent capital inflows experience with that of the late 1970s. The analysis examines differences and similarities between the two episodes in three broad areas: domestic macroeconomic conditions in the recipient countries at the outset of both episodes, the behavior of the external factors that influence the international allocation of capital, and the response of key macroeconomic variables, such as the real exchange rate, reserves, and stock prices, to the inflow of capital. The paper aims at assessing how vulnerable these economies are to an unexpected swift reversal in capital inflows, and whether there are signs that the vulnerability has changed appreciably over time.

The paper is organized as follows. Section II reviews some basic empirical characteristics of capital inflows during the episodes of the late 1970s and the more recent experience of 1990-91. The section also examines quantitatively the extent to which these capital inflow episodes were a regional phenomenon as opposed to a country-specific event. Section III reviews various indicators of initial conditions in both episodes. Section IV examines the role played by external factors, such as interest rates and capital account developments in the United States, which affect the pattern of capital flows in these economies. This section draws heavily on our previous work (see Calvo, Leiderman, and Reinhart (1992)). Final remarks and some policy implications are briefly discussed in Section V.

II. Empirical Regularities

We first discuss the anatomy of capital inflows, then turn to the responses of various macroeconomic variables to the inflows, and last we compare the degree of regional comovements in the previous and the current episodes.

1. Broad evidence

While the recent capital inflows to the region are sizable, amounting to \$24 billion in 1990 and about \$40 billion in 1991, to date these magnitudes remain to date well below those observed during the previous episode of 1978-1981. ^{1/} As Table 1 highlights the orders of magnitude, in dollar terms, are quite similar to those observed during 1978-79, the first two years of the earlier episode. ^{2/} However, when measured relative to GDP it becomes evident that the recent inflows do not match the experience of the late 1970s. The same applies to the transfer of resources to Latin America, defined as net capital inflow minus net payment of profits and interest, which in each year of the earlier episode was about double the value of the inflows in 1991 (\$12 billion per year in the late 1970s compared to \$6 billion in 1991); see Griffith-Jones (1992).

Chart 1 provides country-specific evidence of some of these developments. The chart illustrates that net capital inflows are larger in the current episode only in the cases of Bolivia and Mexico, where the capital account balance as a share of GDP reached 3.6 and 7.6 percent, respectively, in 1991. For Argentina, the net inflows amounted to 1.7 percent of GDP in 1991, or about one half its 3.3 percent peak in 1979. For Chile, net capital inflows in 1990 were about 6 percent of GDP, well below its level of 15 percent in 1981, the year of the largest inflows in the prior episode. Similarly, capital inflows to Brazil, Ecuador, Uruguay and Venezuela during the current episode are small in comparison to those of the previous episode.

An important difference between the two episodes of capital inflows is evident from columns (7) and (8) of Table 1. For the region as a whole, capital inflows have financed less of the current account deficits and more of the reserves accumulation in the present episode than in the earlier episode; see Calvo, Leiderman, and Reinhart (1992).

Table 2 presents a breakdown of the types of capital flows to Latin America. Net external borrowing is, by far, the key item in the capital account of the region in the late 1970s and early 1990s. However, as Renhack, Mylonas, and Szymczak (1992) suggest, the composition of capital

^{1/} See also Kuczynski (1992), Salomon Brothers (1992), and Griffith-Jones (1992).

^{2/} Here we refer to columns 5 and 6 of Table 1, which include errors and omissions. This calculation of the capital account balance, we believe, provides a more accurate reading of the extent to which the external indebtedness of the region is changing. Since, particularly in the previous episode, sizable and rising capital flight co-existed with the increasing inflows. It thus appears that a sizable portion of the funds that were borrowed in international capital markets were finding their way back to financial institutions in the United States and elsewhere in the form of flight capital.

**Chart 1. Selected Latin American Countries:
Balance on the Capital Account, 1970-91**
(As a percent of nominal GDP, in U.S. dollars)

Source: World Economic Outlook, IMF, various issues.

Notes: Positive entries denote capital inflows. Capital account balance includes errors and omissions.

Vertical lines denote the beginning and end (when applicable) of capital inflows episodes.

Table 1. Latin America: Balance of Payments, 1973-91

Year	Balance on goods, services, and private transfers 1/		Balances on capital account 1/		Balance on capital account plus net errors and omissions 1/		Overall Balance 2/	
	\$ Billion	% of GDP	\$ Billion	% of GDP	\$ Billion	% of GDP	\$ Billion	% of GDP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1973	-4.7	-2.4	--	--	8.5	4.4	3.8	2.0
1974	-13.5	-5.3	--	--	13.3	5.2	-0.2	-0.1
1975	-16.3	-6.1	--	--	14.7	5.5	-1.6	-0.6
1976	-11.8	-3.8	--	--	16.9	5.4	5.1	1.6
1977	-11.6	-2.7	19.8	4.6	16.4	3.8	4.8	1.1
1978	-19.4	-4.0	30.5	6.2	27.4	5.6	8.0	1.6
1979	-21.7	-3.8	35.0	6.2	32.9	5.8	11.2	2.0
1980	-30.3	-4.3	47.0	6.7	34.0	4.9	3.7	0.5
1981	-43.5	-5.5	59.4	7.4	41.9	5.3	-1.6	-0.2
1982	-42.2	-5.5	45.1	5.9	23.0	3.0	-19.2	-2.5
1983	-11.6	-1.7	22.4	3.2	13.6	1.9	2.0	0.3
1984	-3.2	-0.5	15.5	2.3	12.5	1.8	9.3	1.4
1985	-4.4	-0.6	6.7	0.9	5.5	0.8	1.1	0.2
1986	-18.9	-2.6	14.2	1.9	12.3	1.7	-6.6	-1.0
1987	-12.0	-1.6	14.5	1.9	15.3	2.0	3.3	0.4
1988	-12.4	-1.5	8.2	1.0	4.7	0.6	-7.7	-0.9
1989	-10.0	-1.1	15.7	1.7	12.1	1.3	2.1	0.2
1990	-8.8	-0.8	24.1	2.3	23.9	2.3	15.1	1.4
1991	-22.3	-2.1	38.1	3.8	39.8	3.9	17.5	1.7

Source: World Economic Outlook, IMF, various issues.

