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***Capital Flows to LAC in the 1990s:  
Overall Trends and Policy Implications***

by

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## **CAPITAL FLOWS TO LATIN AMERICA IN THE 1990s: AN OVERVIEW**

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DRAFT—FOR COMMENTS ONLY

The surge in capital flows to emerging economies in the 1990s, and the string of financial crises that followed, will likely stand out as a major economic feature of the period. This phenomenon was not completely new for Latin America, however; the region had already been through a similar boom-and-bust cycle of foreign finance in the late 1970s and early 1980s. However, several differences separated the 1990s from the 1980s. This paper reviews the broad pattern of foreign capital flows, financial crises, and the policies that accompanied them in Latin America in the last decade. Section 1 will review the main features of capital inflows to the region in the 1990s; section 2 will discuss how domestic policies (the “pull” factors) may have contributed to these features; section 3 will discuss the contribution of external elements (the “push” factors); and section 4 concludes.

### **I. Three features of capital flows in the 1990s**

In the 1990s, capital flows both to Latin America and to emerging economies in general have been characterized by three main features: their rapid expansion, their diversification, and their propensity to lead to severe financial crises.

#### **Higher foreign financing**

Net private capital inflows (NPKI) to emerging economies increased from a yearly average of US\$19 billion in the 1980s, to over US\$120 billion in the 1990s—a sixfold increase, even accounting for the impact of the recent financial crises (Table 1 and Chart 1). Their weight with respect to both the recipients’ GDP and to their exports tripled: from roughly 1 percent of GDP in the 1980s to about 3 percent in the 1990s; and from 4 to 13 percent of their exports—in both cases, the highest ratios on record.

The evolution of net private flows to the Latin American and Caribbean economies (LAC, 32 countries) was roughly similar. Net flows also increased sixfold, from about US\$9 billion a year in the 1980s to US\$55 billion in the 1990s, and their share in LAC’s GDP also tripled (from 1 to 3 percent). For the region as a whole, however, the peaks of 4-4 • percent of GDP

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registered in the mid-1990s were still below the records of 5 percent registered in the early 1980s, before the onset of the debt crisis. In turn, the increase in LAC's ratio of NPFI to exports (from 7 to 24 percent) was more pronounced than for other LDCs, reflecting the smaller (and, in the 1990s, declining) share of exports in the region's GDP, and to a lesser extent the slower growth of regional exports.

Most of the flows to LAC concentrated on five countries (Argentina, Brazil, Chile, Colombia, and Mexico), that together accounted for about 95 percent of the regional total. In some of those countries, the average ratio of NPFI to GDP in the 1990s was significantly higher than the regional average, with a maximum registered in Chile (8 percent for the average of the decade, with peaks of 11 percent), followed by Mexico (close to 5 percent for the decade, with peaks over 8 percent).<sup>1</sup> Only in Argentina and Colombia, however, were the peaks of the 1990s higher than those registered in the early 1980s.

### **More diversified foreign financing.**

The second striking feature of international capital flows in the 1990s was their diversification.

Foreign direct investment (FDI) has traditionally been the main source of foreign capital flows to emerging markets, and it remained so in the 1990s, accounting for 63 percent of NPFI to all emerging markets, up from 56 percent in the 1980s (Table 2 and Chart 2). However, there was a marked change in the composition of other capital flows, with a rapid growth of portfolio investment and a matching decline in bank finance. Portfolio investment to emerging markets increased from about one fourth of total flows in the 1980s to about one third in the 1990s, while "other" investment (mostly bank loans) declined from 17 to 5 percent of the total.<sup>2</sup> Data on gross international issuance (excluding equities) also show the share of syndicated bank lending falling from 88 percent of total issuance in the early 1980s to 42 percent in 1996-98 (Mussa and Richards, 1999).

The increase in portfolio investment flows was much more pronounced in Latin America, where they surged from an almost negligible level in the 1980s (less than 5 percent of total flows) to nearly half of total flows in the 1990s. Most of this increase was due to the issuance of international bonds, mainly sovereign bonds, with Argentina, Brazil and Mexico becoming major issuers on international bond markets. In all, bonds accounted for fully one third of NPFI to LAC in the 1990s. As a result, the share of FDI flows in capital flows to the region

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<sup>1</sup> The ratios of NPFI to GDP were also higher than the regional average in some smaller countries such as Ecuador and Jamaica.

<sup>2</sup> "Other" investment is a residual category in the present balance-of-payments classification system. Instruments in this category are usually not traded in secondary markets, unlike those classified as portfolio investments.

actually declined, although they did continue to be the main source of foreign finance to LAC. Meanwhile, the contribution of “other” flows (here again, mostly bank loans) fell from close to one third on the 1980s to negative flows in the 1990s. Thus, although LAC’s use of foreign financing increased in the 1990s, its ratio of external debt to GDP declined from 46 percent in the 1980s to 35 percent in the 1990s; the share of banks in total debt outstanding fell from 65 percent in the 1980s to 30 percent in the 1990s.

The rising share of financing flows to emerging markets that were no longer intermediated by banks mirrors the declining role of banks in financial markets worldwide in the 1990s: the share of banks in the provision of international finance has fallen, for instance, from over two thirds in the early 1990s to one fifth in 1998 (BIS, 1999). However, the above statistics may well overestimate the decline in the role of banks in the financing of emerging markets. First, banks are likely to have provided credit for a good part of the portfolio investment to emerging markets that took place in the 1990s—a fact that is not reflected in the BOP statistics, but that became evident for instance in the wake of the Russian and Asian crises of 1998-99. More critically, banks still account for the lion’s share of short-term credit lines, particularly those received by emerging countries’ banks; interbank financing, even when it accounts for a relatively small share of total NPFI, is highly critical in view of the central role of banks in emerging economies.

Within portfolio flows, a number of new financial instruments emerged in the 1990s (Table 3). First, although bonds remained the primary vehicle for portfolio flows, there was a surge in investment through equity-based securities such as stocks and ADRs. This trend was particularly pronounced in the largest Latin American economies, as the share of equity securities in total NPFI flows to the five main LAC recipients rose from virtually zero in the 1980s to about 18 percent in the 1990s, about double the share of similar instruments in total flows to the six largest Asian recipients. In the latter part of the 1990s, portfolio investors also used to a number of new debt instruments, such as collateralized bonds, convertible bonds, and more generally financial derivatives. Their share in portfolio investment to LAC never rose above 1 percent of total NPFI flows, a number roughly similar to that found in Asia.<sup>3</sup>

There was also a significant diversification of the sources and sectoral destination of FDI flows. Although the United States remained the main source of FDI, both in LAC and worldwide, some other industrial countries became important sources of funds for emerging markets—most notably, in the case of LAC, Spain (CEPAL, 1999). At the same time, the share of intraregional FDI flows grew noticeably. Overall, the share of LAC countries in

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<sup>3</sup> The share of financial derivatives in total flows is likely underestimated, since these operations are either unreported as off-balance sheet operations, or undervalued under current accounting rules. For details see Garber (1998).

worldwide outgoing FDI flows increased from 0.3 percent in 1989 to 1.4 percent in 1998.<sup>4</sup> FDI also flew to a broader range of sectoral activities. Up to the 1980s, FDI was largely limited to a few manufacturing industries (mostly chemical and machinery and equipment) and natural resources sectors (oil, copper, and a few other mining industries). Its range of operations widened markedly in the 1990s, including to formerly “nontraded” sectors such as utilities, telecommunications, retail trade, banks and other financial services.

