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# Foreign capital *inflows and* macroeconomic policies

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In recent years, a number of countries of the region have gained renewed access to international financial markets, thus passing abruptly from a situation of relative scarcity of external resources to one of abundance. This situation has given rise to considerable pressures on certain key variables of their economies, especially the real exchange rate and interest rates. In previous articles in *CEPAL Review*, the effects of opening-up of the capital account on monetary, exchange rate and stabilization policies have been analysed. The present article considers the dilemma faced by the economic authorities when they try to simultaneously achieve ongoing capital inflows, stability of the economic aggregates, a competitive exchange rate, and a stronger savings and investment process. An analysis is made of the experiences of Argentina, Chile, Colombia and Mexico in this respect, with their economic policy profiles distinguished according to three alternative options for intervention: in the foreign exchange market, in the monetary market, and in the capital market. It is argued that in view of the degree of volatility and uncertainty of external capital flows, policy instruments in these areas should be aimed at obviating the diversion of key prices from their medium- and long-term trends in response to short-term forces.

# I

## Introduction

In the 1980s, the economic policies of most of the Latin American and Caribbean countries, as well as their economic performance, were determined by the need to face up to severe constraints on the availability of external savings.<sup>1</sup> In the 1990s, however, this situation has undergone a considerable change with the inflow into the region of substantial foreign capital. On the one hand, this has helped to set in motion the economic recovery processes currently observed, but on the other it has presented the monetary authorities with new challenges. Thus, in 1992 the net inflow of capital was US\$62 billion, and it is estimated at US\$55 billion for 1993. These figures are equivalent to 5% of the 1992 regional GDP and 4% of the 1993 GDP, compared with 4.6% in 1981 and an average of 1.2% for the period 1983-1989.

The composition of these inflows is different from that observed in the period when the debt crisis was brewing (1976-1981). At that time, the main source of finance was commercial bank credit, but now there is a bigger share of financial investment –bonds, or American Depositary Receipts (ADRs), for example– and foreign direct investment. One of the lessons learnt from the crisis is that its impact on key variables of the economies of the region, such as the exchange rate, interest rates, and the level and structure of demand, depends to a large extent on the kinds of domestic policies adopted by the countries. In this respect,

net capital inflows will have a positive effect on their medium- and long-term growth prospects to the extent that they help to strengthen domestic savings and investment processes. It is important that foreign capital should supplement –and not take the place of– domestic saving efforts, since the latter are crucial for generating the investments needed by the process of changing production patterns with social equity (ECLAC, 1990 and 1992).

Section II of this article suggests three strategic areas of intervention (the foreign exchange market, the monetary market and the capital account). Within these areas, domestic policies can act on the financial and macroeconomic variables so as to favour the generation of savings (including the procurement of external savings) and their intermediation towards productive investment which will strengthen systemic competitiveness: the essential basis for a form of incorporation in the international economy which will foster sustained growth processes (ECLAC, 1994). Section III identifies two extreme combinations of instruments in each of these areas of intervention which allow profiles of the policies applied to be established, and section IV situates the experiences of Argentina, Chile, Colombia and Mexico within these alternatives. Finally, section V presents some conclusions summarizing the resulting policy implications.

□ This article is based on material prepared by the authors for chapter XI of document LC/G. 1800, *Latin America and the Caribbean: policies for improving the region's place in the world economy*, presented by the ECLAC Secretariat at the twenty-fifth session of the Commission (Cartagena de Indias, Colombia, April 1994). In its preparation, the authors enjoyed the benefit of working discussions with their colleagues Alvaro Calderón, Robert Devlin, Ricardo Ffrench-Davis, Stephany Griffith-Jones, Gunther Held, Ricardo Martner, Gert Rosenthal and Barbara Stallings, who, however, bear no responsibility for the views expressed in the article.

<sup>1</sup> External savings are defined as the balance-of-payments current account deficit, of negative sign, whose counterpart item is the inflow of capital, less accumulation of reserves.

## II

### Options for intervention

Two possible effects of the inflow of substantial amounts of foreign capital into a country may be highlighted. The first, of a Keynesian nature, is reflected in greater effective demand, against a background of under-utilization of production capacity. It is also reflected in relaxation of external constraints affecting the country, with consequent reactivation of the growth rate of the product. If the capital inflow is only short-lived, then the Keynesian effect will be short-lived too.

If the financing of demand is of external origin (external savings), aggregate expenditure will grow even more than the product. The risk involved in this situation is that if the growth of expenditure has been financed mainly with external capital, reversal of such capital flows can cause declines in the product and investment. Moreover, if this reversal is accompanied by adverse terms of trade—as have been registered for Latin America in the last ten years—the negative effects on the level and growth of national income and saving, as well as the severity of the external adjustment, could be still greater (figures 1 and 2).

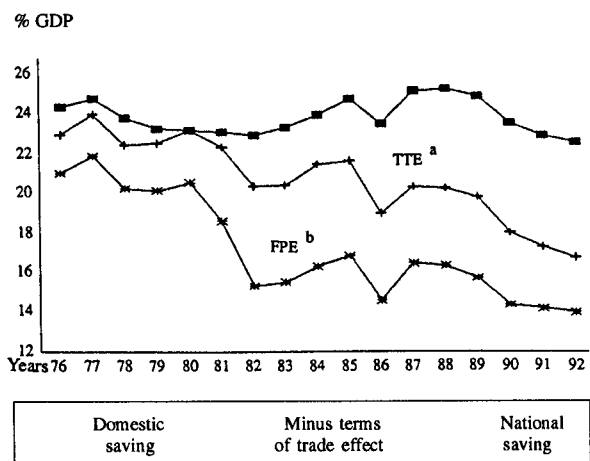
Within this same context, in the phase of sharp increases in the inflow of capital, a tendency is produced towards appreciation of the real exchange rate, since the inflow gives rise to pressures for revaluation in the exchange market.<sup>2</sup> This situation affects the arbitrage conditions between the external and internal capital markets,<sup>3</sup> intensifying the inflow of capital and the tendencies towards exchange rate appreciation.

<sup>2</sup> The substantial appreciations in the real exchange rate observed in the period 1976-1981 were also associated with the use of the exchange rate as a stabilization tool in a number of countries of the region.

<sup>3</sup> In the absence of restrictions on international capital movements, capital moves towards investments offering the greatest expected international returns, taking into account the exchange expectations resulting from the different monetary denominations of the instruments in question, in the light of the expected variations in the nominal exchange rate (Zahler, 1992).

