

**Capital Flows to Latin America and Asia: lessons for**

**Central and Eastern Europe**

**Dr Stephany Griffith-Jones<sup>1</sup>**

**Institute of Development Studies**

**University of Sussex**

**Brighton**

**BN1 9RE**

**Tel: 0273 606261**

**Fax: 0273 621202**

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<sup>1</sup> This paper was written for the workshop on Managing Capital Flows in Central and Eastern Europe, held in Prague on 15-16 June, 1995. I would like to thank Jan Klacek, John Williamson, Helmut Reisen and Zdenek Drabek and the other workshop participants for their comments.

## **I Introduction**

This paper starts by examining briefly the main issues which both practice and theory have shown arise in relation to capital flows.

Secondly, it compares - with a broad brush - the experience of Latin America and Asian countries. The experiences of Chile (positive) and Mexico (at present unfortunately negative) are highlighted. Reference is also made to the on whole very positive Asian experience.

Thirdly, the paper extracts what are seen as the key issues and policy lessons for Central and Eastern Europe, and finishes by posing a number of questions which the case studies should address.

## **II Framework for analysing capital flows**

External capital flows have long been assigned an important role in development. Even more, external capital clearly needs to play a particularly important role in sustaining the transition to the market.

Amongst the positive effects of external capital flows are: a) they are seen as mobilising external savings, which it is hoped will mainly supplement domestic savings, and thus raise investment, growth and employment; b) they are seen as contributing to smooth out expenditure over time, for example if a country faces a sharp deterioration in its' terms of trade; c) these flows are expected to increase the micro-efficiency of production, by causing lower intermediation spreads between lenders and borrowers. Perhaps more important - particularly in the case of transition economies - micro or sectoral efficiency can be expected to be boosted by the transfer of technology and management know-how, which often accompanies foreign direct investment, (see Devlin, Ffrench-Davis and Griffith-Jones, 1995).

Therefore, we can conclude that private capital inflows have important beneficial effects. particularly valuable for transitional economies, to help fund the high investment required for an acceleration of economic growth and for undertaking the necessary large economic restructuring.

However, external capital flows can also have very negative effects on domestic economies. Even though these are to a great extent the problems of success,

nevertheless their negative effects can be seriously magnified if the flows are badly managed. The scale of potential problems that can arise from large capital inflows were dramatically illustrated by the Mexican crisis which started in December 1994.

The first central issue is that of the potential temporary nature and volatility of capital flows, and of the high costs both for domestic economies and - in some cases like the Mexican one, also for the international system - which can be incurred by the volatility of such flows. As economic history and economic analysis<sup>2</sup> have taught us, private capital markets (and especially international ones) are often characterised by successive periods of over-lending (and over-investment) followed by underlending (and under-investment), often resulting in costly financial and / or debt crises. It is interesting in this context that for example there have been five great debt crises - resulting from earlier lending booms - which occurred in Latin America since the region's independence. These debt crises occurred in the mid-1820's, mid-1879's, early 1880's, 1930's and in the 1980's (Marichal, 1990). However, though apparently more frequent in that region, debt crises have also occurred often in other areas, as for example Kindleberger, op.cit, describes.

Furthermore, the concern has been raised that as such a high proportion of capital flows to emerging markets are now channelled via portfolio flows this generates an important additional source of volatility<sup>3</sup>. In this context, it is important to stress that the Latin American debt crisis of the 1980's was one of commercial bank flows; this implied that during the crisis the stock of bank loans previously made remained in the countries, as these loans had been made on average for around seven years; this is in contrast to mainly portfolio flows that came into Mexico in the early 1990's and that left so quickly during and after December 1994. Indeed, the Mexican Central Bank is reported to have lost US \$6 billion of reserves in one single day. Thus, the issue in the 1990's seems to be not only of sustainability of new inflows, but of the risk of very rapid reversal. Furthermore, not only do these new portfolio flows seem more volatile; also securitisation has made investors faceless, thus making negotiations (e.g. for rescheduling) with them far more difficult or impossible.

In this context, it is important to examine not just the level but also the composition of external capital flowing into a country or region. An important distinction in this

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<sup>2</sup> See, for example, Kindleberger (1978), Stiglitz and Weiss (1981) Guttentag and Herring (1984), and Mishkin (1991), for different - but related - analysis of capital market imperfections.

<sup>3</sup> See, for example, Ffrench-Davis and Griffith-Jones, Ed (1995), Calvo, Leiderman and Reinhart (1993), Reisen (1993) and IMF Survey (1995).

context is the extent to which capital flows are likely to be permanent or temporary (and thus volatile). It is difficult to judge ex-ante the "temperature" of flows, that is how "hot" or "cool" they are (see, Claessens et al, 1995 and Reisen, 1995). However, it seems valuable to follow Turner's (1991) ranking of capital flows ranging from the most permanent to the most temporary: 1) long-term bank lending; 2) foreign direct investment; 3) portfolio investment; 4) short-term bank flows. For the first two categories, additional flows or their servicing can vary but the existing stock remains for a long period. For the latter two the stock can fairly easily flow out.

One of the important differences between capital flows in the early 1990's to Latin America and Asia has been the difference in composition of those flows, with Latin America attracting on the whole more volatile flows and Asia attracting more permanent flows (see Table 1).

**Table 1: Composition of Capital Flows, Asia and Latin America (%)**

	1978 - 82		1990 - 93	
	Latin America	Asia	Latin America	Asia
FDI	15.1	15.0	33.0	37.5
Portfolio	4.9	3.6	68.1	14.2
Other "long-term"	63.6	53.9	-32.1	21.7
Other "short-term"	16.4	27.5	30.5	27.0
Total	100.00	100.00	100.0	100.0

Source: Reisen (1995) and IMF World Economic Outlook, Oct 1994.