### **Foreign capital flows and financial crises.**

The third noteworthy characteristic of capital flows in the 1990s was their association with a string of severe currency and banking crises in emerging markets. Such crises in the 1990s were not limited to the emerging economies; a number of industrial countries were also affected, including most prominently European economies with the ERM crises of 1992. However, currency crises in emerging markets tend to be more severe in terms of output losses and bank bailouts. Among emerging economies, crises in the 1990s have tended to be associated with countries that have received the larger NPFI: outright crises have erupted in six of the ten largest recipients of NPFI in the 1990s.<sup>5</sup> Of these, two were in Latin America.

It has been argued that the frequency and severity of financial crises has increased in the 1990s (Calvo, 1998; Calvo and Reinhart, 1999). This observation must certainly be qualified in the case of LAC, where financial crises appear to have been less generalized and less severe in the 1990s than in the 1980s (Loser and Guerguil, 2000). There were less than a dozen crises in LAC in the 1990s, compared to close to 20 in the 1980s. Out of a total of 32 countries, only 9 countries registered a decline in output in 1999, compared with 17 countries in 1982-1983. In most countries, the economic slowdown was also both shorter and shallower than in the 1980s; for the region as a whole, output was virtually flat in 1999 and is expected to recover strongly in 2000; in contrast, output contracted by 0.8 percent and 2.1 percent, respectively, in 1982 and 1983.

Nonetheless, the region was still the scene in the 1990s of at least two currency crises of international projection, and their costs in terms of output losses and social welfare, even if less dramatic than in the 1980s, were still significant. There were also numerous cases of increased foreign exchange pressures that even if they did not lead to a full-blown currency crisis, still required significant monetary tightening, with detrimental impact on activity. More specifically, these crises came after over a decade of extensive reforms that were

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<sup>4</sup> More precise data on the origin and sectoral destination of FDI flows is not available since most of these flows goes through offshore financial centers, particularly in the Caribbean. For details see CEPAL (1999).

<sup>5</sup> Brazil, Russia, Korea, Mexico, Indonesia and Thailand. The other four (China, Hong Kong SAR, Argentina and Turkey) avoided outright crises but still have faced significant financial pressures in the late 1990s (Mussa and Richards, 1999).

intended to protect the region's economies from such disturbances. Thus, at the regional level, the vulnerability to financial crises, if not increasing, is at least an enduring issue.

There has also been concerns that international capital markets in the 1990s have allowed financial disturbances to spread more rapidly from one country to another, through what has been called financial contagion. A relatively large literature has documented that asset price comovements and capital flow comovements across emerging economies have tended to increase dramatically during crises, and that this increase in comovements was particularly pronounced within regions, including in Latin America.<sup>6</sup>

The concept of regional contagion is certainly not new to LAC—the debt crisis of the 1980s was clearly regional (ECLAC, 1985; Devlin, 1989). But the patterns of contagion in the 1990s did not follow strictly traditional assumptions that link financial contagion with common external shocks, trade flows, or herding behavior. For instance, the country in the region that was most affected by the Tequila crisis was Argentina, a country that is both physically and economically remote from Mexico. Also, the regional spread of the Brazilian currency crisis of 1999 was much larger than that of the Tequila crisis, although the crisis *per se* was less severe.

Standard measures of the volatility of capital flows suggest that the volatility of overall NPKI to emerging markets in fact declined in the 1990s, with the only exception of flows to Asia (IMF, 1999, and Table 4). The lower volatility of flows to LAC is broadly consistent with the much less dramatic decline in foreign financing flows experienced by Latin America and the Caribbean in the face of the crises of the late 1990s, as compared to the debt crisis. In the latter case, private capital rapidly began flowing out of the region and flows remained negative for most of the 1980s, and external obligations had to be renegotiated several times. In contrast, private capital inflows to the region, which had surged from \$14 billion in 1990 to a record \$86 billion in 1997 (4.1 percent of GDP), contracted to \$47 billion in 1999 but did not turn negative.

More disaggregated data on volatility cast some doubts on the common assumptions regarding the relative stability of different types of capital flows. Traditionally, FDI flows have been touted as the most stable, and thus most desirable, source of foreign financing. Portfolio investment, on the other hand, has been associated with speculative or “hot” money, or flows that are easily reversible and sensitive to fluctuations in expected risk-adjusted yield differentials. Short-term flows in general, and short-term debt in particular, also tend to be considered as highly volatile. Data on the volatility of different categories of flows in the 1990s confirm that FDI flows have been the least volatile category of flows. However, their volatility did increase significantly, particularly in LAC. Also, there appears to be a

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<sup>6</sup> Glick and Rose (1998); Perry and Lederman (1998); Kaminsky and Reinhart (1998) find that the conditional probability of a crisis in one Latin American country reaches 78 percent when other Latin American countries are in crisis.

correlation between FDI flows and more volatile other short-term flows, maybe because of hedging operations by foreign investors; hedging by multinational corporations was indeed ascribed a significant role in the pressures against Brazil's currency in the late 1990s (IMF, 1998a). Portfolio investment flows, in turn, were only marginally more volatile than FDI in the 1990s, partly reflecting the continued access of the largest Latin American borrowers to the international bond market. On the other hand, the volatility of "other" investment flows increased in all regions, in good part reflecting the significant reduction in bank flows to emerging markets.