1/ 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.

2/ Column (7) equals the sum of columns (1) and (5). A positive sign in column (7) indicates accumulation of international reserves by the monetary authorities.

Table 2. Latin America: Items in the Capital Account
(In billions of U.S. dollars)

Year	Net external borrowing	Non-debt creating flows	Asset transactions (net) 1/	Errors and ommissions 1/	Total
1973	6.0	2.5	--	--	8.5
1974	11.1	2.2	--	--	13.3
1975	11.4	3.3	--	--	14.7
1976	14.2	2.7	--	--	16.9
1977	19.4	2.8	-2.5	-3.4	16.4
1978	28.0	4.9	-2.5	-3.1	27.4
1979	30.2	7.2	-2.4	-2.1	32.9
1980	43.1	6.8	-3.0	-13.0	34.0
1981	61.0	8.2	-8.9	-17.5	41.9
1982	45.7	7.2	-7.7	-22.1	23.0
1983	18.7	4.6	-0.9	-8.8	13.6
1984	14.1	4.5	-3.1	-3.0	12.5
1985	6.2	6.1	-5.4	-1.4	5.5
1986	11.3	4.3	-1.3	-1.9	12.3
1987	10.0	6.0	-1.2	0.5	15.3
1988	3.8	8.8	-4.3	-3.5	4.7
1989	10.9	6.9	-2.1	-3.6	12.1
1990	28.0	8.6	-12.5	-0.2	23.9
1991	17.3	14.1	6.7	1.7	39.8

Source: Data for western hemisphere, World Economic Outlook, IMF, various issues.

1/ These two categories are included in net external borrowing and non-debt creating flows from 1973-1976.

inflows is markedly different in the two episodes. First, Renhack, Mylonas, and Szymczak (1992) note that private sector borrowing through bank loans and bond issues is significantly lower in the current episode. Second, foreign direct investment is much higher in 1991 (i.e., \$14 billion) than it was in the late 1970s, and includes cash inflows of \$3.5 billion from the privatization of state-owned enterprises (especially in Argentina, Brazil, Mexico, and Venezuela). These inflows, owing to privatization, are a relatively new phenomenon; they were not present in the 1970s. Third, the "errors and omissions" item is much smaller compared to the early 1980s. This could well indicate that the current capital flight is considerably smaller than in the earlier episode (see Mathieson and Rojas-Suarez (1992)). ^{1/} Put differently, net external borrowing represents a larger percentage of total capital inflows in the earlier episode than in the present one, and the opposite is true for the relative size of non-debt creating flows.

How did the region respond to the capital inflows? Consider first the behavior of official reserves, as depicted in Chart 2. It shows that in real terms the accumulation of official reserves in the current episode has matched or exceeded that of the previous episode for most countries. Reserve accumulation has been more substantial in Argentina, Bolivia, Ecuador, Mexico, and Venezuela. The accumulation of reserves that has taken place in Brazil, Colombia, Peru and Uruguay is about the same as in the earlier episode. In Chile, the accumulation of reserves is smaller in the current episode is smaller than in the earlier one.

Capital inflows are typically accompanied by real exchange rate appreciation. According to Chart 3, the current real exchange rate appreciation is similar to that observed in 1978-79, although the current level of the exchange rate remains well below the levels of the late 1970s and the early 1980s (Chart 4). ^{2/} The appreciation of the real exchange rate is now moderately greater in Argentina, Ecuador, and Venezuela but is about the same in the remaining countries. When comparing the timing of reserves accumulation and real exchange rate appreciation, most of the evidence in both episodes points to the fact that the accumulation of reserves precedes the real exchange rate appreciation.

Capital inflows are also often associated with stock market booms. Charts 5 and 6 indicate that the booms in the stock markets of Argentina,

^{1/} Notice that in 1991 the "net errors and omissions" item became positive for the first time in several years. This may indicate the unrecorded return of capital that may have previously gone abroad.

^{2/} The latter is not surprising, as the terms of trade for almost all the countries in the region have deteriorated markedly since the late 1970s, with many countries registering declines in the 40-50 percent range. According to Khan and Ostry (1992), a terms of trade decline of 10 percent is likely to produce a median decline (depreciation) in the equilibrium real exchange rate of about 4 percent.

Brazil, Chile, and Mexico are roughly comparable. ^{1/} While part of the booms can be accounted for by the same fundamental factors that give rise to capital inflows, "speculative bubbles" may have played an important role in these booms.

2. Regional comovements: then and now

Despite wide differences in policies and conditions, there is an important degree of comovement across countries in the behavior of capital inflows, official reserves, the real exchange rate, stock market returns, and interest rate differentials (Charts 1-6). Indeed, in our earlier paper we provided statistical evidence in support of the notion that the current episode of capital inflows embodies a key common component that is of a regional, as opposed to a country-specific, nature; see Calvo, Leiderman, and Reinhart (1992). The presence of a strong common element across countries in the region was interpreted as being the result of a common external shock that affected Latin America. ^{2/} In this subsection we examine whether the previous episode, of 1978-81, shared this regional dimension.

In order to quantitatively assess the extent of comovement among the various economic time series considered, we used principal components analysis. The procedure starts with individual time series—say official reserves for each of the ten countries considered—and constructs a smaller set of series, the principal components, which explain as much of the variance of the original series as is possible. ^{3/}

In principle it would have been desirable to use direct data on capital inflows. However, these data are only available on an annual basis for most of the countries in our sample. Consequently, we analyze the extent of comovement in official reserves and in real exchange rates (which are available at a monthly frequency) as proxies for capital inflows. In addition, using monthly data the extent of comovement in inflation rates is examined. The periods considered are: the previous capital inflows episode, (January 1978 to December 1981) and, for comparison purposes, the following four years (January 1982 to December 1985). Similarly, we consider the recent episode (January 1990 to March 1992), and for comparison also the period of January 1988 to December 1989. All the analysis that follows uses the logs of reserves and the real exchange rate. The inflation rate is the 12-month difference in the log of the consumer price index.