Thus, in Latin America the more volatile portfolio flows reached 68% of total gross capital flows in the 1990-93 period, whilst for Asia, portfolio flows reached only 14% in the same period. Furthermore, a larger proportion of portfolio flows to Asia than to Latin America seems to come from more stable sources, and in particular from pension funds and insurance companies. For example, UK pension funds were in mid-1993 investing 4.6% of their total assets in Asia compared to only 0.6% in Latin America (see Griffith-Jones, 1995). This difference may have been explained to an important extent by the fact that in Latin America only Chile and Colombia had the investment grade status often stipulated by the guidelines of pension funds as a

pre-condition, whereas in Asia this grade is enjoyed by several of the major countries (Reisen, 1995). Secondly, other "long term" flows, mainly long-term bank lending still represented over 20% of gross capital flows to Asia in the early 1990's, while this category was negative for Latin America, due to limited new bank lending and Brady related reductions of commercial debt. As regards FDI, this was slightly higher as proportion of total gross flows in Asia than in Latin America; furthermore in the latter a significantly higher proportion was linked to debt / equity swaps, which do not necessarily generate additional capital formation.

A second central issue about foreign capital flows relates to their use in the recipient economy, and in particular to their impact on productive capacity. In this context, it is important to ascertain what proportion of these external flows go to investment in the recipient country, how productive this investment is, and what part of it goes - directly or indirectly - to the production of tradables. If a large proportion of the capital flows go to increase investment, if such investment is efficient and if a high proportion of the output generated by the new investment goes into tradables, this both improves the long-term impact of external capital flows on the recipient country's growth and its' more short-term ability to cope better with changes in the volumes of external capital flows.

Again here there is a rather sharp contrast between Asia and Latin America, as can be seen in Table 2.

**Table 2: Net capital flows and levels of investment, Latin America and Asia (percent of GDP)**

	Capital Account		Investment	
	1984 - 89	1990 - 93	1984 - 89	1990 - 93
Latin America <sup>1</sup>	-2.4	1.6	16.0	16.4
of which Chile	-3.0	5.9	15.8	19.5
Asia <sup>2</sup>	1.6	3.2	25.1	28.6

Source: M Khan and C M Reinhart (1995) and IMF World Economic Outlook (various issues).

1 Average of ten Latin American countries. These include Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay and Venezuela.

2 Average of eight Asian countries. These include Indonesia, Korea, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan Province of China and Thailand.

Indeed, as can be seen clearly in Table 2, in Latin America the turnaround in capital flows between 1984-89 and 1990-93, which was of 4.0% of GDP, only was accompanied by an increase of a mere 0.4% of the average investment ratio. This is in sharp contrast with the Asian experience, where an increase in 1.6% of GDP of capital flows was accompanied by a 3.5% increase of the average investment ratio.

It is interesting that in this, as in other features, Chile approaches more the Asian "stylised facts", as in Chile the increase in net capital inflows was accompanied by quite a large increase (of 2.7% of GDP) of the investment ratio. Furthermore, fairly detailed empirical research on Chile (Calderón and Griffith-Jones, 1995) shows the close correlation between foreign capital flows and investment in tradables, especially as regards foreign direct investment inflows.

The different effects of capital flows to Latin America and Asia on the composition of aggregate demand are one of the key factors which play a role in determining whether the real exchange rate appreciates or not. Indeed, as Calvo, Leiderman and Reinhart (1993) have argued, if the increased investment (in Asia) is tilted more toward imported capital goods and the increased consumption (in Latin America) has an important domestic component, other things being equal, the real exchange rate appreciation in Latin America would tend to be stronger than in Asia. The other key factor which determines the evolution of the real exchange rate is the macro-economic policy response to the surge in capital flows, related to the decision of the economic authorities whether they wish or not to resist the appreciation of the exchange rate leading to "financial Dutch disease" - which results from large external capital inflow. This is one of the main challenges posed for macro-economic management of external capital flows, to which we will return in some detail below.

In any case, both the differential impact of capital flows on aggregate demand and the different macro-economic policy response imply that on average the exchange rate appreciation was far larger in Latin America during the early 1990's than in Asia (see Table 3). Indeed, between 1990 and September 1994, the real exchange rate appreciated by more than 20% in all the Latin American countries (except Chile), and in the case of Argentina it appreciated by almost 70%; this is in sharp contrast with the Asian experience, where two countries with very large capital inflows, China and India actually saw their exchange rate depreciate. Most of the other Asian countries had revaluations of less than 10%, with only the Philippines breaking the trend, and having a "Latin American appreciation" of around 27%.

**Table 3: Real exchange rates and inflation rates**

Countries	Real exchange	Annual inflation	
	Rate <sup>1</sup> (Sept 1994)	1992	1994
	1990=100		
<b>ASIA</b>			
China	75.9	8.8	27.0
India	75.7	8.0	9.4
Indonesia	105.3	5.0	10.0
South Korea	101.6	4.5	6.3
Malaysia	108.9	4.9	4.2
Philippines	126.9	3.0	4.6
Thailand	111.4	3.0	4.6
<b>Latin America</b>			
Argentina	168.8	17.5	3.4
Brazil	130.5	1149.0	936.0
Chile	119.0	12.7	9.0
Mexico	122.2	56.7	16.0
Peru	122.0	56.7	16.0

Source: Reisen (1995) and IMF International Financial Statistics.