However, any conclusion on financial volatility must be tempered by existing data measurement limitations. Beyond traditional problems of omissions and misreporting, BOP statistics may fail to capture certain flows accurately (including, as mentioned above, financial derivatives) or blur distinctions between categories. They are also only available at low frequencies, which may underestimate actual short-term fluctuations. Nonetheless, it is also likely that the growing number of categories of investors and financial instruments, together with the increasing complexity of the latter, have weakened the link between financial instruments and the underlying nature of the investment, and facilitated substitutability between traditional categories.<sup>7</sup>

## **II. The "pull" factors in capital flows to Latin America**

Understanding the mechanisms at play behind the new features of capital markets is important if one wishes to design policies that will be able address their shortcomings, particularly with respect to the potential emergence of financial crises. The large literature on this subject has tended to differentiate between "push factors", reflecting conditions in the creditor countries, and "pull factors", reflecting improving conditions in emerging markets *per se*. This section discusses the domestic factors that attracted NPFI to LAC in the 1990s. It first deals with the extensive policy reforms that were implemented in the region since the late 1980s and how they may have fostered higher foreign capital flows. Then, it addresses the influence of policies that were specifically adopted to modify the level and composition of capital inflows. Lastly, it discusses how domestic policies may have contributed to the emergence of financial crises and how they addressed these crises when they emerged.

### **Policy reforms and capital flows**

Starting in the mid-1980s, the Latin American economies have implemented bold and extensive policy reforms aimed at introducing a broadly outward-looking, market-based

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<sup>7</sup> Claessens et al. (1995), using other measures of volatility, have argued that short-term flows are not necessarily less volatile than other longer-term flows.

approach to economic management in the region.<sup>8</sup> Policy reform in the region had four main elements: macroeconomic stabilization, trade liberalization, financial liberalization (domestic and external), and privatization. Since they increased investment opportunities in the region together with the expected return on such investments, these reforms can certainly be credited for a share of the higher foreign capital flows that came to the region in the 1990s.

- *Financial liberalization*, of both domestic and external transaction, had likely the most direct impact. At the domestic level, the elimination of direct credit controls and deregulation of interest rates led to a marked expansion in the activities of banks and nonbanks in most countries of the region. Although the liberalization of external transactions was generally more gradual and less uniform than domestic financial liberalization, by the mid-1990s the region's capital account was more open than it had been at any moment since 1970, with over half of the countries having fully liberalized foreign transactions.<sup>9</sup> Both domestic and external financial liberalization thus expanded opportunities for foreign investment, and particularly portfolio investment. External financial liberalization often included the easing of restrictions on the permitted level of foreign ownership of particular assets, including in the banking sector, which fostered increases in FDI.

- *Privatization* was also an important channel for increased and more diversified FDI flows. Nearly 800 enterprises were privatized in LAC between 1988 and 1997, with a view to increasing investment and overall efficiency. Many of these enterprises were in the utilities sector, which had traditionally been closed to private participation and was perceived as having the greatest potential for efficiency gains. A number of publicly controlled financial institutions were also sold to private interests. Privatization often fostered the development of local stock markets, which may have contributed to attracting foreign portfolio investment.

- On the *macroeconomic* front, the fight against inflation—and, more generally, the pursuit of financial stability—became the leading policy objective for many governments in LAC. Fiscal deficits were reduced from 4-5 percent of GDP in the late 1980s to about 2 percent of GDP in the mid-1990s. With cautious monetary management inflation fell markedly—from nearly 1,000 percent at the end of 1990 to about 9 percent by the end of 1999. Higher macroeconomic stability increased the attractiveness of LAC economies to foreign investors; it also led to a steady improved in their credit ratings, thus allowing access to LAC securities for certain institutional investors that are constrained to hold assets of a minimum credit quality.

- *Trade reform* also fostered higher financial links. Trade liberalization was extensive and widespread in LAC in the 1990s, with a sharp reduction in tariffs and in their dispersion, and

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<sup>8</sup> Most of these reforms are well documented in the literature. See for instance Edwards (1995), Loayza and Palacios (1997), and Morley et al. (1999).

<sup>9</sup> For details on the process of financial liberalization see IMF/OP 172, and Morley et al. 1999.

the dismantling of most nontariff trade restrictions. With it, the region's ratio of trade to GDP increased from 27 percent in 1980 to 34 percent in 1999.<sup>10</sup> Intraregional trade grew particularly fast, often in the context of regional trade agreements such as NAFTA and MERCOSUR. This growth in trade, and particularly in intraregional trade, contributed to both the increase in FDI flows and the diversification of their sources, including from intraregional partners.

Although the impact of structural changes on economic outcomes is generally hard to quantify, it seems reasonable to assume that policy reform and improved macroeconomic performance were an important element behind the increase in NPFI to LAC in the 1990s. However, in view of the sheer volume of flows received by the LAC economies in the 1990s, it is unlikely that these factors can explain the ultimate level of inflows. They most likely had a determinant influence, however, in the geographical distribution and composition of NPFI to the region (World Bank, 1997; Montiel and Reinhart, 1999).

### **The impact of policies aimed at curbing capital inflows**

Most countries in LAC adopted in the course of the 1990s specific policies to deal with higher inflows, and mitigate the negative impact they were having on demand growth and the external position.<sup>11</sup> The main policy instruments used to this end were sterilized intervention, higher exchange rate flexibility, the liberalization of outflows, and controls on capital inflows.

- *Sterilized intervention* was, in the early 1990s, one of the most widespread policy response in the face of capital inflows. Official intervention in the foreign exchange market attempted to dampen the currency appreciation while the impact of the increase in reserves on liquidity was sterilized, generally through open market operations. In practice, sterilized intervention often led to increases in domestic short-term interest rates, which tended to further fuel capital inflows; they also entailed significant quasi-fiscal costs. Montiel and Reinhart (1997) found systematic evidence that sterilization policies increased the overall volume of capital inflows and skewed their composition toward shorter maturities. Sterilized intervention policies were in most cases abandoned or significantly scaled back by the end of the 1990s.

- A number of countries also increased *exchange rate flexibility*, often through a widening of the exchange band, partly with the objective of introducing uncertainty, increasing the short-term exchange risk, and thus discouraging speculative short-term inflows. Reinhart and

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<sup>10</sup> Loser and Guerguil (1999). The increase in the trade-to-GDP ratio is much larger when measured in volume terms (from 27 percent in 1980 to 45 percent in 1997, measured at constant 1990 prices), mostly because of the impact of terms-of-trade and exchange rate movements over that period.

<sup>11</sup> See ECLAC (1995) and Reinhart and Reinhart (1998) for a detailed account.

Reinhart (1999) finds however that the variance of exchange rates increased little in the countries that widened the bands, suggesting that the impact of greater exchange rate flexibility was rather muted.