^{1/} Also comparable are the domestic/foreign interest rate differentials in both episodes.

^{2/} On the role of external shocks, see Diaz Alejandro (1983, 1984).

^{3/} For an exposition of principal components analysis, see, e.g. Dhrymes (1970). For an application that parallels ours see Swoboda (1983), who used this approach to examine economic interdependence across different exchange rate regimes for six of the G-7 countries.

Chart 2. REAL OFFICIAL RESERVES

Billions of 1985 U.S. Dollars

Source: International Financial Statistics.

Notes: Real Reserves minus gold (in U.S. dollars) deflated by U.S. consumer price index.

Current episode: January 1990 = 100.

Previous episode: January 1978 = 100.

Vertical line denotes January 1982.

Chart 3. REAL EFFECTIVE EXCHANGE RATE

Source: Information Notice System, IMF.

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

Current episode: January 1990 = 100.

Previous episode: January 1978 = 100.

Vertical line denotes January 1982.

Chart 4. REAL EFFECTIVE EXCHANGE RATE

Source: Information Notice System, IMF.

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

Chart 5. REAL STOCK PRICES

ARGENTINA

BRAZIL

CHILE

MEXICO

Source: International Finance Corporation, Quarterly Review of Emerging Stock Markets.

Notes: Stock prices in U.S. dollars, deflated by U.S. Consumer Price Index.

Current episode: January 1990 = 100.

Previous episode: January 1978 = 100.

Vertical line denotes January 1982.

Chart 6. STOCK MARKET PERFORMANCE, January 1978-August 1992

(Real Stock Price Indices in U.S. dollars, January 1984 = 100)

Sources: Quarterly Review of Emerging Stock Markets, International Finance Corporation, Standard and Poor's, United States Department of Commerce.

Notes: All stock price indices are deflated by the U.S. consumer price index.

The key results that emerge from examining the extent of comovement across countries in reserves, the real exchange rate, and inflation are presented in Table 3 and are summarized below:

(1) The extent of comovement in reserves and the real exchange rate across countries is markedly greater in the capital inflows episode of 1978:1-1981:12 than in the debt crisis years, 1982:1-1985:12. Similarly, the degree of comovement in reserves and the real exchange rate across countries is greater in the recent capital inflows episode of 1990:1-1992:3 than in the previous two years. Increased comovements under capital inflows could possibly be explained by external shocks that are common to the region. ^{1/}

(2) The degree of comovement in reserves across countries is greater in the current episode. Possible explanations may be: (a) greater intervention in the current episode aimed at either avoiding exchange rate appreciation or at increasing reserves as a cushion against possible adverse shocks in the future; or (b) an attempt to bring the reserve-to-imports ratios back to their "long-run" values—which could be plausible given that in the current episode eight of the ten countries were below their "long-run" reserve-to-imports ratios (more details follow below).

(3) The covariation in real exchange rates was much greater during the 1978:1-1981:12 period than in any period since then. Possible explanations may be: (a) since there was less intervention at that time, the exchange rate was allowed to react to the inflow much more uniformly; and (b) the exchange rate based stabilizations (or tablitas) in the Southern Cone during the earlier period were more synchronized than any of the stabilization programs of the past two years.

(4) The extent of comovement in the domestic inflation rate, a variable less obviously linked to external factors, diminished in the current episode of capital inflows relative to the previous two years (1988-89). While in the previous episode the extent of comovement was about the same as that which characterized the following four years.

III. Initial Conditions

Initial conditions may play a key role in determining the economic performance and response to capital inflows. They may also determine the vulnerability of a given economy or region to a reversal of those flows. Accordingly, we focus here on comparing some of the similarities and

^{1/} In all cases we tested the null hypothesis that the ten series are linearly independent and found that we could reject this hypothesis at standard significance levels. The test statistics, which are distributed as —with 45 degrees of freedom, and the attendant probability values are presented in Table 2.

Table 3. Establishing the Comovement in Macroeconomic Series
The Previous Episode: 1978 to 1981

	Previous Episode 1978:1 to 1981:12	Debt Crisis Years 1982:1 to 1985:12
REAL EXCHANGE RATE		
First Principal Component	0.81	0.51
Second Principal Component	0.96	0.71
Chi-Squared(45)	1274.55	470.5
Probability Value	(0.0000)	(0.0000)
RESERVES		
First Principal Component	0.58	0.50
Second Principal Component	0.77	0.74
Chi-Squared(45)	645.28	431.26
Probability Value	(0.0000)	(0.0000)
DOMESTIC INFLATION RATE 12-month percent change		
First Principal Component	0.57	0.53
Second Principal Component	0.81	0.78
Chi-Squared(45)	744.82	783.49
Probability Value	(0.0000)	(0.0000)
<hr/>		
	1988:1 to 1989:12	Current Episode 1990:1 to 1991:11
REAL EXCHANGE RATE		
First Principal Component	0.41	0.58
Second Principal Component	0.78	0.79
Chi-Squared(45)	302.01	286.31
Probability Value	(0.0000)	(0.0000)
RESERVES		
First Principal Component	0.48	0.67
Second Principal Component	0.69	0.80
Chi-Squared(45)	204.97	297.23
Probability Value	(0.0000)	(0.0000)
DOMESTIC INFLATION RATE 12-month percent change		
First Principal Component	0.60	0.45
Second Principal Component	0.88	0.64
Chi-Squared(45)	475.94	306.4
Probability Value	(0.0000)	(0.0000)

Notes: The cumulative R^2 gives the percentage of the variance of the original series explained by the first principal component, the first two principal components, and so on.

differences in initial conditions in the Latin American countries being studied. Initial conditions are represented by various indicators for the region for 1977-78 and 1988-89, which are the periods immediately preceding both episodes of capital inflows. Initial conditions of the relevant external factors are discussed in the next section.