1 Refers to the nominal exchange rate adjusted by the increase in local consumer prices relative to those of the US.

The unwillingness of the Asian countries' economic authorities to accommodate external capital flows with an upward float of the exchange rate - and the resulting impact on monetary aggregates - implied that during the capital surge episode analysed inflation increased in most Asian countries (see again Table 3). In sharp contrast, several Latin American countries - and especially Argentina, Mexico and Peru - gave very high priority to reducing inflation, and were keen to use an overvalued exchange rate for this purpose. Again here (till recently) the Chilean case was somewhat different, in that the economic authorities put higher priority on maintaining a competitive exchange rate, and as a result the decline in inflation that occurred was far more modest than in Argentina, Mexico or Peru.

However, if we follow the story through, the least successful story - even as regards inflation - is the Mexican one. Though in the short-term (till December 1994), the Mexican authorities successfully used an overvalued exchange rate to lower

inflation to one digit levels (an achievement to which they attached very high priority), the excessive overvaluation of the exchange rate and the resulting very large current account deficit (of 8% of GDP in 1994) assumed continued very high levels of external capital flows. When the trend changed, and then reversed brutally, the resulting collapse of the Mexican peso started provoking a very rapid acceleration of Mexican inflation, which is expected to reach at least 60% in 1995! Therefore, the more prudent approach towards exchange rate appreciation and inflation reduction pursued by the Asian countries - and to a lesser extent by Chile - gives far more satisfactory results in the medium-term for the domestic economy, including for inflation, and therefore is more likely to contribute to the sustainability of capital inflows in the medium-term.

### **III The policy experiences of managing capital flows**

As Williamson (1994) very clearly shows, governments faced with very large capital inflows, have a variety of alternative policy instruments which can be deployed. The right mix for a particular country will depend on domestic country circumstances, on a perception of what proportion of the flows are likely to be permanent and on policy objectives.

It would seem desirable that amongst the policy objectives countries should follow in this context are: 1) maintain international competitiveness, which is particularly crucial for very open economies; 2) avoid over-reliance on short-term capital flows, which may either decline or reverse themselves; 3) encourage more long-term capital flows; 4) avoid risk of future debt or foreign exchange crises and 5) attempt to complement increased external savings with higher domestic savings, therefore avoiding displacement of domestic savings by external savings, as occurred in several Latin American countries in the early 1990's.

It seems useful to order in three levels the policy measures that can be pursued. (see ECLAC, 1994).

An initial level of intervention arises in the foreign exchange market. The purpose of intervention is to moderate trends towards excessive appreciation of the real exchange rate, since this rate has become one of the main instruments of export promotion. This point was well summarised by the President of the Central Bank of Chile (Zahler, 1992): "If the exchange rate remains below equilibrium for too long, it will have at least two kinds of undesirable effects. First, the tradables sector of the

economy may be hurt. It is a well known fact that many of the economies that have been successful in recent years (especially the small ones) have based their development on the growth of the export sector ... Second, ... sooner or later the value of the currency will have to return to its level of long-term equilibrium (or even rise above it for a time), and this will put pressure on prices, thereby jeopardising the goal of curbing inflation."

At the first level of intervention, two very different situations can be observed, depending on how central banks respond to increases in capital inflows. One response is not to intervene at this first level (not to accumulate reserves). In this case, capital flows would not bring about any changes in the international assets held by central banks and their entire increase would put pressure on the exchange market to revalue. In this way, the international capital market is used for funding an increase in the current account deficit, that will lead to increased investment and / or consumption. The other situation occurs when the central bank intervenes at the first level by accumulating reserves. In this situation, a decision must be taken whether or not to sterilise the effects of the accumulation of reserves on the money supply. At this second level, intervention involves choosing between an active or a passive monetary policy (in terms of managing aggregate demand), which also determines its relationship with stabilisation.

In the final instance, countries can always consider revising the nature of the capital account liberalisation in order to regulate the composition of inflows. A third level of intervention then occurs. Some countries have chosen to open up to the inflow of capital and to establish only those intervention mechanisms that will prevent the entry of short-term speculative capital which does not contribute to the investment process.

To sum up, policy options are available at three levels: i) intervention in the foreign exchange market through an accumulation of reserves compatible with the various aspects of exchange rate policy; ii) Central Bank sterilisation of the monetary effect of the accumulation of reserves in order to influence the level and composition of aggregate demand; iii) regulation of capital movements in order to alter their level and composition in favour of long-term flows.

The possible combinations between the first and second levels of intervention yield different mixes of exchange rate policy and monetary policy which make it possible to distinguish two major intervention alternatives. The first, favoured by countries which have chosen to maintain a passive monetary policy, is that known as non-sterilised intervention. It involves accumulating substantial international reserves,

since the Central Bank buys the foreign currency brought in by capital flows in exchange for national currency, without sterilising the monetary effect of these operations. However, if adjustment by way of an increase in imports does not occur fast enough, this alternative can expand the monetary base beyond desirable limits. This usually results in inflationary pressures, causing appreciations in the real exchange rate and tendencies towards excesses and changes in the composition of expenditure.

The second alternative, adopted by countries which, together with defending the exchange rate, have chosen to pursue active monetary policies, is known as sterilised intervention. Like non-sterilised intervention, it involves accumulating reserves, but systematically approaches the second level of intervention by applying a sterilisation of the monetary effects of these operations. The purpose is to isolate the money stock from fluctuations stemming from the mobility of foreign capital. This type of sterilisation, if effective, prevents domestic real interest rates from falling. In economies that are making full use of their productive capacity, this has the advantage of helping control aggregate spending and preventing further appreciation of the real exchange rate. However, with this option, if interest rate differentials persist, capital inflows continue to be stimulated, generating further needs for sterilisation; at the same time, the intervention may be a source of quasi-fiscal deficits, since the Central Bank is placing commercial paper in the domestic market at higher interest rates than those it obtains on its international reserves. These quasi-fiscal losses may be partly offset by a subsequent capital gain derived from the appreciation of foreign exchange reserves.