- The *liberalization of capital outflows*, by allowing domestic investors, particularly pension funds, to acquire foreign assets, was another policy frequently introduced with the objective of reducing inflows. However, it may have induced higher inflows, by sending a positive signal and increasing investors' confidence. Additionally, its immediate impact was undermined by the maintenance of high domestic interest rates, which deterred portfolio diversification.
- Lastly *controls on capital inflows*, either through quantitative controls, tax-like instruments, or prudential regulation aimed at curbing the foreign exposure of the domestic banking sector, were prominently adopted by a number of Latin American countries in the 1990s to curb foreign capital inflows. There is a very large literature on the effectiveness of such controls in curbing capital inflows.<sup>12</sup> Capital controls have generally been found to have had no statistically significant impact on the volume of inflows, but to have altered their composition by reducing the share of short-term and portfolio inflows while increasing that of FDI. However, controls appear to have become lose their effectiveness over time as investors find ways to circumvent them. Kaminsky and Schmuker (2000) confirm that capital controls reduced the volatility of asset prices but only at high frequencies, suggesting a constant race between investors who find loopholes and regulators who expand the controls to close the loopholes. On the other hand, the existence of taxes or quantitative limits on short-term foreign borrowing by banks can encourage nonbanks to borrow directly abroad, as seen for instance in Brazil and Chile. Such accumulation of foreign liabilities may in fact increase the economy's external vulnerability insofar as they are subject to less stringent regulations and reporting requirements, while its lack of visibility may induce an unwarranted sense of security.

In sum, policies aimed at controlling capital inflows appear to have had some impact, either on their volume or their composition, although mostly limited to the short term, and not always consistent with the effect that was initially intended. Policies may have sometimes interacted to generate unintended effects on capital inflows (increasing for instance their volume in the case of sterilized intervention), or to undercut the effectiveness of other policies. For instance, combining sterilized intervention with the liberalization of capital outflows may have undermined the effectiveness of each of these policies taken individually (Reinhart and Reinhart 1999). Sterilized intervention also may have reduced the effectiveness of capital controls by boosting domestic interest rates and thus increasing the gains for evading controls.

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<sup>12</sup> Recent summaries of this literature can be found in IMF (1998b) and Kaminsky and Schmukler (2000).

## Domestic policies and financial crises

Beyond their impact on the volume and composition of financial flows, the interactions between domestic policies and financial crises in the 1990s in LAC are also worth exploring. In the 1990s, this interaction was particularly relevant in four policy areas: aggregate demand management, bank regulation, exchange rate policy, and trade policy.

First, following rather traditional patterns of currency and banking crises, *overly expansive demand policies* that channeled capital inflows to an undue buildup in domestic demand remained the main facilitating factor for financial crises in LAC in the 1990s. The commonly held assumption on the Asian crises, that paired financial turmoil with macroeconomic prudence, did not hold in LAC; financial crises in LAC in the 1990s were all associated with significant domestic macroeconomic imbalances.

A surge in capital inflows can generally be expected to foster exchange rate appreciation, faster credit and demand growth, and a widening of the external current account deficit. Macroeconomic policies can accommodate or even spur the increase in domestic demand, or temper it. In most Latin American countries the surge in capital inflows in the early 1990s was accompanied by an easing of demand management policies, either in the monetary area (Mexico) or in the fiscal area (Brazil, Colombia, Ecuador). Such expansionary policies tended to spur lending booms and excessive domestic and foreign debt accumulation, severe misalignments in asset prices and in the exchange rate, and marked declines in the national savings rate that led to further widening of current account deficits. The impact of a more relaxed fiscal stance on the external accounts was often compounded by the accumulation of short-term public foreign debt, often with clauses such as put option clauses that reduced short-term servicing costs but seriously increased the vulnerability to exchange rate movements. At some point, the accumulated imbalances led to an abrupt loss of confidence that triggered, depending on the country, either an attack on the currency or a run on banks or both. Accommodative demand policies in the face of large capital inflows were a frequent but not a necessary outcome. Some countries, most notably Chile, exercised fiscal restraint in the face of large capital inflows during most of the period. Fiscal tightening, particularly in the first half of the decade, helped Chile dampen currency appreciation, control the current account deficit, and orient domestic absorption toward investment.

Second, *weak domestic financial regulation* also proved to be a powerful channel for financial crises, as seen for instance in Mexico, Colombia and Ecuador. In many LAC countries, local banks were in no conditions to efficiently intermediate abundant foreign capital flows. Domestic financial markets were shallow and uncompetitive, banks undercapitalized, lending standards lax, and supervision weak. Such banking fragilities were not always apparent, partly due to poor supervision, and subsequent lending booms and asset price inflation in fact masked banking problems until the correction in asset prices exposed them. Also, large capital inflows can turn vulnerable even banks that are initially relatively sound, because the lending boom exacerbates the maturity mismatch between bank assets and liabilities, and reduces overall loan quality.

Regulatory forbearance was in some cases compounded by the existence of an explicit or implicit bank safety net, including for example an unbounded and unfunded deposit insurance scheme as in Mexico. The perception that the authorities would rescue failing institutions encouraged excessive risk taking by both foreign lenders and domestic banks. Nonfinancial corporations that borrow abroad directly, sometimes to bypass limits on banks' debt, also benefited from the public safety net.

However, here again there is scope for domestic policies to mediate the outcome: not all LAC countries that faced a credit boom ended up with weaker banks or a banking crisis. A weak domestic banking system was a central element of the financial crisis in some, but not all LAC countries. For instance, severe fragilities in Mexican banks contributed to the severity of the recession after the Tequila crisis, while on the contrary, the relative soundness of Brazilian banks helped minimize the impact of the devaluation of the real.

The nature and extent of revealed banks' fragilities also may have constrained the choice between exchange rate or interest rate management in the face of the reversal in capital flows. The authorities may have been eager to limit interest rate increases if a large part of the banks' domestic assets was of poor quality, as possibly in Colombia; alternatively, they may have wished to limit currency depreciation if the banks or large corporations had a large foreign exposure, as possibly in Chile.

Third, in many countries of the region *explicit or implicit exchange rate guarantees*, through a commitment to the maintenance of a currency peg or an exchange rate band, also fueled capital inflows. An important number of countries in the region fixed their exchange rate in the 1990s, often in the context of exchange-rate based stabilization programs. Fixed or semi-fixed exchange rate arrangements eliminate the exchange risk for creditors and borrowers alike, and thus tend to fuel both the supply and the demand of foreign debt. They lower borrowing costs as foreign lenders tend to underprice the risk associated with domestic securities under the expectation of official support to borrowers in the event of a crisis. In addition, they tend to discourage the development of hedging instruments, and lead to the accumulation of large unhedged exposures. Pegged exchange regimes also interacted negatively with other policies aimed at controlling inflows; for instance, the use of sterilized intervention in the context of a peg likely maximized the volume of short-term capital inflows in Mexico in 1990-93.

Lastly, *higher trade integration* shaped the patterns of the regional spillovers of financial crises to a greater extent in the 1990s than in the 1980s. Trade links were doubtlessly important in spreading the impact of the Brazilian currency crisis to other Mercosur countries, particularly Argentina. Thus, higher trade integration in LAC likely contributed to increase the regional character of financial crises in the 1990s.