The main results from this comparison are summarized below (see also Chart 8).

(1) External debt indicators suggest that most of these countries are more vulnerable to an adverse external shock, e.g. in the form of an increase in world interest rates, in the 1990s (after the debt crisis) than in the 1970s. While the sharp declines in U.S. and other international interest rates have gone a long way toward reducing the debt servicing burdens of these ten heavily-indebted countries, external debt ratios are sharply higher (Table 4) than at the outset of the current capital inflow episode. Further, as shown in the top panel of Table 4, the proportion of external debt that carries a variable interest rate is much higher now for most of the sample countries.

(2) In eight of the ten countries considered, the ratio of official international reserves to imports was higher at the outset of the previous episode, and closer to its long-run average (Table 4, lower panel). The fact that reserves at the outset of the present episode were, more often than not, below their long-run averages may explain why reserve accumulation has been greater in the current episode.

(3) Vulnerability to terms of trade shocks has been a common characteristic of most Latin American economies. This vulnerability can be partially assessed by examining the structure of merchandise exports, which provides an idea as to the extent of diversification in the export base of these countries. Table 5 presents a breakdown of exports into broad groupings for the years 1977 and 1989. The picture that emerges is mixed. Some countries, notably Brazil, Chile, Colombia and Mexico, have made considerable progress in diversifying their export bases since the late 1970s. Others have not appreciably changed the structure of exports and remain vulnerable to the vagaries of international commodity prices.

(4) The public sector was larger and showed weaker budgetary discipline in the previous episode. As Table 5 (lower panel) indicates, government consumption as a share of GDP is markedly lower in the current episode for the majority of countries (except Brazil and Colombia). Moreover, structural budget deficits are now lower than their previous levels (see Table 6). The stronger commitment to reduced government intervention in the recent episode is also evident in the volume of privatization in a number of the countries. For example, during 1991 Argentina, Brazil, Mexico, and Venezuela raised about \$15 billion through the privatization of state-owned enterprises (as indicated earlier, \$3.5 billion of this total amount was cashed as inflow from abroad). Financial

Table 4. Initial Conditions: External Debt and Reserves Indicators

Floating Rate Debt as a Percentage of Total Long-term Debt

	1977	1989
Argentina	39.4	83.2
Bolivia	30.9	22.3
Brazil	54.6	71.0
Chile	17.5	69.6
Colombia	9.1	46.0
Ecuador	45.5	63.7
Mexico	53.1	79.4
Peru	30.3	32.3
Uruguay	21.4	73.1
Venezuela	60.2	87.3

Ratio of Total External Debt to Exports of Goods and Services

	1980	1989
Argentina	242.4	511.3
Bolivia	258.2	433.8
Brazil	304.3	295.0
Chile	192.5	174.6
Colombia	117.1	208.3
Ecuador	203.1	386.8
Mexico	259.2	250.0
Peru	207.7	415.7
Uruguay	104.1	161.3
Venezuela	131.8	205.1

Official reserves as a ratio of nominal imports in U.S. dollars

	1977	1989	1970-91 Average
Argentina	0.88	0.4	0.63
Bolivia	0.37	0.28	0.31
Brazil	0.6	0.48	0.49
Chile	0.23	0.54	0.48
Colombia	0.92	0.8	0.71
Ecuador	0.41	0.34	0.36
Mexico	0.29	0.27	0.33
Peru	0.18	0.39	0.45
Uruguay	0.65	0.52	0.56
Venezuela	0.79	0.65	0.93

Sources: International Financial Statistics and World Economic Outlook, IMF and World Debt Tables, World Bank, various issues.

Table 5. Selected Indicators
Structure of Merchandise Exports
 (Percentage share of merchandise exports)

	<u>1977</u>			<u>1989</u>		
	Fuels, minerals, and metals	Other primary commodities	Manufactures	Fuels, minerals, and metals	Other primary commodities	Manufactures
Argentina	1	75	24	4	64	32
Bolivia	79	17	4	80	15	5
Brazil	10	64	26	15	33	52
Chile	83	10	7	57	33	10
Colombia	4	77	19	26	49	25
Ecuador	50	48	2	49	48	3
Mexico	32	39	29	41	14	45
Peru	47	45	8	55	26	19
Uruguay	1	60	39	0	61	39
Venezuela	97	1	2	91	1	8

Sources: World Development Report, World Bank, various issues.

Public Consumption
 (Nominal public consumption as a percent of nominal GDP)

	<u>1977</u>	<u>1989</u>
Argentina	9.41	7.89
Bolivia	13.12	10.98
Brazil	9.43	14.32
Chile	14.57	9.84
Colombia	7.71	10.55
Ecuador	14.82	9.38
Mexico	10.76	7.81
Peru	14.85	6.83
Uruguay	12.31	13.53
Venezuela	14.75	9.72

Sources: International Financial Statistics and World Economic Outlook, IMF, various issues.

Notes: All data are taken from the national income accounts.

Table 6. Investment
(As a percent of GDP)