It is for these two reasons imply that the alternative of sterilised intervention has been combined with other policy measures: i) at the first level of intervention, to influence the exchange market; ii) at the second level of intervention, to regulate aggregate demand through mechanisms other than the interest rate; and iii) at the third level of intervention, to modify the level and composition of capital flows, either directly, through restrictions and charges aimed particularly at short-term capital, or indirectly, by generating exchange rate uncertainty. Among the possible measures, the following are noteworthy (see also Table 4, for measures applied in Argentina, Colombia, Costa Rica, Chile and Mexico):

At the first level measures can include: i) increase the demand for foreign exchange through incentives for the outflow of capital during periods of surplus funds; this can be done by relaxing the rules governing investment by nationals abroad and the repatriation of foreign direct investment, and by authorising

**Table 4:**  
**Latin America And Central America: Summary Of Intervention Measures Adopted With Regard To Capital Inflows, Selected Countries**

	Argentina	Colombia	Costa Rica	Chile	Mexico
<b>First Level</b> (Moderation of the impact of capital inflows on exchange rate appreciation - accumulation of reserves).	March 1991, Convertibility Act, designed to fix the nominal exchange rate and deregulate the foreign exchange market. Liberalisation and trade opening.	June 1991: Introduction of float band ( <i>certicambios</i> ). January 1992: All exporters allowed to keep part of their returns abroad, and residents allowed to keep up to US\$500,000 in assets abroad without prior permission. February 1992: Reduction of the minimum maturity period for external loans to finance working capital and fixed investment. Liberalisation of trade.	Early 1992, introduction of floating with intervention.	1991: float band introduced. March 1992: "dirty" float allowed within the band. July 1992: exchange rate pegged to a basket of currencies of trading partners. 1991: increase in the percentage of foreign currency deposits which banks can use for foreign trade. Investment by nationals and pension funds abroad made more flexible. Reduction of the time-limit for remitting capital brought in through debt conversion operations.	Floating band with fixed floor. November 1991: band ceiling devalued by 20 centavos a day. October 1992: daily devaluation extended to 40 centavos of new pesos.
<b>Second Level</b> (Sterilisation of the monetary effect of exchange operations).	Strengthening of public finances and introduction of a passive monetary policy.	Strengthening of public finances. January-October 1991: active monetary policy. October 1991: interest rates freed and sterilisation abandoned.	Strengthening of public finances. Monetary policy uses open market operations and reserve requirements on deposits for foreign and national currency.	Strengthening of public finances. Active monetary policy through open market operations.	Strengthening of public finances. Moderate sterilisation.
<b>Third Level</b> (Moderation of capital inflows).		June 1991: 3% tax on transactions in foreign currency generated by personal services abroad. February 1992: increase in the commission on purchases of foreign currency by the Central Bank from 1.5% to 5%. June 1992: regulation of the entry of foreign currency as payment for services.		June 1991: reserve requirement of 20% without interest must be paid on credit obtained abroad. July 1991: this requirement is extended to all credit with terms of under six months. January 1992: requirement extended to all deposits in foreign currency in commercial banks. Marginal requirements with respect to interbank deposits. Reserve requirement increased from 20% to 30%.	The amount of liabilities in foreign currency is limited to the equivalent of 10% of total liabilities.

institutional investors to invest abroad and various debtors to make advance payments abroad; ii) apply foreign trade measures, to liberalise; iii) promote the introduction of mechanisms which encourage productivity increases.

At the second level of intervention, the purpose of which is to control the impact on aggregate demand, measures include: i) introduce mechanisms for regulating financial systems in order to avoid distortions in the sector and remedy weaknesses in the prudential financial regulation of the banking system; ii) impose fiscal discipline in order to reduce the additional pressure on demand; iii) supplement exchange rate policy with social contracts on prices and wages.

At the third level of intervention, designed to alter the composition of capital inflows measures include: i) apply indirect exchange rate measures aimed at reducing the entry of short-term capital by introducing an element of uncertainty as to the evolution of the exchange rate, through intervention by the respective Central Bank in the determination of this rate over the short term; ii) adopt direct measures imposing restrictions on capital inflows, which can take the form of adjustments of the reserve requirements, often without interest, on bank deposits or other credits from abroad, and various kinds of quantitative controls (and requirements as to minimum maturity periods, minimum volumes for bond issues, caps on interest rates on foreign capital and regulations on the participation of foreign capital in the stock market).

### Latin American Experiences

#### i) Experiences of Non-Sterilised Intervention

This alternative has often been adopted by countries which favour price stability as a key objective of economic policy. This is based on the expectation that national interest and inflation rates will rapidly converge with international rates. Much of the success of this strategy ultimately depends on the confidence of economic agents in the monetary authority's ability to maintain the nominal exchange rate.

While, in practice, countries can be seen to have used different policy mixes, Argentina is one of the countries that have come closest to this alternative, starting from high levels of inflation.

In terms of combating inflation, the policies instituted in the 1990's in Argentina have drastically reduced the inflation rate.

Though the Argentine alternative, based on fixing of the nominal exchange rate, the adoption of monetary rules which do not sterilise the effects of capital flows on the monetary supply and the implementation of a set of structural reforms, has resulted in important achievements in the area of stabilisation, it was accompanied by an appreciation of the real exchange rate. This has led to a sharp increase in its current account deficit. As a result, Argentina was the country most strongly affected by the "tequila effect". Though, till now, it was not forced to devalue, it had to impose a very strong deflationary package, and shore up its increasingly fragile banking system, hit by large withdrawals after December 1994.