FIGURE 1

Latin America: Domestic saving and national saving



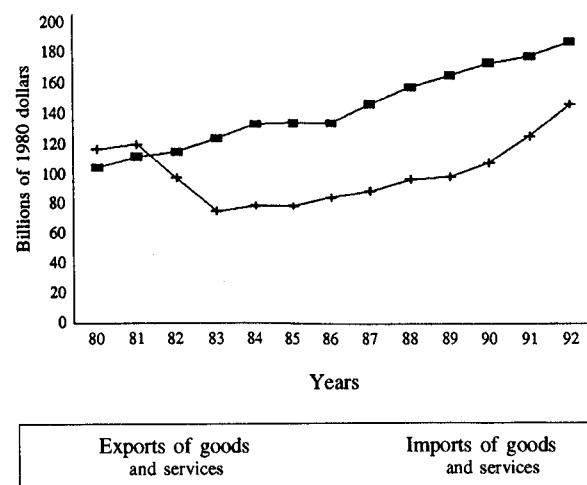
Source: ECLAC, Statistics and Projections Division, on the basis of official data.

<sup>a</sup> TTE = Terms of trade effect.

<sup>b</sup> FPE = Factor payment effect.

FIGURE 2

Latin America: Trade balance (goods and services)



Source: ECLAC, Statistics and Projections Division, on the basis of official data.

The second effect of capital inflows affects the country's production capacity, through an increase in investment in productive sectors which –directly or indirectly– improves the country's international competitiveness. If this occurs, this increases the country's capacity to cope with possible deteriorations in external debt servicing conditions and in the volume of external resource flows.

What happened in the region during the boom in the inflow of external capital in the period 1976-1981 indicates that on that occasion the right conditions were not created for ensuring the sustainability of the capital flow in a context of macroeconomic stability and strengthening of the saving and investment process (table 1). Quite to the contrary: the adjustment which was required involved an intensive recessionary cycle when it was necessary to cope with changes in international financial and trade conditions (Ffrench-Davis and Devlin, 1993).

Other studies on the situation in this period note that the short-term effects of the inflow of capital in 1976-1981 gave rise to excess expenditure equivalent to around 4% of GDP. In some countries of the region –especially Argentina, Chile and Uruguay– this was accompanied by serious financial “bubbles” of a speculative nature.<sup>4</sup> Thus, the value of domestic financial and real estate assets rose much faster than the product and income, while domestic interest rates remained above the levels registered in international financial markets. The financial “bubbles” were based fundamentally on two factors: the strong inflow of capital (stimulated by the big difference between domestic and international interest rates) and the exchange lag made possible by these flows. The serious problems faced by domestic financial systems during the debt crisis show that these factors were not sustainable over time (Ramos, 1986; Corbo and de Melo, 1987).

The region's experience also offers valuable lessons on the way in which a country's form of incorporation in the international financial markets must be accompanied by suitable domestic economic policy design, however. Relatively abundant capital inflows cause exchange rate appreciation which may

not be in keeping with medium- and long-term goals. The authorities must decide on their economic policy in the light of four main objectives: maintaining stable capital inflows; sustaining an exchange rate which suitably furthers international competitiveness as the motor of the economy; ensuring the stability of the monetary aggregates and prices; and promoting saving, taking care that external savings do not discourage domestic saving, and channelling savings towards investment in sectors that strengthen the competitiveness of the economy.

Three possible levels of policy intervention may be distinguished, depending on the economic policy objectives pursued. A *first level of intervention* is in the exchange market. In this case, the aim of the intervention is to moderate tendencies towards over-appreciation of the real exchange rate, since this variable has become one of the main instruments for export promotion.<sup>5</sup> The objective is to give stability and credibility to an exchange policy that provides suitable signals for permanent and sustainable growth.

This point was recently underscored by the President of the Central Bank of Chile:

“From a macroeconomic standpoint, the potential effects of an “excessive” inflow of capital on the level of the real exchange rate are even more important than the effects of greater exchange rate volatility, for if the exchange rate remains below its equilibrium level too long, this has at least two kinds of undesirable consequences. Firstly, there is a risk of adversely affecting the tradeables sector of the economy. It is well known that most of the economies which have been successful in recent years (especially the small economies) have based their development on export growth ... Secondly, ... sooner or later the value of the currency must return to its long-term equilibrium level (or even exceed it for a while), and this will put pressure on prices, thus endangering the inflation control objective.” (Zahler, 1992, p. 169).

Since the debt crisis, the countries have been taking a more conservative attitude with regard to the proportion of the capital flows used to finance the balance of payments current account deficit. In 1992 the countries of the region only channelled 60% of those inflows –that is to say, US\$30 billion at 1980

<sup>4</sup> These countries were pioneers in the region in terms of the deregulation and liberalization of domestic financial markets (Akyüz, 1993; Held, 1993).

<sup>5</sup> This decision is not an easy one for the economic authorities, since in conditions of increased capital inflow exchange rate appreciation has often been due to the fact that exchange policy has had anti-inflationary aims.

TABLE 1

## Latin America: Macroeconomic indicators

	Thousands of 1980 dollars						Percentages of GDP					
	1976- 1981	1983- 1989	1990- 1992	1990	1991	1992	1976- 1981	1983- 1989	1990- 1992	1990	1991	1992
1. Net capital inflow	32 536	7 781	33 318	17 971	32 639	49 345	4.9	1.0	3.9	2.2	3.8	5.6
2. Variation in reserves	6 423	-98	16 027	11 957	16 120	20 004	1.0	-	1.9	1.4	1.9	2.3
3. External saving (1 + 2)	26 113	7 879	17 291	6 014	16 519	29 341	3.9	1.0	2.0	0.8	1.9	3.3
4. Current account deficit of negative sign (5 + 6 + 7 + 8)	26 113	7 879	17 291	6 014	16 519	29 341	3.9	1.0	2.0	0.8	1.9	3.3
5. Terms of trade effect <sup>a</sup>	5 422	31 191	48 737	45 853	48 623	51 735	0.8	4.0	5.7	5.6	5.7	5.9
6. Trade deficit	4 338	-56 017	-53 425	-65 992	-53 156	-41 128	0.6	-7.2	-6.3	-8.0	-6.2	-4.7
7. Factor service	16 905	34 561	27 137	30 306	26 525	24 580	2.5	4.5	3.2	3.7	3.1	2.8
8. Transfers <sup>b</sup>	-552	-1 856	-5 158	-4 153	-5 474	-5 845	-0.1	-0.2	-0.6	-0.5	-0.6	-0.7
9. Total GDP	670 552	775 030	854 695	825 074	856 502	882 510	100.0	100.0	100.0	100.0	100.0	100.0
10. Gross National Income (GNI) <sup>c</sup> (9 - 5 - 7 - 8)	648 777	711 134	783 979	753 068	786 828	812 040	96.7	91.8	91.7	91.3	91.8	92.0
11. Consumption	512 595	587 107	659 563	633 328	661 572	684 790	76.4	75.7	77.2	76.8	77.2	77.6
12. Investment	162 295	131 906	141 707	132 765	141 510	157 000	24.2	17.0	16.6	16.1	16.5	17.8
13. Excess of expenditure over the product (9 - 11 - 12) = 6	4 338	-56 017	-53 425	-58 981	-53 420	-40 720	0.6	-7.2	-6.3	-7.1	-6.2	-4.6
14. Excess of expenditure over income (10 - 11 - 12) = 4	26 113	7 879	17 291	13 025	16 254	29 750	3.9	1.0	2.0	1.6	1.9	3.4
15. Per capita GDP	2 044	2 000	1 998	1 966	2 003	2 025						
16. Per capita GNI	1 978	1 836	1 835	1 795	1 840	1 864						
17. GDP growth rate (%)	4.44	1.80	2.36	0.30	3.80	3.00						
18. Growth rate of exports of goods (%)	6.08	4.85	5.19	5.82	3.41	6.34						
19. Growth rate of imports of goods (%)	6.11	5.57	15.50	11.19	15.56	19.77						
20. Value of exports of goods	81 783	121 793	155 442	148 810	153 880	163 639	12.2	15.7	18.2	18.0	18.0	18.5
21. Value of imports of goods	79 559	69 267	105 413	89 344	103 242	123 652	11.8	8.9	12.3	10.8	12.1	14.0