Countries/Years	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
A. Country Data																						
Argentina																						
Total	21.2	22.1	21.9	19.6	19.3	19.5	21.5	24.4	22.1	21.9	22.8	20.1	15.3	14.1	12.5	11.6	8.9	13.3	11.5	8.8	7.5	9.9
Private I/GDP	13.1	13.5	13.3	12.7	12.6	11.8	11.7	13.1	11.8	12.8	13.9	11.5	8.2	7.6	7.9	7.8	4.3	7.6	5.4	4.8	4.5	
Public I/GDP	8.1	8.6	8.6	6.9	6.7	7.7	9.8	11.3	10.3	9.1	8.9	8.6	7.1	6.5	4.6	4.0	4.6	5.7	6.1	4.0	3.0	
Primary deficit	-	-	-	-	7.3	14.4	10.2	3.6	4.6	4.5	5.6	9.4	8.8	11.7	9.0	3.1	2.4	3.7	5.3	-	-	-
Bolivia																						
Total	-	-	-	-	-	-	-	-	-	-	14.4	11.5	11.4	7.0	6.0	4.5	4.9	5.2	5.9	5.6	5.3	5.9
Private I/GDP	-	-	-	-	-	-	-	-	-	-	7.4	4.0	5.7	2.8	3.4	2.3	2.4	2.0	2.0	1.9	1.9	2.0
Public I/GDP	-	-	-	-	-	-	-	-	-	-	7.0	7.5	5.7	4.2	2.6	2.2	2.5	3.2	3.9	3.7	3.4	3.9
Primary deficit	-	-	-	-	-	-	-	-	9.4	9.7	7.9	5.6	5.4	4.6	3.0	4.9	11.0	9.4	-1.2	-	-	-
Chile																						
Total	16.4	14.5	12.2	7.9	21.2	13.9	12.8	14.5	17.8	17.8	21.0	22.7	11.3	9.8	13.6	13.7	14.6	16.9	17.0	20.3	20.2	18.8
Private I/GDP	9.5	6.5	4.5	0.5	9.2	3.2	4.8	7.6	11.4	12.6	15.6	17.5	6.5	4.9	7.3	6.8	7.0	10.3	8.2	13.7	15.6	14.4
Public I/GDP	6.9	8.0	7.7	7.4	12.0	10.7	8.0	6.9	6.4	5.2	5.4	5.2	4.8	4.9	6.3	6.9	7.6	6.6	8.8	6.6	4.6	4.4
Primary deficit	-	-	-	-	4.2	-0.5	-6.2	-2.4	-2.9	-5.8	-6.3	-0.8	3.4	1.7	2.1	-0.3	-0.2	-2.8	-6.8	-	-	-
Colombia																						
Total	20.2	19.4	18.1	18.3	21.4	17.0	17.6	18.7	18.3	18.1	19.0	20.6	20.5	19.9	19.0	19.0	17.7	17.4	19.5	18.1	15.0	16.5
Private I/GDP	14.5	13.0	12.3	11.3	16.2	11.8	12.1	9.6	11.5	12.3	11.4	12.0	11.1	11.0	10.0	9.4	9.2	8.3	11.0	9.9	7.4	8.8
Public I/GDP	5.7	6.4	5.8	7.0	5.2	5.2	5.5	9.1	6.8	5.8	7.6	8.6	9.4	8.9	9.0	9.6	8.5	9.1	8.5	8.2	7.6	7.7
Primary deficit	-	-	-	-	-	-	1.0	1.9	0.4	3.0	4.8	5.6	7.3	7.0	4.6	0.9	-2.7	-3.6	-3.4	-	-	-
Ecuador																						
Total	16.7	21.8	18.0	17.6	18.2	23.2	22.2	23.6	26.2	23.7	23.6	22.3	22.6	16.5	15.4	16.1	18.8	22.6	21.3	20.9	18.3	21.6
Private I/GDP	10.0	14.7	11.4	10.8	10.2	14.5	13.0	13.4	16.8	14.5	14.1	11.7	13.0	8.6	9.0	9.5	9.6	13.3	12.7	11.7	10.1	
Public I/GDP	6.7	7.1	6.6	6.8	8.0	8.7	9.2	10.2	9.4	9.2	9.5	10.6	9.6	7.9	6.4	6.6	9.2	9.3	8.6	9.2	8.2	
Primary deficit	-	-	-	-	-	-	2.7	7.5	4.8	-0.4	2.0	2.2	2.2	-3.6	6.2	-7.0	-0.8	7.2	2.2	-	-	-
Mexico																						
Total	19.8	17.8	18.9	19.2	19.9	21.4	21.0	19.7	21.2	23.7	21.8	26.4	23.0	17.6	17.9	19.1	19.4	18.4	19.1	18.2	18.9	19.3
Private I/GDP	13.2	13.2	12.8	11.7	12.3	12.4	12.8	11.9	12.8	13.5	13.9	14.3	12.8	11.0	11.3	12.5	12.9	12.9	14.7	14.4	14.4	15.0
Public I/GDP	6.6	4.6	6.1	7.5	7.6	9.0	8.2	7.8	8.4	10.2	10.9	12.1	10.2	6.6	6.6	6.6	6.5	5.5	4.4	3.8	4.1	4.3
Primary deficit	-	-	-	-	3.9	6.4	4.9	2.4	2.3	2.9	3.4	6.4	7.7	-4.4	-4.9	-3.9	-	-	-	-	-	-
Peru																						
Total	-	-	-	-	-	-	-	-	-	-	-	28.8	29.7	23.7	21.0	18.2	20.5	19.8	22.1	16.2	14.2	13.2
Private I/GDP	-	-	-	-	-	-	-	-	-	-	-	21.5	21.3	15.0	12.8	12.0	15.1	15.3	17.9	12.7	12.0	
Public I/GDP	-	-	-	-	-	-	-	-	-	-	-	7.3	8.5	8.7	8.1	6.2	5.4	4.4	4.2	3.5	2.3	
Primary deficit	-	-	-	-	-	-	8.2	7.5	3.1	-1.8	1.7	5.7	6.4	8.0	1.8	-2.3	0.0	-0.1	-0.2	-	-	-
Uruguay																						
Total	11.8	11.5	9.8	9.0	10.3	13.3	15.5	15.2	16.0	16.2	16.7	15.8	15.1	13.7	10.9	9.6	9.9	11.4	11.9	12.4	12.3	13.0
Private I/GDP	8.8	8.3	7.5	7.1	7.7	8.7	9.0	8.2	8.0	9.7	11.4	10.7	7.9	8.6	6.4	6.1	6.2	7.4	7.9	7.9	8.3	8.7
Public I/GDP	3.0	3.2	2.3	1.9	2.6	4.6	6.5	7.0	8.0	6.5	5.3	5.1	7.2	5.1	4.5	3.5	3.7	4.0	4.0	4.5	4.0	4.3
Primary deficit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela																						
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0	17.3	20.4	21.2	22.8	16.9	14.2	17.9
Private I/GDP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.5	10.5	10.9	12.2	12.4	7.9	4.9	6.4
Public I/GDP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5	6.8	9.5	9.1	10.5	9.0	9.3	11.5
Primary deficit	-	-	-	-	-	-	-6.7	0.9	2.2	-5.2	-6.5	-6.6	2.9	-3.3	-11.5	-7.7	-3.4	-3.9	-3.8	-	-	-
B. Total for Latin America *																						
Total	16.6	16.9	17.5	16.6	19.1	19.4	20.3	20.6	21.3	21.6	20.7	21.2	18.6	15.9	15.8	15.3	15.6	17.3	17.7	17.4	16.2	
Private I/GDP	11.6	11.5	11.5	10.9	12.6	12.3	12.3	12.0	13.0	13.5	12.8	12.8	11.0	9.3	9.7	9.3	9.6	11.0	11.3	10.9	9.9	
Public I/GDP	5.0	5.3	6.0	5.8	6.5	7.1	8.0	8.5	8.4	8.0	7.9	8.4	7.6	6.6	6.1	5.9	5.9	6.3	6.4	6.1	5.5	