### III. The “push factors” behind capital flows to Latin America

Push factors, or development in the creditor countries, can also be separated into structural factors, that reflect underlying long-term changes, and policies that are more closely linked to short-term policy management.

#### **Structural factors**

A number of changes in the structure of mature financial markets are generally credited for the higher level and diversification of international financial flows in the 1990s.<sup>13</sup> They include technological change and financial innovation, financial deregulation, and the rising importance of institutional investors.

Advances in communications and information technologies have lowered the cost of issuing and trading financial instruments both domestically and across borders, and provided faster access to a wider range of information for a larger number of participants. They have also enabled the design of a wider selection of instruments that pool or reduce exposure to currency and commercial risk, thus facilitating portfolio diversification. This, it has been argued, is equivalent to a supply shock that explains part of the increase in world financial activity, including in NPFI to LAC.

Financial liberalization, itself a response, at least in part, to technological change, has been a gradual but persistent process in the industrial countries since the late 1970s (IMF, 1998b). It has brought about significant regulatory changes that have fostered a marked expansion in the activities of banks and nonbanks in a context of increased competition. They have also eased the access of emerging economies to bond and equity markets in industrial economies. Financial liberalization, coupled with the aging population profile and rising income of industrial countries, also contributed to marked increases in the assets managed by institutional investors, including private pension funds. This in turn fostered the demand for instruments with a wider range of maturity, liquidity and risk profiles.

Needless to say, the impact of these structural “push factors” is as difficult to quantify as the impact of structural “pull factors”. However, the persistence of NPFI to emerging markets, including LAC, after the series of financial crises that have marked the late 1990s suggests that underlying structural changes have contributed to a lasting upward shift in the supply of foreign finance to emerging markets.

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<sup>13</sup> Indeed, the rapid growth, diversification, and instability of private capital flows in the 1990s was not a phenomenon limited to emerging markets. Net international financing is estimated to have grown even faster, from about US\$50 billion in the early 1980s to US\$570 billion in 1993-98 (BIS, 1999).

### **The search for yield**

The impact of structural change was also amplified by a number of shorter-term elements that led investors to search for higher yield in emerging economies. These include lower interest rates in industrial economies, slower growth, high global liquidity, and rising equity value in industrial markets. Investors may also have searched to diversify their portfolio into LAC because of the perceived low covariance of LAC investments with industrial countries returns; thus investing in LAC assets reduces total portfolio risk even if the returns on these assets display higher volatility (Mussa and Richards, 1999).

As mentioned above, the fact that the amount of foreign financing received by most emerging markets in the early 1990s was clearly too large for them to absorb efficiently gives intuitive support to the “push factor” hypothesis. A number of empirical studies have suggested that low interest rates in industrial countries, and particularly the U.S., provided at least the initial impetus to the surge in capital inflows in the 1990s, particularly to Latin America.<sup>14</sup> Eichengreen and Mody (1998) have also shown that the international demand for riskier debt instruments increases when yields on less risky debt are low. Conversely, it has been argued that the increase in the U.S. interest rate in 1994 precipitated the Tequila crisis. On the other hand, a more recent study (World Bank, 1997) finds that the correlation between U.S. rates and NPKI changed sign in 1993-95, although this may in fact be linked to higher risk aversion in the aftermath of the Tequila crisis.

### **Push factors and financial crises**

Push factors may also have influenced the ways financial crises developed in the 1990s in LAC and in other emerging regions. At a theoretical level, the issue is whether these push factors, and particularly the structural ones, have tended to reduce, or on the contrary amplify, the information asymmetries that tend to distort the efficient functioning of financial markets.

It is well known that financial markets tend to suffer from information asymmetries, because of the uncertainty that is inherent to financial transactions, the incomplete character of insurance markets, and informational bottlenecks. These lead to distortions in the short-term allocation of resources and the pricing of financial assets, and thus potentially to financial crises.<sup>15</sup> In principle, financial innovation may alleviate these inefficiencies insofar as it

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<sup>14</sup> Including Calvo, Leiderman, and Reinhart (1994), Calvo and Reinhart (1995), and Fernández-Arias (1996).

<sup>15</sup> Financial theory generally identifies three sources of inefficiencies: adverse selection (under which markets do not allocate resources efficiently), moral hazard (when levels of intermediation and investment will be suboptimal), and herding behavior (whereby partly  
(continued...)

allows for more complete information flows and lower transaction costs. Derivatives for instance allow investors to separate the various risks associated with cross-border investments, which should bridge gaps in international financial markets, and thus lead to a more efficient international allocation of capital.

The positive contribution of the new financial instruments to financial efficiency has certainly been questioned in the light of the recent financial crises, which have raised the opposite concern, that international financial markets may be structurally more volatile, and vulnerable to higher swings in pricing and in volume. This may be due to the lags with which the regulatory framework adapts to the new financial context. The inherent opaqueness of derivatives, for instance, reduces the efficiency of existing national regulatory rules, and thus increases the potential for market instability. Financial engineering allows banks to bypass regulatory rules such as reserve requirements, liquidity requirements, and limits on lending and foreign exchange exposure by going offshore or engaging on off-balance sheet operations. Surges in portfolio investment to thin asset markets such as those of LAC increase the risk of stock market speculative bubbles (ECLAC 1995).<sup>16</sup> The gap in regulations at the international level, in a context in which cross-border flows are growing fast, also increases financial risk. Information asymmetries may be more pervasive in the international context because of geographical and cultural differences that limit access to information and make it more difficult to enforce contracts across borders (Kaminsky and Schmuker, 2000). These problems, however, are basically transitional learning problems—both for investors and for regulators—and they should be overcome as learning takes place over time.

On the other hand, there is a concern that modern capital markets have led to a qualitative change in the causes and dynamics of financial crises. This possibility has been raised in view of the fact that some of the recent crises did not seem to fit the traditional mold of a financial crisis that is fundamentally domestic in origin and generated by overly expansionary policies such as excessive credit growth. Rather, recent crises seem to have had an essentially international dimension, with causes mostly linked to potentially novel factors such as investors' behavior and expectations.

The concept of self-fulfilling speculative attacks, in which a currency crisis is fueled by investors' expectations with respect to the authorities' commitment to defend the exchange rate, was initially developed in the context of the ERM crises, but later extended to emerging

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uninformed investors try to follow the lead of better informed investors, giving rise to sudden market movements and volatility). See IMF (1998b), and ECLAC (1995).