Source: ECLAC, on the basis of balance of payments and national accounts data of the countries.

<sup>a</sup> Resources needed to cover the losses caused by price increases of imported goods compared with the prices of the goods exported by the region.

<sup>b</sup> Corresponds to private capital inflows in respect of donations and other registered non-official operations.

<sup>c</sup> GNI = Gross National Income.

prices— to finance that deficit (use of external savings), compared with 100% in 1980-1981.<sup>6</sup>

In this first level of intervention, the variations in the reserves reflect official purchases and sales of foreign currency and indicate the degree to which the Central Bank is intervening in that market. If there is

no intervention at this first level (no extra reserves are accumulated), then the capital flows will not cause any changes in the international assets in the possession of the central banks, and the whole of the increase in such flows will exert pressure on the exchange market in favour of revaluation. The capital market is thus induced to help in financing the net increase in imports of goods and services.

When the authorities intervene at this first level by accumulating reserves, the effects on the exchange market are sterilized, but an impact is caused on the monetary market. In view of this, it is necessary to decide whether or not to sterilize the effects of the

<sup>6</sup> According to ECLAC estimates (ECLAC, 1990), in the light of this amount of external savings the achievement of an annual growth rate of 5% for the region would require domestic savings to reach US\$190 billion at 1980 prices, which would mean an increase of 50% over the present level.

accumulation of reserves, which in fact influences the degree of liquidity of the economy by increasing the money supply. At this *second* level, intervention involves choosing between an active or passive monetary policy (in terms of the management of aggregate demand) and its relation with stabilization. This latter is the result of intervention at the first level in order to keep the nominal (or real) exchange rate stable within certain limits. If this means accumulating reserves, then the Central Bank must make an effort to sterilize the monetary effects of exchange operations in order to maintain the real value of the exchange rate. (Calvo, Leiderman and Reinhart, 1993). If this is done through an active monetary policy, open-market operations will be needed; in the contrary case of a passive approach, then the adjustment will take place through prices and interest rates, giving rise to bigger demand for imports which will neutralize the expansion of the money supply through foreign exchange sales by the Central Bank.

### III

#### Two patterns of intervention

After the lessons learned through the debt crisis of the early 1980s, the management of external resources now appears to be more cautious. This is reflected in the fact that more of the inflow of capital is used to build up the reserves, thus moderating the impact of these resources on the economies of the region. Nevertheless, just as in the debt crisis, we are now observing: i) an increase in the share of imports in the GDP; ii) a relatively greater increase in domestic spending compared with the product and income, together with a decline in the surplus on the non-financial current account and the overall balance of payments surplus, indicating that greater use is being made of external savings; and iii) displacement of national saving by external savings, as reflected in the fact that the growth in total investment was less than the increase in external savings (table 1).

During the time when the debt crisis was building up, the reduction in national saving was due to big increases in consumption, but now it is the result of a decline in income caused by deterioration of the terms of trade.<sup>7</sup> It has also been possible to reactivate economic growth—the annual average rate of which

A *third level of intervention* concerns the nature of the openness of the capital account and is designed to regulate the composition of capital inflows in order to bring them more into line with the country's development aims. In this respect, most countries have opted for opening up to capital inflows and adopting only intervention mechanisms designed to avoid inflows of speculative short-term capital which do not aid the investment process.

To sum up, economic policy should be designed in the light of three main aspects: i) the degree of intervention in the foreign exchange market through the accumulation of reserves in line with the various exchange policy schemes; ii) the measures taken by the Central Bank to sterilize the monetary effect of the accumulation of reserves in order to influence the level and composition of aggregate demand; and iii) the type of regulation of capital movements in order to influence their level and composition so as to promote long-term flows.

has risen from 1.8% between 1983 and 1989 to over 3% between 1990 and 1993—without an increase in investment.<sup>8</sup> This recovery has been due largely to the fact that the greater availability of external finance has made it possible to purchase more imports of inputs to increase the degree of utilization of existing production capacity, and this revives the levels of aggregate demand through its effects on the product and income.

The greater or lesser degrees to which the authorities have allowed the capital inflow to reduce the

<sup>7</sup> In the three-year period 1990-1992, this decline was equivalent to 5.7% of GDP in 1980 dollars, while external saving was equivalent to 2% of GDP. In the period 1976-1981, in contrast, the loss due to the terms of trade was equivalent to 0.8% of GDP while external saving was equivalent to 3.9% (figure 1).

<sup>8</sup> The use of the word "reactivation" refers to the fact that the external constraints under which the economies of the region were operating did not allow them to make full use of their production capacity. Once the level of production usable in the short term has been reached, however, the prospects for continued growth will depend on the saving and investment efforts and improvements in productivity.



external deficit and exert supply pressures on exchange markets have been reflected in differing tendencies towards exchange rate appreciation. Initially, these tendencies would appear to reflect the degree of recovery of aggregate demand, imports and the real exchange rate from the levels they had occupied as a result of the external constraints during the period 1983-1989. The problem lies, however, in ensuring future stability, since if the capital inflows are reversed, the levels of aggregate demand, imports and the exchange rate may not be sustainable in the medium and long run. The equilibrium values of these variables should reflect the domestic conditions of the goods and money markets, as well as the availability of external savings, which will depend on whether the capital inflows are permanent or transitory.