## ii) Experiences of Sterilised Intervention

This alternative has been preferred by countries which have maintained an active monetary policy and, at the same time, a more cautious position as regards the nature of capital flows. It reflects a concern for competitiveness and the continued development of the tradables sector.

Among the Latin American countries which have opted for active intervention, Chile has done so most persistently.

### The Case of Chile

In 1990, the Chilean authorities started to take measures to regulate capital inflows and sterilise the monetary effects of the accumulation of reserves, through interventions in the foreign exchange and money markets. Chile used basically three instruments for these purposes: an exchange rate policy based on "dirty" floating of the exchange rate around a benchmark value determined on the basis of a basket of currencies; sterilisation of the monetary effects of the accumulation of reserves through open market operations; and the application of charges and reserve requirements in order to regulate the entry of capital and discourage excessive, short-term flows.

The Chilean authorities opted for intervention in order to influence determination of the real exchange rate in the short term, on the basis of two assumptions: i) the monetary authority has a better idea of future trends in the balance of payments and their effects on the economy; and ii) its planning horizon is longer-term than that of agents operating in short-term markets (Zahler, 1992).

Chile's exchange rate policy has undergone important changes in recent years. In 1983, it adopted a crawling peg policy, which involved determining a benchmark price for the dollar. This was devalued daily by the Central Bank on the basis of

domestic and external inflation differentials. At the same time, in order to allow the market to play a role, the price for the purchase and sale of foreign exchange was allowed to float within a band around the benchmark value of the dollar. In mid-1989, this band was fixed at 5% of this value (see French-Davis, Agosin and Uttoff, 1985).

Since capital inflows intensified as of 1990, the official exchange rate repeatedly settled around the lower limit of the band, forcing the Central Bank to intervene. As a result, the Central Bank had to buy up US\$1.5 billion in 1990 and US\$3 billion in 1991 and also had to carry out numerous open market operations to sterilise the monetary effect of foreign exchange operations.

Apart from this large inflow of capital, in Chile there was an improvement in the current account. The authorities viewed some of the factors that were contributing to the positive evolution of the current and capital accounts as more permanent, and proceeded to accommodate these tendencies through two additional measures: i) a 2% revaluation, in June 1991, supplemented by a reduction in customs tariffs from 15% to 11%; ii) a further revaluation, of 5%, in January 1992. The foreign exchange market exerted persistent pressure towards a higher appreciation. Convinced they were dealing largely with transitory factors, the Chilean authorities adopted a series of measures to moderate the revaluation pressures.

Some of the main measures were: i) in 1991, they established a reserve requirement of 20% and a tax of 1.2% on short-term external credits; ii) in 1992, they widened the float band from 5% to 10% of the dollar benchmark value, to create more uncertainty in the formation of short-term expectations; iii) this measure was supplemented in March 1992 when the Central Bank decided to intervene on a discretionary basis within the limits of the band ("dirty" float); iv) in May 1992, the reserve requirement was raised to 30%; and v) in July 1992, exchange rate regulations were amended in order to reduce the linkage of Chile's monetary policy with that of the United States and to link it more closely with that of Chile's other main trading partners. To do this, the benchmark exchange rate was pegged to a basket of currencies, made up of the United States dollar (50%), the German mark (30%) and the Japanese yen (20%), weightings.

Chile has also adopted a number of important measures to encourage selective, gradual capital outflows. In 1991, it increased the percentage of deposits in foreign currency that commercial banks could use for financing external trade; it made the process of investment abroad by national enterprises more flexible; it reduced the period for remitting capital brought in through debt conversion operations; and it

authorised private pension funds (AFPs) to invest part of their portfolio abroad, in low-risk instruments.

Another important characteristic of the Chilean experience has been the Central Bank's access to the domestic financial market in order to counter the liquidity created by the accumulation of reserves, which tripled between 1989 and 1993. The national financial market has developed substantially, because of the reform of the pension system. In fact, the pension funds' rate of accumulation of resources has been greater than the increase in the supply of authorised financial assets and they now have a majority share in the market for some specific instruments. This development of the capital market has allowed the Central Bank to place very large volumes of relatively long-term notes, mainly with the object of sterilising the increased liquidity resulting from purchases of foreign exchange.

On the whole, recent events following the Mexican crisis have confirmed the success of the Chilean strategy; however, it should be stressed that it has had its' costs. Ffrench-Davis, Agosin and Uthoff, op.cit, estimated that the immediate cost of monetary sterilisation in Chile reached 0.5% of GDP in 1992. Williamson (1994) reports similar costs of sterilisation for Colombia, a country that followed a fairly similar strategy to that of Chile.

It is interesting that the Chilean economic authorities based their macro-management of capital flows on the assumption that these were - to a large extent- temporary. As a consequence, they adopted a policy package (which included discouragement of short-term capital flows and sterilisation of capital inflows) consistent with this assumption. Paradoxically, the success of these policies have implied that a rather large part of the capital inflows have been permanent, at least in the medium-term (1990-1995).