<sup>16</sup> Overall, the share of portfolio investment from industrial countries directed to emerging markets increased from 0.5 percent in 1985 to 16 percent in 1993, in circumstances in which the total market capitalization of emerging markets was only 7 percent of total world capitalization (Mussa and Richards, 1999).

markets, and particularly Asia, where crises developed in a context of prudent monetary and fiscal management. More recently, the concept of “crisis zones”, or “instability zones” has been developed to address situations where the relevance of fiscal discipline, and more generally of macroeconomic policies, in the determination of final economic outcomes, is greatly reduced, or even becomes hostage to the unpredictable and often arbitrary behavior of market expectations (Chang and Majnoni, 2000).

As mentioned above, this pattern does not strictly fit the description of financial crises in Latin America, where expansionary demand policies have greatly facilitated the emergence of a crisis. Nonetheless, expectations have played an important role in both the timing and the spread of the financial crisis in Mexico, and to a lesser extent Brazil (IMF, 1995; IMF, 1999).

Financial crises may also be caused by imperfectly informed investors, whose behavior foster the spilling of local financial shocks to other countries, independently of their effective macroeconomic situation. Imperfectly informed investors base their decisions for one country on indicators available for other, potentially similar, countries, or on the actions of other, supposedly better informed, investors, in what has been called adverse selection or herd behavior. There has been previous examples of such behavior in the context of Latin American financial crises—most notably the debt crisis of the 1980s, when banks cut their exposure to Latin America across the board, including to countries like Colombia that did not face severe macroeconomic problems (ECLAC, 1985; Devlin, 1989). As mentioned above, technological change should provide the means to alleviate at least part of these inefficiencies. Elements such as the rapid expansion of rating agencies have sometimes been cited as evidence of this trend (IMF, 1998). However, it has also been argued that in the 1990s, capital market liberalization in a large number of countries, and the resulting increase in the number of countries where investments can be placed, and in the range of investors, has led to an increase in herd behavior. This is because with information asymmetries, the fixed costs involved in the gathering and processing of country-specific information for a larger number of countries induces the smaller investors to simply follow the investment path of informed investors. Thus, the search for diversification in a context of expanding securities markets leads to an increase in the prevalence of herd behavior (Calvo and Mendoza, 1998; Dornbusch et al., 2000).

The transmission of financial shocks across countries, independently of their fundamentals, is also facilitated when countries share common creditors, and even if these creditors are well informed (Kaminsky and Reinhart, 1999). A creditor, when confronted with a deterioration in the quality of its assets in one country, may reduce its overall level of lending because of, for instance, liquidity constraints: the creditor will then sell his assets to generate liquidity, and this will spread the initial financial shock across a broad spectrum of instruments and borrowers. The value-at-risk models used by commercial banks can also explain such selling waves. This is different from herding behavior, because in that case the creditor may be well informed, but will still cut its exposure across countries. Some investors such as open-end mutual funds, hedge funds, and in general leveraged investors, may be more susceptible to such behavior. At the other end, countries whose financial assets are widely traded, and

whose domestic markets are more liquid, are more vulnerable to this type of contagion. Since regional blocks tend to depend on a single common creditor country, the common creditor channel will contribute to the regional character of financial crises.

In Latin America, the common creditor channel may explain a good part of the effect of the Mexican crisis of 1994 on Argentina. It may also explain why countries such as Colombia and Venezuela, that were barely represented in international portfolios at the time of the Mexican crisis, were little affected by this crisis, but severely hit by the Brazilian crisis only five years later, when their participation in international portfolios had increased significantly. Thus, in spite of the diversification of financial flows, and in spite of the reduction in the role of banks in total flows, the common creditor channel appear to have remained significant in Latin America in the 1990s.

#### **IV. Concluding remarks**

The push and pull factors behind capital flows to LAC are certainly not mutually exclusive: indeed, they can be mutually reinforcing. Capital inflows offer many benefits for LAC economies, most notably the potential to increase an otherwise meager growth and improve social welfare. But capital flows, and particularly their new modalities, also constrain policy design in recipient countries. In LAC, worldwide financial liberalization and domestic structural reform have increased financial integration at the same time as the effectiveness of traditional policy instruments was being reduced. Structural changes and policy reform have amplified trade and financial links both within the region and outside, contributing to the faster transmission of real or common shocks across countries. Higher capital mobility also tends to increase the vulnerability of national economies, particularly small open economies, to shocks that are caused by factors that are beyond their control, including shift in expectations (Maxfield, 1998). This means that the risks traditionally associated with financial opening have increased at the same time as the LAC economies were opening up (Calvo, 1998). Also, financial innovation and higher capital mobility have reduced the coverage and efficiency of national regulatory systems. They have blurred the meaning of traditional economic indicators, and undermined their usefulness for policy design. They have reduced the efficiency of certain traditional policy instruments, including capital controls. Overall, financial integration can magnify the effects of certain underlying distortions and institutional weaknesses, and amplify the costs of policy mistakes.

But conversely, domestic policy can filter and mediate the impact of capital inflows on the domestic economy. Some policies do increase the benefits and reduce the potentially adverse impacts of capital inflows; in contrast, other policies amplify the distortions they may impart on the domestic economy. And although no policy mix may avoid a reversal of capital flows, an appropriate one will dampen the amplitude of the swing and of its adverse impact. This “appropriate” policy mix will certainly vary across countries, depending on their particular economic and institutional structure; but it should certainly include three core elements: a conservative fiscal policy, zealous financial supervision, and greater exchange rate flexibility.

Disciplined fiscal and monetary management that dampens the pressures of large capital inflows first requires, in the case of LAC, *further fiscal consolidation*. In many countries, there is still ample scope to strengthen public finances by revamping the tax system and reducing or eliminating inefficient public expenditure. There is also a need to impose hard budget constraints on subnational governments, public enterprises, and public financial institutions. More particularly, public debt management practices should be reviewed with a view to increasing the robustness of the public debt structure to external shocks, including through a lengthening of maturities and diversification of instruments and currencies. Improved debt management efforts should cover all public contingent liabilities, including implicit commitments such as those linked to deposit insurance or social security schemes.

It is often argued that fiscal policy is of little use to deal with capital inflows because of its short-term inflexibility. However, fiscal consolidation can help reduce Latin America and the Caribbean's external vulnerability by giving scope for proactive fiscal management and higher national savings. Fiscal policy in Latin America has tended to be managed procyclically, thus contributing to overheating in a context of high capital flows. Alternatively, an anticyclical policy could build cushions in good times and use them to assuage the impact of the subsequent decline in capital flows. In fact, there is now greater interest in LAC for fiscal stabilization funds that mitigate the impact of terms of trade fluctuations on fiscal revenues, or more general fiscal rules that can create scope for anticyclical fiscal management. There is also a greater recognition of the signaling role that fiscal policy can play with respect to the overall policy stance of the authorities.