The renewed possibility of access to financial markets has found the countries in varying stages of their adjustment programmes.<sup>9</sup> Indeed, they have used a wide range of policy instruments to tackle the problems referred to. The instruments adopted have been aimed at what are known as the first and second levels of intervention. Some countries have also resorted to regulation of capital inflows in order to influence their composition so as to bring it more into line with their development objectives.

The possible combinations between the first and second levels of intervention result in different mixes of exchange rate and monetary policies in which two main intervention options may be distinguished. The first of these, favoured by countries which have preferred to use a passive monetary policy, is known as *non-sterilizing intervention*. It consists of defence of the exchange rate, with the accumulation of significant international reserves if necessary. The Central Bank buys the foreign exchange brought in by the capital inflows in return for national currency, without sterilizing the monetary effect of these operations, under a system of controlled exchange rates.<sup>10</sup>

<sup>9</sup> Some countries were in a position where they needed to begin to seek or to strengthen macroeconomic stability; others, which had progressed further in stabilizing their economies but still had unused production capacity, were at a stage where it was necessary to promote reactivation of their production facilities; while others (the fewest in number), which had inflation under control and were enjoying signs of reactivation of their production activities, were strengthening their saving and investment capacity with a view to procuring financial resources which would enable them to increase their production capacity and achieve sustainable economic growth. Although these stages correspond to the components of an adjustment programme, they must not necessarily follow the sequence in which they are given above.

The extreme case of a fixed nominal exchange rate is equivalent to a monetary approach to the balance of payments. The aim is a compromise with a fixed exchange rate, but in this case, if the adjustment through an increase in imports does not take place with the necessary speed, the domestic monetary base may expand more than is desired, which is usually reflected in inflationary pressures, appreciation of the real exchange rate, and a tendency towards excesses and changes in the composition of expenditure.

The second alternative, used by countries which have decided not only to defend the exchange rate but also to apply active monetary policies, is known as *sterilizing intervention*. As in the previous case, it involves building up reserves, but at the same time systematically moving towards the second level of intervention by sterilizing the monetary effects of these operations. The aim is to insulate the money supply from variations due to the mobility of foreign capital. If this is effective, such sterilization will avoid a drop in real domestic interest rates. In economies which are using their production capacity to the full, it has the virtue of helping to control aggregate expenditure and preventing much appreciation of the real exchange rate. In this option, however, if differences between domestic and international interest rates persist, this will continue to encourage capital inflow. This gives rise to a need for further sterilization and may also cause quasi-fiscal deficits if the Central Bank puts commercial paper on the domestic market at interest rates higher than those received on its international reserves.

The sterilizing intervention option is not devoid of conflicts, especially when the economic authorities do not have sufficient flexibility in the area of taxation to offset the negative domestic effects that may be generated.<sup>11</sup> When there is a lack of flexibility in the management of fiscal policy, the problems arising in connection with sterilizing intervention stem from the dilemma faced by the economic authorities when they simultaneously try to

<sup>10</sup> The methods usually employed range from fixed nominal exchange rates and movable pegs to dirty floats within pre-set limits.

<sup>11</sup> The position today in most of the democracies of the region (and of the rest of the world) is that legislative approval is required to change taxes. This demands the formation of broad majorities for approving tax reforms, and this reduces the flexibility of the economic authorities.

control real interest rates (as a monetary policy instrument for the implementation of stabilization policies) and the real exchange rate (as a trade policy instrument for promoting the growth of activities producing tradeable goods). If the interest rate which is in keeping with the objectives in terms of inflation (through sterilization of the monetary effects of the accumulation of reserves) is higher than the international rate adjusted by the expectations of devaluation, then the capital inflow will continue to exert pressure in the direction of appreciation of the real exchange rate, to the detriment of the aim of protecting the tradeable goods sector. If, on the other hand, domestic interest rates are allowed to go down, then this will adversely affect both objectives, since the higher expenditure encouraged by the lower interest rates will put pressure on prices while also causing appreciation of the real exchange rate (Zahler, 1992).

Consequently, in practice sterilizing intervention has usually been combined with other policy measures with the aim of acting at the first level of intervention through: i) incentives for increased demand for foreign currency through liberalization of capital outflows during periods of excess funds (for example, through liberalization of the rules governing investments by nationals abroad, repatriation of foreign direct investments, and authorization for institutional investors to invest abroad and for certain debtors to make external payments in advance);

ii) external trade measures designed to bring imports, the current account deficit and the accumulation of reserves into line with the exchange rate appreciation targets fixed for the country; and iii) the adoption of measures to promote productivity improvements in keeping with the level of exchange rate appreciation.

At the second level of intervention, action can be taken through: i) the introduction of mechanisms for regulating the financial systems so as to avoid distortions in the sector and to correct any weaknesses in the financial and cautionary regulation of the banking system; ii) fiscal discipline aimed at reducing additional demand pressures; and iii) complementation of exchange policy with social pacts regarding prices and wages.

At the third level, action can be taken through: i) measures designed to discourage the inflow of short-term financial capital, by generating uncertainty about the short-term evolution of the exchange rate; and ii) restrictions on capital inflows, which may take the form of adjustments in the reserve requirements (often without interest) for bank deposits and other external credits and various types of quantitative controls (requirement of minimum maturities and minimum bond issue volumes, ceilings on interest rates payable on foreign capital and regulations on the participation of foreign capital in the stock market).

## IV

### Concrete intervention experiences

The non-sterilizing intervention option has often been adopted by countries which give high priority to price stability as an economic policy objective. This is a strategy which acts directly on inflation and indirectly on the real exchange rate. When applying this mechanism, it is hoped that national interest and inflation rates will rapidly come into line with international levels. Ultimately, much of the success of this strategy depends on the confidence of the economic agents in the monetary authorities' capacity to maintain the nominal exchange rate: a situation which, in the final reckoning, means that the Central Bank must maintain high international reserves, thus affecting the structure of its assets and liabilities.

Although in practice the countries of the region have used various policy mixes, among the countries which have come closest to this intervention option, starting from high levels of inflation, is Argentina. In recent years, that country's authorities have taken a number of measures aimed at deregulating the various markets, including the Convertibility Act (which came into effect in March 1991), which fixes the nominal exchange rate at a 1:1 parity with the U.S. dollar and also establishes the legal validity of contracts denominated in various currencies. The explicit aim of this Act was to check inflation and guarantee the availability of foreign exchange at a fixed nominal value, thus contributing to the stability of the

nominal exchange rate (Argentina, Ministerio de Economía y Obras y Servicios Públicos, 1993a and 1993b; Fanelli and Machinea, 1993).