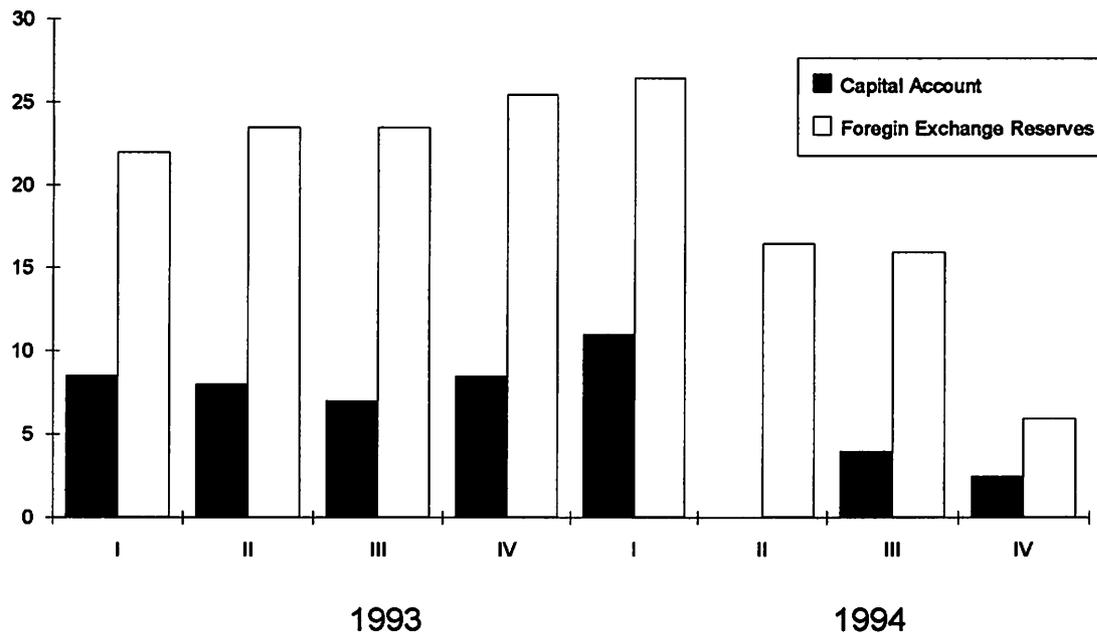
This is in sharp contrast with Mexico, where the economic authorities assumed that a large part of the capital inflows would be at least in the medium-term permanent (sustained by factors such as Mexico's entry into NAFTA and the OECD). As a result, the Mexican authorities followed policies consistent with this assumption; they allowed a level of exchange rate that implied a very large increase of the current account deficit, they were somewhat ambivalent on attempting to control short-term capital flows, and - even worse - allowed foreigners to buy up a very high proportion of very short-term Treasury securities. Indeed, a very high proportion of Mexico's external debt financing raised in the 1990's was very short-term debt, denominated initially in local currency and - in 1994 - converted into dollar

denominated securities. Again, paradoxically, the large imbalances created by the policies pursued, the short-term nature of a large proportion of the inflows, as well as other factors, (such as serious political problems in Mexico in 1994) led to a large part of the external capital flows to become not only temporary, but to be very rapidly reversed.

The Mexican authorities seem to have made two types of mistakes. During the first stage of heavy capital inflows, (1990-93) they allowed the exchange rate to become over-valued, and the current account deficit to grow very rapidly, to 8% of GDP in 1993. Though they adopted several measures to curb over-valuation of the peso and to sterilise inflows (Gurría, 1995), these measures were not as comprehensive as they should have been. Some ex-ante justification for these Mexican policies could be found in that till 1993 foreign capital was pouring into Mexico at such levels, that foreign exchange reserves were still rising, even though the current account deficit had grown to such a large magnitude.

During 1994, two very important changes occurred simultaneously that had a major impact on capital flows to Mexico. Firstly, US interest rates started to rise from their previously very low level, thus sharply diminishing the relative attractiveness of Mexican - and other emerging market - paper to US investors. Secondly a number of serious political events -the revolt in Chiapas, the murder of the Presidential candidate and of the President of the ruling party - seriously undermined the perception that Mexico had "low-political risk". Both these factors combined to provoke a sharp change in the willingness of foreign investors and especially US ones, to continue channelling funds to Mexico. As a result foreign exchange reserves fell quite sharply in early 1994, (see Graph 1). The problem was that for almost twelve months, the Mexican authorities did not recognise that this was a major (and permanent) change in investors' perception. As a result, most of the measures adopted (like switching peso denominated Treasury Bills to dollar denominated Treasury Bills) assumed that the problem was temporary. Measures such as an important acceleration of the crawling peg, a one-off devaluation (for example, in March 1994) and / or a tightening of monetary policy which would have been the automatic response to falling reserves, were not adopted. The failure to recognise the permanent change in foreign investors' attitude and to respond accordingly was a major mistake. It was based on a reluctance to recognise the fact that if investors and / or lenders are willing to finance at one

**Graph 1: Capital account and foreign exchange reserves (billions of dollars)**



Source: El Indicador Economico, Serfin, Mexico, Feb 1995

moment a country's large current account deficit this by no means implies they will continue doing so indefinitely, particularly if circumstances (both external and / or domestic) change. Mexican officials would have been far wiser to heed - both before 1994 and especially during 1994 - Williamson's, op.cit, prudent rule, "that positive shocks should be treated as temporary and negative shocks as permanent". The fact that they are ignored it had a very high cost for the Mexican economy.

### **Asian Experiences**

The Asian experience of managing capital inflows - and especially their strategies for sterilising those inflows - seem to offer interesting lessons, particularly relevant for open economies with relatively underdeveloped securities markets, such as the transitional economies of Central and Eastern Europe.

Indeed, the Asian experience shows a rather effective use of public-sector savings and of mandatory private savings to compensate for lack of developed money markets.