*Weak banking supervision* was an important ingredient of many LAC crises in the 1990s, and its strengthening and upgrading is essential to reduce the likelihood of crisis in the future. There has been significant advances in this field in the region, mostly in the latter part of the 1990s, in the aftermath of the Tequila crisis. Prudential guidelines were firmed up, minimum capital requirements introduced or increased, together with systems to monitor asset quality and the provisioning of bad loans, and tighter limits to avoid the excessive concentration of loans. However, many countries still present serious weaknesses, particularly with respect to accounting procedures (including the definition of bank capital and the valuation of assets). Countries, and particularly those who have offshore financial centers, should increase their ability to supervise cross-border banking transactions, as well as the activities of nonbank financial intermediaries. It is also necessary to strengthen the infrastructure of national capital markets, with a view to fostering long-term financial instruments and the operations of domestic institutional investors, so as to reduce the economy's vulnerability to foreign investors' herding. Lastly, the authority and independence of financial supervisors should be further strengthened to enable them to monitor the continuous adherence to these standards, and to resist the often intense political pressure for regulatory forbearance.

Higher transparency is an absolute requirement for efficient financial regulation. At the national level, the provision of extensive and timely information on macroeconomic and financial developments, effective financial prudential regulation, and the adoption of international best practices in areas such as fiscal and monetary transparency, banking

disclosure and accounting, are necessary complements to sound macroeconomic policies to mitigate the risk and severity of financial crises. Private corporations, be it in the financial or other sectors, must also report financial flows in a more complete, consistent and prompt fashion. Systems should be set up for a more comprehensive and frequent monitoring of the short-term exposure of all main sectors of the economy. Also, there is a need for stricter and more effective bankruptcy laws to limit expectations and delivery of public financial assistance to large private corporations.

In view of the slow speed at which supervisory and regulatory capacities can be improved, and of the constant difficulties encountered by governments to bring regulation in line with market development, nontraditional supervisory measures may also be considered as complements of higher transparency and stricter financial regulation. These include measures attempting to limit the role of banks in intermediating short-term flows, especially if they are assumed to have a low ability to monitor and evaluate related risks—through, for instance, quantitative limits on short-term cross-border transactions, or limits on the net open foreign exchange positions of banks. More general measures, such as taxes or reserve requirements on foreign capital inflows, may also be useful. However, the authorities should be aware that such measures are increasingly likely to be evaded, thus reducing their effectiveness. Moreover, they may have perverse effects if they mask a buildup in, for instance, corporate foreign liabilities that will constrain financial management in nearly the same way as would an increase in bank debt.

Integrated capital markets also make it much more difficult for countries to maintain exchange rate pegs or exchange bands, because of their higher vulnerability to speculative attacks. In contrast, *exchange rate flexibility* helps discourage speculative inflows through higher exchange rate risk; it also increases the independence of the monetary authorities and gives them more leeway to control demand pressures. The main disadvantage of floating a currency is that it allows for potentially frequent and steep movements in the exchange rate, that may hurt strategic sectors such as non-traditional exports. Empirical evidence in Grobar (1993) suggests that exchange rate volatility has negative effects on the tradable sectors of developing economies, mostly because local financial markets do not provide enough instruments to hedge against the exchange rate risk. In that context, there is still a space for managed exchange rates in the LAC economies where the need to diversify exports is particularly strong. However, the modalities of management may have to be less explicit (more akin to a managed or dirty float), and the authorities should still remain alert to any buildup of speculative pressures against the currency.

In that context, it is particularly important to develop properly regulated hedging markets, so as to provide buffers for potentially large fluctuations in the value of the currency. The availability of hedging instruments is presently limited in most LAC markets, although it is increasing. In some countries, the limited development of currency derivatives has reflected concerns that they could be a vehicle for speculative positions, and thus increase exchange rate volatility. However, Jochum and Kodres (1998) find that exchange rate volatility did not significantly increase with the development of hedging instruments in Mexico and Brazil.

Nonetheless, it is likely to take considerable time before medium-term hedging instruments can be available at a reasonable cost in LAC.

Finally, it is clear that no single policy will reduce an economy's exposure to financial instability, and countries should certainly not rely on a single policy instrument to reach that objective. At the same time, the need for consistency between the fiscal, monetary and exchange rate policies is amplified in the presence of large capital flows. Thus, it is even more necessary than before to achieve a better coordination of policy measures in different areas, taking into account their potential interactions. For instance, financial regulation may have to be tailored to the type of exchange arrangement in place, with countries opting for a fixed exchange rate also using higher prudential standards and liquidity requirements, as Argentina since 1995. Public debt management policy should also explicitly be compatible with the type of exchange rate arrangement that is in place.

Table 1  
**Net Private Capital Flows**

	Annual averages		
	1970-79	1980-89	1990-99
Net Private Capital Flows to Emerging Economies			
In billions of U.S. dollars	7.3	18.6	121.2
In percent of GDP	0.7	0.7	2.7
In percent of exports	3.4	3.8	12.8
Net Private Capital Flows to Latin America and the Caribbean			
In billions of U.S. dollars	12.7	8.7	54.4
In percent of GDP	3.2	1.1	3.1
In percent of exports	27.2	7.3	24.0

Source: International Monetary Fund.

Table 2  
**Composition of Net Private Capital Flows**  
*(annual averages; in percent of total net private capital flows)*

	Emerging economies		Latin America and the Caribbean	
	1980-89	1990-99	1980-89	1990-99
Foreign direct investment	56.1	62.9	63.2	56.1
Portfolio investment	27.0	32.3	4.4	48.1
Other investment	16.9	4.8	32.4	-4.2

Source: International Monetary Fund.

Table 3  
**Composition of Net Portfolio Investment Flows**  
*(annual averages; in percent of total net private capital flows)*

	Latin America And the Caribbean 1/		Asia 2/	
	1982-89	1990-98	1982-89	1990-98
Portfolio investment	8.2	63.7	11.4	17.6
Equity securities	--	18.0	--	9.8
Debt securities	8.2	45.7	11.4	7.8
Bonds	8.2	45.0	11.4	7.2
Others	--	0.7	--	0.6

Source: International Monetary Fund.

1/ Argentina, Brazil, Chile, Colombia and Mexico.