Other measures taken in order to promote capital movements and generate confidence in ongoing monetary stability and convertibility of the currency include the Economic Emergency Act of August 1989, establishing equal treatment for foreign and domestic capital invested in productive sectors; the Fiscal Amnesty Act of April 1992; the deregulation of financial and securities markets, and finally the reform of the public sector. These have had considerable effects on capital movements, especially in the case of the Act on Reform of the State, which laid the bases for the privatization of public enterprises and debt/equity swap schemes. The amendments to the Articles of the Central Bank provide for the independence of that institution, prohibit monetary financing of the public deficit, and eliminate the State guarantee on deposits (Fanelli and Machinea, 1993; Argentina, Ministerio de Economía y Obras y Servicios Públicos, 1993a and 1993b). At the same time, the process of trade liberalization and openness, within a fixed-exchange-rate scheme, has made it possible to slow down the rate of increase in the prices of internationally tradeable goods and has thus backed up the anti-inflation efforts.

With regard to control of inflation, the policies applied as from the 1990s have permitted a sharp reduction in the rate of inflation. Thus, the consumer price index (CPI) went down from 1344% in 1990 to only 8% between November 1992 and November 1993. This reduction in inflation has been accompanied by marked appreciation of the real exchange rate (after heavy devaluation in 1990 which made possible a big surplus on the trade account), but this process gradually slackened as domestic inflation came closer to the international level. At the same time, the authorities have promoted the establishment of incentives for productivity increases.

The absence of mechanisms for sterilizing the effects of exchange operations<sup>12</sup> has given rise to a considerable increase in the monetization of the economy (compared with the low levels observed after the hyperinflation of 1989), and this situation, together with the greater use of external saving and

the expansion of domestic credit, led to a sharp increase in aggregate demand and economic activity in the three-year period 1991-1993.

The sterilizing intervention option has been preferred by countries which have maintained an active monetary policy combined with a more cautious approach to the continued development of the tradeables sector, the generation of national income, and its channelling to saving and investment in that sector.

Among the countries which have used the active intervention option, Chile has done so most persistently, but other leading cases are those of Colombia and Mexico.

### 1. The case of Chile

Chile has been working for more than two decades on aspects connected with the liberalization of the capital account, through Decree-Law 600 on foreign investment (DL 600, 1974), which eliminated legal discrimination against foreign investors. In the mid-1980s chapters XVIII and XIX of the Compendium of Rules on International Exchange Operations authorized debt/equity swap operations for both Chileans and foreigners. More recently, in 1989 various firms were authorized to issue stock for sale on foreign stock exchanges (Chilean Investment Funds) and in 1990 American Depositary Receipts (ADRs) were approved as an alternative to the direct issue of stock and debt paper in the United States by Chilean firms (Ffrench-Davis, Agosin and Uthoff, 1993).

As from 1990, the authorities had to take measures to regulate capital inflows and sterilize the monetary effects of the accumulation of reserves, through intervention in the foreign exchange and money markets.<sup>13</sup> Basically, three instruments have been used for these purposes:

i) An exchange policy based on a dirty float of the exchange rate around a reference value determined on the basis of a basket of currencies. Chilean exchange policy has undergone substantial changes in recent times, however. In 1983, a moving peg policy was adopted under which a reference value

<sup>12</sup> In terms of months of imports, the reserves amounted to 15, 11 and 9 months in 1990, 1991 and 1992, respectively, compared with approximately 4.5 months in 1989.

<sup>13</sup> The Chilean authorities decided to intervene in order to influence the short-term determination of the real exchange rate, on the basis of two assumptions: i) the monetary authorities have a better knowledge of the prospects for the evolution of the balance of payments and its effects on the economy, and ii) their planning horizon is longer than that of the agents operating in the short-term markets (Zahler, 1992).

was determined for the U.S. dollar. In mid-1989, the buying and selling prices of foreign exchange were allowed to float within a range of variation around the reference value of the U.S. dollar.<sup>14</sup> As the inflow of capital was stepped up as from 1990, the official exchange rate was repeatedly close to the bottom of this range, obliging the Central Bank to step in: thus, it had to buy US\$1.5 billion in 1990 and US\$3 billion in 1991, as well as carrying out substantial open market operations to sterilize the monetary effect of the exchange operations. Later, the authorities decided that some of the factors contributing to the positive evolution of the current and capital accounts were of a more permanent nature, and they proceeded to take steps to adapt to those tendencies.<sup>15</sup> Subsequently, in order to reduce the effect of transitory factors, they took a number of measures which allowed them to mitigate pressures for revaluation.<sup>16</sup>

ii) Sterilization of the monetary effects of the accumulation of reserves. An important feature of the Chilean experience has been the Central Bank's use of the domestic financial market in order to offset the liquidity generated by the accumulation of reserves, which trebled between 1989 and 1993.<sup>17</sup> The national

financial market has received a big boost from, *inter alia*, the reform of the pensions system.<sup>18</sup> This development of the capital market has enabled the Central Bank to sell very significant volumes of debentures, mainly with the aim of sterilizing the expansion of liquidity due to purchases of foreign exchange.

iii) The application of duties and reserve requirements in order to regulate the entry of capital and discourage excessive inflows, especially of a short-term nature. In order to discourage the latter—due especially to differences between the domestic and international interest rates—the authorities have sought ways of increasing the cost of undertaking indebtedness in foreign currency abroad.<sup>19</sup> Various important measures have also been taken to promote the gradual selective exit of capital.<sup>20</sup>

In general, the effects at this third level have been limited, since investment has continued to be more profitable in Chile. The only significant aspects have been investments abroad involving the purchase of firms under privatization processes and the purchase of stock on rising stock exchanges. These measures discourage the inflow of capital, thus reducing the pressures for appreciation of the exchange rate and helping to recover control of domestic interest rates and, through them, of aggregate demand and inflation.

## 2. The case of Mexico

Mexico's economic strategy has been based on two lines of action: macroeconomic adjustment and price stabilization, on the one hand, and structural reforms on the other. The latter have involved, *inter alia*,

<sup>14</sup> This range was fixed at more or less 5% of that value.

<sup>15</sup> This was done through two additional measures: i) a 2% revaluation in June 1991, supplemented with the reduction of customs tariffs from 15% to 11%, and ii) a further revaluation of 5% in January 1992.