As Reisen (1993) and Folkerts-Landau et al (1995) show, the economic authorities in Singapore, Malaysia, Indonesia and Taiwan seem to be able to deal with

extremely large capital flows without losing price stability or competitiveness. They use rather unorthodox - but on the whole very effective - measures for this purpose, such as transactions designed to manipulate the flow of liquidity into the banking system, for example, by swapping government excess savings held in banks in (and out of) government bonds.

Malaysia has combined direct instruments for sterilisation, such as increased reserve requirements (which were increased from 6.5 per cent in 1991 to 11.5 per cent in 1994) with less conventional ones. Amongst the latter, Malaysia sterilised capital inflows by transferring government and Employee Provident Fund (EPF) deposits from the banking system to special accounts in the Central Bank. Both types of measures, combined with fiscal consolidation, helped reduce liquidity in the economy.

A similar strategy was undertaken in Singapore, where the monetary authorities sterilised capital inflows via portfolio allocations of the Central Provident Fund, a government administered compulsory pension fund. This policy is strongly complemented with a government budget, which is mostly in surplus, as well as the high level of forced private savings.

On the other hand, Indonesia sterilised capital inflows by actively managing public enterprise deposits, which had to be moved from deposits in commercial banks to Bank of Indonesia certificates.

Taiwan's successful sterilisation of truly massive capital inflows is particularly impressive, as Taiwan's foreign exchange reserves grew from \$10 billion in 1981 to over \$80 billion ten years later. During this period, monetary aggregates, inflation and exchange rate appreciation were successfully controlled.

In Taiwan, the monetary authorities forced commercial banks to buy Treasury Bills and central bank certificates of deposit; they also shifted Post Office savings from the commercial banking system to the Central Bank.

Finally, it is interesting to note that in some Asian countries - as in some Latin American countries - sterilisation of inflows has been combined with measures to discourage certain inflows. In particular, Malaysia is reported to have applied a variety of such measures, including limits on the size of banks' foreign currency swap book and on their overall foreign liabilities, temporary (for a few months)

restrictions on residents selling short-term securities to non-residents. and a temporary (for a few months) obligation of foreign financial institutions to deposit their accounts with the Central Bank, where they did not pay interest (which implied a high tax on non-resident deposits). In other countries, like South Korea, there are more general restrictions on external flows, for example in total foreigners are not allowed to hold more than 12% of the value of the Korean Stock Exchange capitalisation.

Though the Asian experience of managing capital flows is in general positive - both in itself and in comparison with the Latin American one - it still raises some difficult issues. In particular, concerns have recently been expressed<sup>4</sup>, that also in the Asian case, interaction of surges in capital flows and weaknesses in the financial infrastructure (especially as regards regulatory and supervisory aspects) could not only increase systemic risks but even, in some cases, lead to systemic problems in domestic financial markets. These potential problems seem more serious in relation to non-bank financial institutions.

More generally the issue of increased fragility and systemic risk in domestic financial markets that results from large surges in capital flows is an important source of concern, particularly if these capital flows are very volatile. Indeed, the large outflow of capital from Mexico, and the large depreciation of the peso, for example, has significantly weakened the Mexican banking system.

In the case of Central and Eastern Europe, domestic financial systems are already relatively fragile (see Griffith-Jones and Drabek, Ed, 1995). As a result, one of the major sources of concern with very large capital inflows in the East European case is with its' potential impact on greater financial vulnerability (Calvo, Sahay and Vegh, 1995). This by itself may be an important argument for preferring sterilised to non-sterilised intervention, as the smaller expansion of liquidity in the financial system (and especially the banks) caused by the former, reduces risks of banking crisis.

#### **IV Conclusions and questions for case study research**

A review of previous experience and of the literature seems to show us that no single policy is more appropriate for managing capital inflows, but that those countries which choose a package of policies, seem most successful.

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<sup>4</sup> Fолerts-Landau et al, op. cit; interview material.

It seems important to stress that -where necessary - such a package should include less orthodox measures, such as discouraging short-term capital flows, when these become too large. The positive experience of Chile and of several Asian countries, like Malaysia, illustrate this. Though this statement would have been considered with great scepticism in more conservative circles before the Mexican crisis, after December 1994, the need to curtail or discourage excessive short-term capital inflows in emerging markets has become widely accepted even in the most conservative circles and institutions<sup>5</sup>. This analysis also has some implications for the timing and speed of capital account liberalisation, as once certain capital controls on inflows are removed, it becomes very difficult to get them back. In the case of Central and East European countries, any temporary measures to discourage or curtail excessive short-term capital inflows as well as the timing and speed of capital account liberalisation must be made compatible in the near future with forthcoming negotiations with the EU on accession to membership by those countries.

However, less conventional measures, like discouraging short-term flows and sterilised intervention, also have some problematic features. Therefore, they are most effective when complemented by more conventional measures, such as (where appropriate) some liberalisation of capital outflows and tightening of fiscal policy. Furthermore measures like sterilised intervention are most effective when they are properly adapted to the development of local capital markets; the Asian experience shows ingenious use of local conditions for this purpose.

It seems valuable for countries' authorities to have a sense of the size of capital inflows that are desirable. Williamson (1994) provides us with a valuable framework for determining a maximum for capital inflows, dependent on the existing debt/GDP ratio and on the rate of growth of the economy. According to Williamson's approach, a sustainable and therefore desirable steady state current account deficit level should not be more than 0.4 times the expected long-term growth rate of the economy.. This would imply moving towards a debt / GDP ratio of 40%, traditionally considered to be a desirable maximum limit; of course, a country that starts with a lower debt / GDP ratio than 40% can run a greater deficit for a while, but it should not let the current account deficit get too much larger, because it is difficult to adjust back when the debt limit approaches; naturally, a country

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<sup>5</sup> Interview material.

starting with a higher debt / GDP ratio than 40% should not have any (or as small as possible) current account deficit.