* Argentina, Belize, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Paraguay, Peru, Uruguay, Venezuela.

markets have also been liberalized in a number of countries. The reduction in the size of government and the move toward privatization and deregulation suggests that the resurgence of capital inflows during 1990-91 may be taking place against a backdrop of stronger fiscal policy fundamentals.

(5) Despite these positive developments, the debt burden on the public sector is larger now than it was in the earlier episode (Table 7). Thus, from 1976-77 to 1987-88 the ratio of domestic public debt to GDP increased in Argentina from 4.6 percent to 17.1 percent, in Brazil from 10 percent to 18.6 percent, in Chile from 2.1 percent to 11.7 percent, and in Mexico from 3.2 percent to 11.3 percent. This is one of the legacies of a decade of fiscal deficits. Combining these developments with those in item (1) above indicates that between the 1970s and the 1990s there was a marked increase in both the external and the internal public debts of Latin America.

(6) As part of the capital inflows are monetized through nonsterilized central bank intervention, as in e.g. Argentina, it is well to assess the inflationary potential of these flows. If monetization is met by an increase in the quantity of real money balances demanded, then there could be no inflationary pressures arising from the inflows. To partially assess this issue, Table 7 (lower panel) presents evidence on the velocity of circulation of M1 at the start of both episodes of capital inflows. For most sample countries, the level of velocity was much higher in 1988-89 than in 1976-77. Thus, some of the increased monetization could have contributed to reducing velocity toward its earlier levels, such a move would be consistent with the reduction in the rate of inflation observed in most countries and with the reactivation of the real sector.

(7) Turning to the real sector, its initial conditions during the earlier episode were more favorable than in the current one. Between 1976 and 1977, real GDP in Latin America grew at a rate of 5.4 percent per year. In contrast, in 1988-89 real GDP growth in the region was less than 1 percent per year. Table 6 provides evidence on the behavior of real investment and its public and private sector components for the various countries; see also Pfeffermann and Madarassy (1992) and Montiel (1992). At the start of the previous episode the ratio of investment to GDP was relatively high, about 21 percent for the region as a whole. Relatively high levels were observed for both the public and private sector investment components. These relatively high ratios were maintained, and even slightly increased, during the earlier inflows of 1978-81. However, all these investment ratios were markedly reduced during the debt crisis years thereby leaving weaker initial conditions for the present episode.

Are the present capital inflows being used to finance increases in investment? This can be assessed by looking at the figures in Table 6. In most cases, no major changes in investment ratios have been observed during 1991. The exceptions appear to be Chile and Mexico, where some increases have been observed. For the region as a whole, however, it is safe to conclude that thus far the present capital inflows have not financed major

Table 7. Selected Indicators

Domestic Debt Excluding Central Bank as Percentage of GDP

	1976-77	1981-82	1987-88
Argentina	4.6	6.0	17.1
Bolivia	0.0	0.0	0.0
Brazil	10.0	12.8	18.6
Chile	2.1	1.9	11.7
Colombia	3.7	3.5	6.4
Ecuador	0.1	—	—
Mexico	3.2	2.7	11.3
Peru	1.0	0.3	0.1
Uruguay	5.5	3.5	21.7
Venezuela	1.7	5.5	8.6

Source: Guidotti and Kumar (1991).

Velocity of Circulation of M1
(Velocity = Nominal GDP/M1)

Country	1976-77	1988-89
Argentina	12.0	22.4
Chile	18.8	17.0
Colombia	7.7	10.2
Ecuador	6.4	10.6
Mexico	10.0	21.6
Peru	5.9	16.4
Venezuela	4.8	8.0

Source: Calculations based on International Financial Statistics, IMF.

increases in private or public sector investments. Thus, questions can arise as to how the Latin American countries will generate the resources required for repaying the new external debts that are associated with the current capital inflows.

(8) Latin American stock markets are typically shallow, volatile, and particularly vulnerable to developments in international capital markets. While market capitalization has universally increased in the recent past for all the larger Latin American markets, 1/ it is primarily driven by soaring stock prices. To gauge if these markets have deepened during the past decade, it may be necessary to look at other indicators as well, such as, measures of volatility and the number of companies listed in these stock exchanges. As regards the number of companies listed in the largest stock exchanges in these countries, the trend appears to run in a declining direction. In 1980 there were 278 companies listed in the Buenos Aires stock exchange and 265 companies in Chile's Santiago exchange. However, by 1989 the number of companies had fallen to 178 and 213 for Argentina and Chile, respectively. The trend is similar for Venezuela and Colombia, while the number of companies in the Mexican stock exchange is about the same now as it was in the early 1980s. Brazil provides the exception as the number of listings rose from 426 in 1980 to 592 in 1989. 2/ Overall, stock markets appear to be at least as vulnerable now as they were at the start of the earlier capital inflows episode.