<sup>16</sup> Some of the main measures were: i) in 1991 a compulsory 20% reserve requirement and a 1.2% tax on short-term external credits were applied; ii) in 1992 the floating range was increased from 5% to 10% of the reference value of the dollar, in order to generate more uncertainty with regard to the formation of short-term expectations; iii) this measure was supplemented in March 1992 by the Central Bank's decision to intervene at its discretion within the limits of that range (a dirty float); iv) in May 1992 the compulsory reserve rate was raised to 30%, and v) in July 1992 the exchange rules were amended in order to reduce the linkages of the monetary policy with that of the United States and increase its linkages with the policies of the country's other major trading partners. To this end, the reference exchange rate was linked to a basket of currencies made up of the U.S. dollar (50%), the German Mark (30%) and the Japanese yen (20%). These weightings reflect the importance of the various monetary areas in Chile's foreign trade; the sterilization of the monetary effects of the accumulation of reserves through open market operations, and the application of duties and reserve requirements in order to regulate the entry of capital and discourage excessive inflows, especially of short-term capital.

<sup>17</sup> In 1993 the reserves were equivalent to one year's imports.

<sup>18</sup> In fact, the rate of accumulation of pension fund resources has been greater than the increase in the supply of authorized financial assets, and they already have a majority share in the market for some specific instruments.

<sup>19</sup> For example, through compulsory reserve requirements (and taxes) in order to bring the cost of such indebtedness in line with the domestic cost, adjusted by the exchange risk assumed by agents wishing to operate in the country. The dirty float and the linking of the exchange rate to a basket of currencies also serve to make the inflow of capital more selective by increasing the uncertainty and costs of operators using short-term capital of a speculative nature.

<sup>20</sup> In 1991, the percentage of foreign currency deposits that commercial banks could use for external trade financing was increased; the formalities for foreign investment by national firms were eased; the time limit for remitting capital brought into the country through debt conversion operations was reduced, and the Pension Fund Management firms (AFPs) were authorized to invest part of their portfolios abroad in low-risk instruments.

greater trade openness; changes in the regulations governing foreign investment; privatization of public enterprises; domestic deregulation (in commerce, industry and finance), and strengthening of the public finances.

Within this context, and in view of the fact that the inflow of fresh capital, through its expansionary effect on aggregate demand, could make it more difficult for the economic authorities to reach their goals with regard to inflation, measures were taken at the various levels of intervention to reduce the impact of such capital flows on the economy (Banco de México, 1993; Guzmán, 1993). Firstly, exchange policy was made more flexible. The exchange rate is now allowed to fluctuate within a certain range in which the ceiling for intervention is lowered each day by a pre-announced amount, while the floor level remains constant.<sup>21</sup> The aim of this measure was, on the one hand, to provide greater flexibility so that the exchange rate would adapt to the greater supply of capital and, on the other, to widen the range so as to increase the exchange risk in an attempt to discourage the entry of short-term capital.

Secondly, the effect of exchange operations was sterilized. To this end, the monetary policy implicit in this exchange system (controlled evolution of the nominal exchange rate) corresponds to an endogenous money supply determined by variations in domestic credit and the balance of payments position. Thus, the main monetary policy instrument at the disposal of the authorities is the control of domestic credit, allowing interest rates to adjust freely to the exchange rate objective (Banco de México, 1993). Open market operations to sterilize the impact of capital flows have been used with caution. It is estimated that the cost of sterilization amounted to 0.25% of GDP in the three-year period 1990-1992 (Gurría, 1993).

Thirdly, limits were placed on the levels of external indebtedness of the commercial banks. In 1992

a limit was fixed for the total foreign-currency liabilities of the commercial banks: it currently stands at 20% of their total liabilities. At the same time, the liquidity coefficient of 15% was maintained, with the requirement that the resources corresponding to this coefficient must be placed in low-risk instruments (Banco de México, 1993; Gurría, 1993).

### 3. The case of Colombia

The inflow of capital into Colombia in 1991 was accompanied by changes in the exchange policy in June of that year. The aim was to strengthen the active policy of sterilization of the monetary effects of the accumulation of reserves, through open market operations. As a result of these changes, the Central Bank no longer pays for the foreign exchange it purchases in cash, but in exchange certificates ("cercicambios"), which are non-interest-bearing dollar-denominated bonds with a current maturity of one year. The price in pesos for the redemption of these bonds (referred to as the official exchange rate) is fixed daily by the Central Bank.<sup>22</sup>

Although the exchange strategy permits the dilution over time of the monetary effects of the accumulation of reserves, the monetary sterilization carried out in this period was quite intense, and it is estimated that its impact on the quasi-fiscal deficit came to between 0.5% and 1.0% of GDP in 1991 (Cárdenas, 1993; IMF, 1993).

As from October 1991, efforts were made to bring down interest rates in the domestic financial system. The active sterilization policy followed in the first nine months of 1991 was abandoned, and monetary policy was aimed at the gradual elimination of the differential between domestic and international interest rates. The objective was to discourage the inflow of speculative capital, even at the cost of permitting an increase in the money supply greater than those observed in the previous period. In spite of this

<sup>21</sup> In November 1991, together with the abolition of exchange controls, the range for exchange rate fluctuation was widened, while permitting devaluation of the ceiling by 0.02 new pesos per day. In October 1992 the devaluation of the ceiling was increased to 0.04 new pesos per day (equivalent to devaluation of 4.5% per year). In mid-May 1993 the exchange rate was fluctuating within a range of around 6%, and it was expected that by the end of 1993 the difference between the floor and ceiling levels would be 9% (Banco de México, 1993).

<sup>22</sup> This price is not strictly an exchange rate, since it does not apply to an operation of sale or purchase of foreign exchange but reflects the settlement price of an instrument on its maturity. Thus, the "official exchange rate" corresponds to the settlement price payable in pesos by the Banco de la República when it buys back the "cercicambio" (Cárdenas, 1993). At the time of their issue, these certificates can be sold on the secondary market at a discount ranging from 5.5% to 12.5%. The price of these certificates on the secondary market depends on the rate for the U.S. dollar, known as the representative rate.

increase, however, inflation went down during 1992 and 1993 (Carrasquilla, 1993; Garay, 1993).

Other measures aimed at reducing the inflow of capital were the application in June 1991 of a 3% tax on foreign exchange transactions in respect of personal services rendered abroad and other types of transfers, and the February 1992 decision of the Banco de la República to raise the commission charged on the purchase of foreign exchange from 1.5% to 5% (IMF, 1993).

Finally, in order to support the application of a non-sterilizing monetary policy, the tax reforms adopted in June 1992 included a measure to regulate the inflow of foreign exchange under the heading of services, as a means of influencing the inflow of capital, and at the same time the regulations regarding the outflow of capital were made more flexible.<sup>23</sup>

Tables 2 and 3 show economic indicators for the four countries studied. It will be seen from them that although the inflow of capital has shown an upward trend in all the countries in question since the beginning of the 1990s, its intensity and frequency have varied, with Chile and Mexico being the two countries where it represents the highest proportion of GDP.