However, Williamson suggests that non-debt foreign claims including foreign holdings of shares in domestic companies should have a lower weighting than debt creating flows. Particularly given the volatility of the former flows in the recent Mexican crisis, it would seem desirable to give equal (100%) weighting to both debt and non-debt creating flows, with the possible exception of foreign direct investment.

In this sense, it seems valuable to use an indicator that links sustainable level of total capital inflows (and not just debt related ones) with level of exports. Dadush, Dhareshwar and Johannes (1994) have developed such a ratio, based on the traditional rule of thumb that the debt / export ratio should not exceed 200%, and transformed it into a maximum limit of 200% for the ratio of a countries increased net liabilities divided by exports. Following this line of analysis an indicator, which is very simple to calculate, is derived which is equivalent to:

$$\frac{\text{Current Account Deficit}}{\text{Exports}} \quad \text{divided by} \quad \frac{\text{Change in Exports}}{\text{Exports}}$$

Dadush et al then assume that the rule of thumb that can be applied is that this new indicator (which we can call LTE (liability increase to export increase ratio) should not be higher than 2, and that it should be calculated using averages for current account deficit and export growth for the last four years available. It is  
export

interesting that in the preliminary calculations carried out by Dadush et al in late 1994, Mexico was one of the few countries whose LTE was well above 2; it may be a source of concern that both Hungary and Poland were also amongst the countries with ratios above 2, though it needs to be pointed out, that both countries were a special case, as exports fell in the early 90's due to both to the economic transition and the transition to Western export markets, linked to the breakdown first of Comecon and then of the FSU. However this does indicate some preliminary reason for concern to reduce those countries' LTE, which can be achieved by expanding exports and / or by possibly discouraging inflows, especially of a short-term nature.

It should be stressed that the LTE does have one problem, in that it refers to all net capital flows, thus including foreign direct investment, which seems to be less volatile than other capital flows.

For this the LTE indicator could also be complemented by another, which measures annual short term flows (e.g. of flows of debt with maturity less than a year, or easily reversible equity flows) as proportion of total capital flows, and of GDP. If these latter ratios were high by international standards and / or rising fairly rapidly, this should encourage countries' authorities to act more decisively to curb such flows.

Finally, as discussed above, an important policy objective in managing capital flows will be to maintain medium-term external competitiveness for the economy, for which overvaluation of the exchange rate must be avoided.

The use of the exchange rate as an anchor to stabilise prices can in the medium-term cause large real exchange rate appreciation, and a change in the composition of output against tradables, which can lead to growing current account deficits. An extreme reliance on this approach to attack inflation is clearly a high risk strategy. It is therefore more sensible to: a) be slightly less ambitious on reducing inflation, say to one digit levels and b) more importantly, rely on other means, such as fiscal, monetary and incomes policy to reduce inflation.

### **Questions for case studies**

In the context of the above discussion it is suggested that the following questions and issues are examined in the country case studies.

i) What are the main features and scale of the flows coming in to the country? What are the main categories of flows coming in, relating to FDI, equity investment, bonds bank lending and others? What are their financial conditions, in terms of maturities, costs and other? Did financial innovations take place which facilitated their inflow? Did these innovations carry different risks than more traditional instruments.

ii) In what proportion do these different categories of flows seem to be permanent or transitory? What are the main reasons why different categories of

flows are seen to enter the country? Are these reasons linked mainly to national or international developments? Are these factors likely to remain?

iii) How are these external private flows being used in the country? What sectors are they going into? If possible, determine to what extent they are going into productive investment, especially in tradeables. What other destinations do they have?

Is the government / private sector monitoring the micro-economic impact of these flows, in individual cases, at a sectoral level and in aggregate? If it is not, would it be desirable / feasible? How could this be done, in the existing institutional and policy framework?

iv) What has the policy response of the monetary and other financial authorities been? To what extent have they adopted an active policy response? What policy instruments have been used? Have all (some) inflows been discouraged and how has this been done?

v) Has there been non-sterilised intervention? Or have flows been sterilised? What proportion? Through what mechanisms? What was the cost of such sterilisation, as % of GDP? Has the cost of sterilisation become so large, that it has become problematic? How have economic authorities reacted?

vi) Have fiscal measures been taken to compensate for the effect of these flows?

vii) Have measures been taken to relax controls on capital outflows or to liberalise imports?

viii) Has the exchange rate policy been modified, (for example by creating or widening a band for exchange rate fluctuations)?

ix) What effects have these different policy measures had? What lessons can be drawn from this experience?

x) In your opinion, what alternative policy measures could have been used? How and why would their effects have been more desirable.

x) What have been the main macro-economic effects of different kinds of flows and of their management? What are the likely future macro-economic effects of these flows? In particular, what are estimated effects on output, on investment, on domestic savings, on inflation levels? What are the estimated effects of recent flows and of the policies to manage them on levels of foreign exchange reserves, the level of money supply, level of interest rates and the level of both nominal and real exchange rates? What are the likely long-term growth effects, if the level of flows is sustained, if it increases and if and when it decreases? Are there risks that the flows could fall suddenly or be reversed? What macro-economic impact would that have? What effects could it have on the financial system?

xii) If you calculated indicators for your country, such as Williamson's sustainable steady state current account deficit and Dadush et al's LTE (for details see pp 20-21, above), as well as the ratio of reversible capital inflows to total capital inflows (and their evolution), do you think the level and structure of capital flows coming into your country is a sustainable one? Why? Should any policy action be taken to make them more sustainable? Which ones?

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