Summing up, several important indicators point to weaker initial conditions in the current capital inflows episode than in the earlier one. In particular, there is now a higher burden of domestic and external public debt, a larger portion of the external debt is now subject to variable rates, reserves are now lower relative to imports, and growth and investment (as percent of GDP) are now lower than in the earlier episode. Moreover, in most of the sample countries current capital inflows have not been used so far to finance marked increases in investment. However, other indicators work in the opposite direction. Namely, there are leaner public sectors after the debt crisis (e.g., structural deficits are lower), there is a strong commitment to lower budget deficits and inflation and to reform and privatize the various economies—all of which provide some signals of future capability to deal with debt repayments. 3/ These positive developments have probably dominated the overall outlook of the region as reflected in the recent restoration of voluntary capital market financing for Latin American countries.

1/ Argentina, Brazil, Chile, Colombia, Mexico and Venezuela are the six largest equity markets in the region.

2/ A striking contrast is Korea where the number of companies listed more than doubled during the 1980's. The source for the data cited is the Emerging Stock Markets Handbook, IFC.

3/ Moreover, it could be argued that there has been a learning process throughout the debt crisis.

IV. The External Factors

Our earlier work maintained that some of the renewal of capital inflows to Latin America in the 1990s was due to external factors, and could be considered an external shock common to the region. A comparison with the 1970s suggests that similar considerations apply there as well. The main external factors at work in both episodes are:

(1) There was a decline in nominal and real interest rates in the United States. In 1975-77 U.S. nominal interest rates reached in 1975-77 a level that was 30 percent lower than that of 1972-74, and in 1991 they were 50 percent below 1989 levels. In both episodes, ex post real interest rates were relatively low, and even negative between 1974 and 1980), (see Table 8). By reducing the external debt service on floating rate debts, the recent decline in U.S. interest rates has improved the solvency of Latin American debtors, as reflected in a rise in the secondary market prices for their loans.

(2) The value and purchasing power of Latin American exports markedly increased before or at the start of the capital inflow episodes. As detailed in Table 9, real export earnings expanded at healthy rates in all ten countries during 1972-81. Thus, despite heavy borrowing to finance current account deficits, ratios of debt to exports remained stable. Between 1975-76 and 1977-78, the value of Latin American exports rose by 40 percent and the purchasing power of exports increased by 13 percent. Similarly, between 1986-87 and 1988-89 the value of Latin American exports increased by 29 percent and the purchasing power of exports rose by 14 percent. These developments cannot be accounted for by fluctuations in the terms of trade alone. In fact, the terms of trade were rising at the start of the earlier episode, but were decreasing at the start of the current one; and their level during the latter was about 20 percent lower than at the start of the previous episode. Interestingly, it is precisely at times of improved export performance that Latin American countries borrow more from abroad.

(3) In both episodes of capital inflows, external conditions resulted in an increase in the availability of loanable funds in international capital markets. In this respect, the recycling of petrodollars played an important role in the 1970s. However, since industrial countries drifted into recession, the funds were loaned elsewhere, and Latin America was one of the main recipients. In this connection, Sachs (1989) indicates that during the two years of 1980 and 1981, total bank exposure to the major debtor countries nearly doubled over the level of 1979. In the two years after the rise in real interest rates (1980 and 1981) the commercial banks made about as many net loans to the major debtors as during the entire period 1973-79. Similar considerations apply to the 1990s, in that in addition to low interest rates, there were weak performances in equity and real estate markets in the United States (Table 8). Real stock prices are somewhat stronger in the current episode than during most of the 1980s,

Table 8. External Factors: Selected U.S. Indicators

	Balance of the U.S. with Latin America and other Western Hemisphere on			Interest rates	Inflation	Ex-post	Real GDP	Real capital	Real capital
	Current account	Private capital account		3-month	(CPI year-	real interest	growth	gains/losses	gains/losses
	(millions of U.S. dollars)			treasury bill	over-year	rate	(percent)	S&P500	real estate
	(1)	(2)	(3) *	(4)	(5)	(6)	(7)	(8)	(9)
1970	1,466			6.46	5.90	0.56	-0.30	n.a.	n.a.
1971	1,314			4.35	4.30	0.05	2.80	13.2870	1.1903
1972	821			4.07	3.30	0.77	5.00	7.5447	1.9968
1973	1,566			7.04	6.20	0.84	5.20	-7.3810	-12.1100
1974	-616	-5,800	1,540	7.89	11.00	-3.11	-0.50	-30.5400	0.3734
1975	3,412	-8,546	-3,489	5.84	9.10	-3.26	-1.30	-4.7060	0.8922
1976	2,875	-11,956	-2,622	4.99	5.80	-0.81	4.90	11.9720	2.2441
1977	1,853	-6,507	-2,185	5.27	6.50	-1.23	4.70	-9.5980	8.4144
1978	4,664	-6,770	-6,046	7.22	7.70	-0.48	5.30	-9.1660	5.5603
1979	7,283	3,904	-8,322	10.04	11.30	-1.26	2.50	-3.4980	7.1230
1980	14,451	-23,701	-14,474	11.51	13.50	-1.99	-0.20	1.4969	-7.2540
1981	20,306	-7,167	-14,220	14.03	10.40	3.63	1.80	-2.3020	-8.5660
1982	7,615	-15,792	-5,759	10.89	6.10	4.59	-2.50	-11.9300	-2.9840
1983	-8,287	17,047	6,122	8.63	3.20	5.43	3.60	29.8220	8.4684
1984	-13,755	23,428	13,933	9.58	4.30	5.28	6.80	-4.0570	-0.5810
1985	-10,036	21,542	10,493	7.48	3.80	3.88	3.00	12.4430	8.4216
1986	-6,446	11,886	6,693	5.98	1.90	4.08	2.90	24.1080	14.5950
1987	-13,350	-4,079	10,144	5.82	3.70	2.12	3.10	17.0850	5.2819
1988	-9,385	52,886	9,464	6.67	4.00	2.67	3.90	-10.9500	3.3310
1989	-10,834	18,044	11,378	8.11	4.80	3.31	2.50	15.8620	4.4535
1990	-12,943	20,689	11,691	7.51	5.40	2.11	1.00	-1.6240	-3.5650
1991	-2,127	11,581	2,202	5.41	4.20	1.21	-0.70	4.5930	-1.8390
1972-81 avg.	5,842	-7,864	-6,201	7.79	6.46	-0.69	2.75	-4.62	-0.13
1982-91 avg.	-7,955	15,724	7,637	7.59	4.12	3.47	2.36	7.53	3.56
1976-81 avg.	11,676	-8,434	-10,766	10.70	10.73	-0.03	2.38	-3.37	-0.79
1982-89 avg.	-8,060	15,620	7,809	7,087.00	3.95	3.92	2.91	9.05	5.12
1990-91 avg.	-7,535	16,140	6,947	6.46	4.80	1.66	0.13	1.48	-2.70