In all four countries the inflow of capital has stimulated trends towards reactivation of the economy, appreciation of the real exchange rate, increased current account and trade deficits, reductions or only very modest increases in domestic saving, and varying degrees of success in combating inflation.

With regard to the real exchange rate, it may be noted that the countries which have adopted –and maintained– sterilizing intervention policies (without

using the exchange rate as a nominal anchor) register lower rates of appreciation of the real exchange rate. Thus, in Chile this rate appreciated by 4% between 1991 and 1993. In contrast, the countries which do not engage in sterilizing intervention, or do so using the exchange rate for stabilization purposes (Mexico), or which abandoned this policy (Colombia), register a decline in the real exchange rate. Thus, between 1991 and 1993 this rate went down by 14% in Argentina, 12% in Mexico and 14.2% in Colombia.

The different types of evolution of the real exchange rate have naturally been reflected in the external accounts, and the countries with lower degrees of intervention tend to register bigger increases in the trade deficit and the current account deficit of the balance of payments.<sup>24</sup>

As far as the medium-term effects are concerned, the investment coefficient shows signs of recovery in all four countries. However, this reflects a different mix of national and external saving in the financing of investments. There is less displacement of national saving by external saving in those countries which have pursued active policies of sterilizing intervention. As a proportion of GDP, investment coefficients continue to be below the 1980–1981 levels. The country where they come closest to those levels is Chile.

With regard to stabilization processes, reduction of the rate of inflation has been most marked in countries which have preferred to use the exchange rate as an instrument of stabilization, while at the same time applying passive or moderate intervention policies. The other countries display greater inertia in their inflation, with inflation levels which, while moderate, are higher than in the first-named countries.

<sup>23</sup> In January 1992 all exporters were authorized to keep part of their foreign exchange income abroad: previously this was only permitted for the State oil and mineral exporting enterprises and for coffee exporters. In addition, residents were authorized to keep assets of up to US\$500 000 abroad without prior permission. In February of the same year, the minimum maturity of foreign loans was reduced to one year (previously five years, with two years' grace). These loans are only permitted, however, if they are for financing working capital or fixed investments (IMF, 1993).

<sup>24</sup> Although in Chile there was a considerable increase in the trade and current account deficits in 1993, this does not seem to have been due to a sharp increase in imports but rather to a decline in exports.

TABLE 2

**Latin America (four countries): Selected economic indicators <sup>a</sup>**  
*(As a percentage of GDP, on the basis of figures in 1980 dollars)*

	1976- 1979	1980- 1981	1982	1983- 1989	1990	1991	1992	1993
<b>ARGENTINA</b>								
Net inflow of capital	1.7	1.6	1.6	1.5	1.0	3.3	7.4	4.2 <sup>b</sup>
Variation in reserves	2.8	-2.5	-0.6	-0.4	2.4	1.6	2.6	0.8 <sup>b</sup>
External saving	-1.1	4.2	2.2	1.9	-1.3	1.7	4.8	3.4 <sup>b</sup>
<i>Effect on reactivation</i>								
Growth rate of GDP	3.9	-1.4	-3.1	0.1	-0.1	8.9	8.6	6.0
Imports of goods	5.2	7.9	4.8	4.0	3.0	4.9	8.2	8.2 <sup>b</sup>
Investment	25.2	23.7	19.2	17.0	13.3	15.3	18.5	...
Per capita GDP (1980 dollars)	3 932	3 961	3 641	3 599	3 278	3 527	3 787	3 969
<i>Medium-term effect</i>								
Domestic saving (GDP - C)	28.6	22.3	25.0	24.2	26.6	23.5	22.1	...
National saving (Y - C)	26.3	19.6	17.0	15.1	14.7	13.6	13.7	...
Exports of goods	8.3	7.8	8.7	9.7	14.9	13.5	12.4	6.5 <sup>b</sup>
<i>Non-financial external balances</i>								
Trade balance (M - X (goods))	-3.0	0.2	-4.0	-5.7	-11.9	-8.5	-4.2	...
Non-financial current account (M - X (goods and services))	-3.4	1.4	-5.8	-7.1	-13.3	-8.2	-3.6	1.7 <sup>b</sup>
<b>CHILE</b>								
Net inflow of capital	6.1	15.5	4.3	4.7	7.9	3.6	8.0	7.1 <sup>b</sup>
Variation in reserves	2.0	2.7	-5.6	0.3	6.0	3.2	5.8	1.9 <sup>b</sup>
External saving	4.2	12.7	9.9	4.4	1.9	0.4	2.2	5.2 <sup>b</sup>
<i>Effect on reactivation</i>								
Growth rate of GDP	8.2	6.6	-12.6	5.0	2.0	5.8	10.3	6.0
Imports of goods	17.6	22.7	16.1	16.1	19.6	19.7	22.1	31.4 <sup>b</sup>
Investment	14.1	22.2	11.5	14.5	18.1	17.4	20.1	...
Per capita GDP (1980 dollars)	1 998	2 235	2 072	2 652	2 599	2 705	2 936	3 065
<i>Medium-term effect</i>								
Domestic saving (GDP - C)	14.2	15.0	15.7	23.8	27.6	28.6	29.3	...
National saving (Y - C)	9.9	9.4	1.5	10.1	16.2	17.0	17.8	...
Exports of goods	18.9	17.1	21.5	24.9	26.9	27.3	28.3	31.4 <sup>b</sup>
<i>Non-financial external balances</i>								
Trade balance (M - X (goods))	-1.3	5.5	-5.4	-8.7	-7.3	-7.7	-6.2	...
Non-financial current account (M - X (goods and services))	-0.1	7.2	-4.2	-9.3	-9.6	-11.2	-9.2	1.4 <sup>b</sup>
<b>COLOMBIA</b>								
Net inflow of capital	2.5	4.5	6.0	2.2	0.1	-1.0	0.6	3.0 <sup>b</sup>
Variation in reserves	3.9	1.4	-2.4	0.1	1.2	3.6	2.3	0.2 <sup>b</sup>
External saving	-1.4	3.1	8.4	2.1	-1.1	-4.6	-1.7	3.2 <sup>b</sup>
<i>Effect on reactivation</i>								
Growth rate of GDP	5.7	3.3	1.0	4.2	4.0	1.9	3.6	4.5
Imports of goods	11.0	13.4	15.1	10.9	10.2	8.7	10.7	23.0 <sup>b</sup>
Investment	18.3	20.1	22.0	17.5	14.9	14.4	16.1	...
Per capita GDP (1980 dollars)	1 138	1 308	1 213	1 445	1 444	1 447	1 473	1 486
<i>Medium-term effect</i>								
Domestic saving (GDP - C)	19.4	18.2	17.0	20.0	22.2	22.8	22.0	...
National saving (Y - C)	19.7	17.0	13.6	15.4	15.9	19.1	17.9	...
Exports of goods	11.9	11.5	10.1	13.3	17.2	18.6	18.1	19.2 <sup>b</sup>