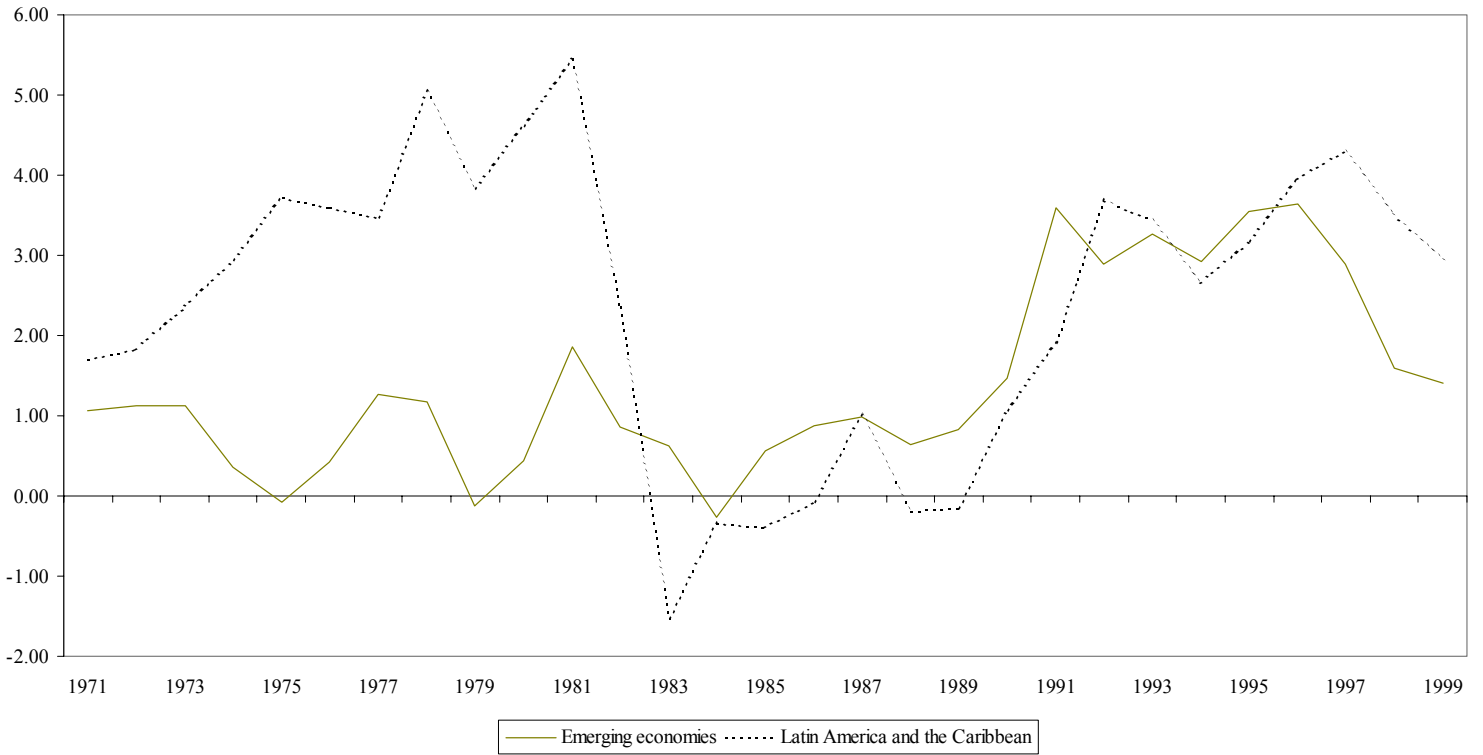
2/ China, Indonesia, Korea, Malaysia, Singapore and Thailand.

Table 4  
**Volatility of Net Private Capital Flows**  
*(standard deviation divided by mean)*

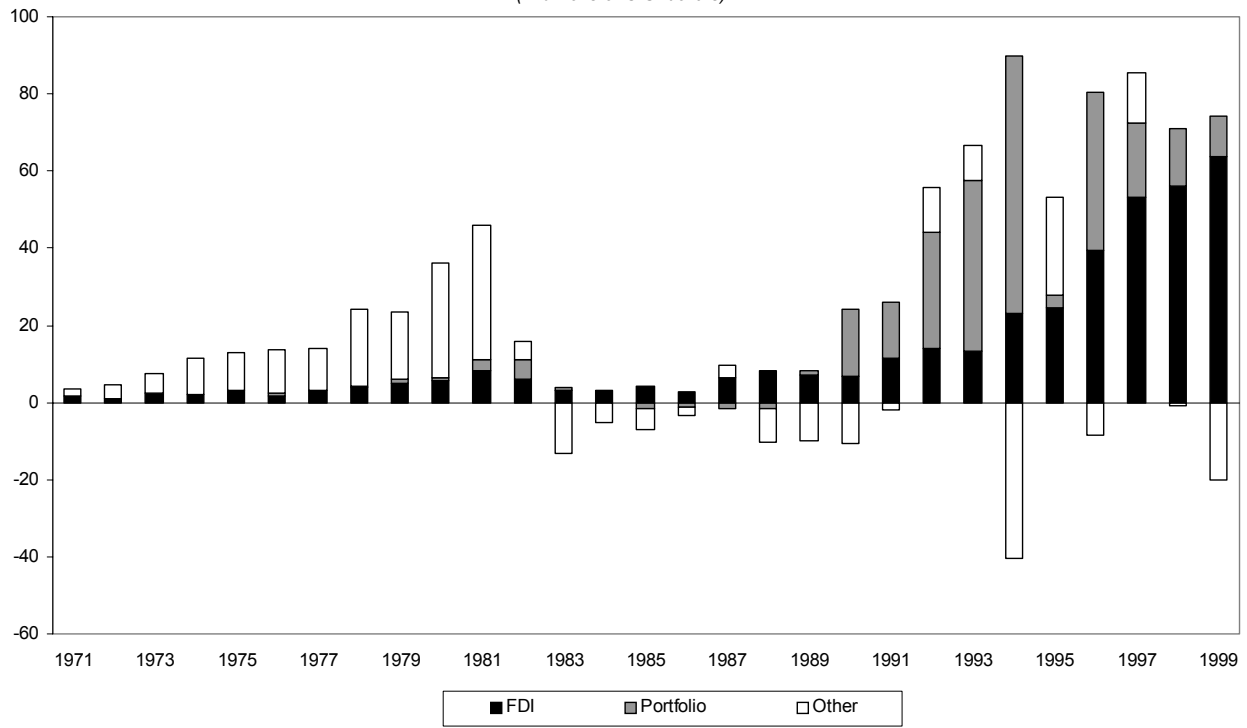
	Emerging economies		Latin America and the Caribbean	
	1980-89	1990-99	1980-89	1990-99
Total net private capital flows	0.72	0.35	2.12	0.40
Foreign direct investment	0.36	0.54	0.37	0.68
Portfolio investment	0.80	0.64	5.68	0.74
Other investment	3.98	7.97	5.86	-8.24

Source: International Monetary Fund.

**Chart 1**  
**Net Private Capital Flows to Emerging Economies**  
*(in percent of GDP)*



**Chart 2**  
**Composition of Net Private Capital Inflows**  
**to Latin America and the Caribbean**  
*(in billions of U.S. dollars)*



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