* Includes statistical discrepancy.

Notes: Real equity and real estate prices are obtained by deflating the nominal indices by the CPI. The price of existing homes is the indicator used for the real estate market.

A minus sign on the capital account denotes a capital outflow from the United States to Latin America.

Table 9.
External Indicators: Real Export Earnings
(percentage change)

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Mexico	Peru	Uruguay	Venezuela
1972 to 1981 avg.	8.00	12.11	7.48	7.20	6.07	16.27	18.45	2.63	5.26	13.07
1982 to 1991 avg.	1.32	-1.42	4.36	7.50	9.26	-1.32	1.64	-3.48	5.01	-2.83
1978 to 1981 avg.	7.66	12.89	0.73	8.73	-2.42	6.23	32.45	11.35	5.91	12.83
1982 to 1989 avg.	-1.00	-2.76	7.70	9.47	9.27	-1.79	-0.02	-2.39	5.88	-5.24
1990 to 1991 avg.	10.59	3.97	-8.99	-0.39	9.22	0.58	8.30	-7.88	1.52	6.81

Volume of Exports
(percentage change)

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Mexico	Peru	Uruguay	Venezuela
1972 to 1981 avg.	6.96	6.98	11.05	5.76	4.47	8.72	12.51	1.39	5.22	-5.87
1982 to 1991 avg.	8.20	4.05	4.01	7.93	11.75	6.10	7.18	0.48	3.68	2.70
1978 to 1981 avg.	10.03	16.27	16.38	6.87	12.65	-1.12	21.63	7.60	9.24	-2.05
1982 to 1989 avg.	4.96	2.58	6.61	7.78	12.61	7.01	7.25	0.53	4.35	0.84
1990 to 1991 avg.	21.16	9.94	-6.36	8.52	8.33	2.45	6.90	0.27	1.01	10.14

while real estate is weaker. In both cases it is clear that the investment climate in the United States was relatively unattractive, and investors had incentives to seek opportunities elsewhere, for example in Latin America. This reallocation of international capital flows is evident from columns (1)-(3) in Table 8, which show a marked rise in capital outflows from the United States to Latin America during both episodes.

When these foreign factors are quantified in the form of principal components—as in Calvo, Leiderman, and Reinhart (1992)—it is found that they account for a sizable fraction (i.e., about 50 percent) of the forecast error variance of official reserves and real exchange rates of the ten countries in our sample. Thus, while the economic and political reforms that have taken place in a number of these countries have been instrumental in the re-entry of Latin America in international credit markets—and indeed there is a significant statistical residual to be accounted for—the evidence suggests that economic conditions in the United States may have played an important role in shaping the patterns of capital inflows into Latin America in both these episodes. ^{1/}

V. Concluding Remarks

The restoration of voluntary access to international credit markets is, without a doubt, a positive development for Latin America. However, given that the previous episode of capital inflows ended in the debt crisis of the 1980s, there are well-founded concerns that the present trends are reversible. The reversible nature of the inflows would be particularly marked if a sizable share of the capital inflows are of the "hot money" variety. It is therefore necessary to assess the extent to which these economies are vulnerable to a sudden withdrawal of international capital.

There are a number of areas where Latin American countries stand on firmer footing now as opposed to the late 1970s. For example, governments have reduced their spending and structural deficits, policies are oriented toward privatization and deregulation, and inflation is being brought under control in a number of countries in the region. In addition, during the decade of the 1980s most of these countries learned to cope with adverse terms of trade shocks and have successfully maintained growth of real export earnings through an expansion in the volume of exports. There is also evidence that some of these countries were successful in further diversifying their export base. This scenario contrasts with the late 1970s when the favorable export performance was largely due to favorable terms of trade developments. As the experience of the 1980s shows, the external shock was fully reversed in an abrupt manner. It appears that much of the

^{1/} This proposition is formally tested for the recent episode in Calvo, Leiderman, and Reinhart (1992). The results indicate that in nine of the ten countries considered the external factors were significant in explaining the behavior of reserves and the real exchange rate.

aggressive lending by commercial banks during 1979-81 was based on the expectation that the favorable terms of trade environment would persist.

While there are a number of important areas where these economies have become more resilient over the past decade, there are also areas where their vulnerability has increased. As the key debt ratios show, external and internal public sector indebtedness remains at levels that are sharply above those of the late 1970s. Further, the proportion of variable rate debt is now much greater. Taken together, the facts suggest that these economies are now more vulnerable to an increase in world interest rates than they were during the late 1970s. Stock markets have not deepened to any significant extent since the boom-bust of the late 1970s and early 1980s, rather, some of the evidence suggests the opposite. As a consequence, these markets are quite susceptible to speculative inflows that could be reversed in short notice. The banking system also remains vulnerable to a sudden withdrawal of deposits, particularly if their investments are anything less than fully liquid and if reserve requirements on short-term deposits are low. In sum, while the renewed optimism about the re-integration of Latin America in world capital markets is warranted, some of the stylized facts and economic indicators of these countries suggest that optimism should be toned down by caution.

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