Table 2 (conclusion)

	1976- 1979	1980- 1981	1982	1983- 1989	1990	1991	1992	1993
<i>Non-financial external balances</i>								
Trade balance (M - X (goods))	-0.9	1.9	5.0	-2.4	-7.1	-9.9	-7.5	...
Non-financial current account (M - X (goods and services))	-1.1	1.9	5.0	-2.5	-7.3	-8.4	-5.9	3.8 <sup>b</sup>
<b>MEXICO</b>								
Net inflow of capital	3.2	7.6	1.4	-0.4	4.7	8.4	8.9	8.5 <sup>b</sup>
Variation in reserves	0.1	0.5	-1.8	0.1	1.3	3.1	0.4	1.3 <sup>b</sup>
External saving	3.1	7.1	3.1	-0.4	3.4	5.3	8.5	7.2 <sup>b</sup>
<i>Effect on reactivation</i>								
Growth rate of GDP	7.3	9.0	-0.6	0.7	4.4	3.6	2.6	1.0
Imports of goods	6.9	11.3	7.4	8.1	14.5	16.3	19.9	26.5 <sup>b</sup>
Investment	23.0	27.9	21.8	17.0	18.9	19.5	20.7	...
Per capita GDP (1980 dollars)	2 275	2 462	2 703	2 473	2 456	2 491	2 503	2 470
<i>Medium-term effect</i>								
Domestic saving (GDP - C)	24.6	25.0	27.4	27.0	24.1	23.1	20.4	...
National saving (Y - C)	19.9	20.9	18.7	17.4	15.5	14.2	12.2	...
Exports of goods	6.8	9.3	12.5	16.2	17.4	18.2	18.1	15.0 <sup>b</sup>
<i>Non-financial external balances</i>								
Trade balance (M - X (goods))	-	2.0	-5.1	-8.1	-2.9	-1.9	-1.8	...
Non-financial current account (M - X (goods and services))	-1.6	2.9	-5.5	-10.0	-5.2	-3.6	0.3	5.5 <sup>b</sup>

Source: ECLAC, Statistics and Projections Division, on the basis of official data.

<sup>a</sup> C = consumption; Y = gross national income; M = imports; X = exports.

<sup>b</sup> On the basis of figures in dollars at nominal prices.

TABLE 3

## Latin America (four countries): Real exchange rate and rates of inflation

	1989	1990	1991	1992	1993
<b>ARGENTINA</b>					
Real exchange rate <sup>a</sup>	144.3	113.0	85.4	79.9	73.8
Inflation (CPI) <sup>b</sup>	492.3	134.4	84.0	17.7	7.7
<b>CHILE</b>					
Real exchange rate <sup>a</sup>	133.5	139.5	137.6	131.8	132.0
Inflation (CPI) <sup>b</sup>	21.4	27.3	18.7	12.7	12.2
<b>COLOMBIA</b>					
Real exchange rate <sup>a</sup>	152.7	172.5	173.0	154.8	148.3
Inflation (CPI) <sup>b</sup>	26.1	32.4	26.8	25.1	21.2
<b>MEXICO</b>					
Real exchange rate <sup>a</sup>	110.4	107.4	98.0	90.7	85.4
Inflation (CPI) <sup>b</sup>	19.7	29.9	18.8	11.9	8.7

Source: ECLAC, 1993.

<sup>a</sup> 1985 = 100.

<sup>b</sup> CPI = Consumer Price Index.



# V

## Conclusions

The success of economic policy should not be judged only on the basis of access to external capital flows, but rather in the light of the authorities' capacity to defend macroeconomic stability and incentives so that the agents can take decisions on the basis of medium- and long-term goals. In this respect, the need for intervention arises as an effort to manage the effects of capital flows, since these simultaneously affect two key prices for resource allocation: the real exchange rate and real interest rates. In the first case, they act through their effect on the exchange market, and in the second through their effect on the money market.

It is important to remember that external capital is extremely volatile. According to some studies on the internal and external factors that explain the recovery of capital movements in the region, external factors (especially the drop in United States interest rates) have been very important in the recent evolution of the capital account in Latin America, and in at least five countries of the region they have been the most important factor (Calvo, Leiderman and Reinhart, 1993). Indeed, access to international capital markets has provided financing both for reactivating the economies and for continuing the investments needed in order to put them on the path of sustained and sustainable growth.

Policy instruments must allow the authorities to keep a suitable balance between the benefits and costs of regulating and supervising capital inflows and their effects. The benefits are connected with the need to insulate the money and exchange markets from short-term speculative international capital movements; to ensure proper management of monetary policy when the aims of exchange and credit policy are threatened; to avoid the draining-off of the national currency to international markets when there is only a limited supply of external finance, and to bring the cost of foreign credit into line with reasonable criteria in order to avoid excessive private sector indebtedness and obviate the formation of destabilizing "bubbles".

The costs are connected with the fact that excessive regulation causes uncertainty which militates

against productive innovation; regulations which continually run counter to the market forces end up by being ignored and lead to the formation of parallel markets. Over-restrictive regulations also limit the range of risks, liquidity and maturity terms open to creditors and debtors, reduce the opportunities open to financial institutions operating at the international level, and could even limit economic growth by cutting the country off from greater opportunities to procure finance for growth and for cushioning transitory short-term shocks.

Three levels of intervention may be identified: a first level at which the aim is to moderate the impact on the exchange rate through the purchasing of foreign exchange (which means the accumulation of reserves) by the Central Bank; a second level involving sterilization policies to reduce the monetary impact of the reserves accumulated at the first level of intervention; and a third level in which an attempt is made to influence the incentives for capital inflows so as to encourage the inflow of long-term capital which directly affects investment.

Generally speaking, governments have opted for either one or the other of two alternatives. Some have preferred non-sterilizing intervention, which involves the purchase of foreign exchange and the accumulation of reserves by the Central Bank without sterilizing their monetary impact. This option is based on liberalization of capital movements in the context of commitment to a nominal exchange rate which will follow a determined path, but without any control over the monetary aggregates. Others have adopted sterilizing intervention policies, under which reserves are accumulated in an attempt to keep the real exchange rate within certain limits considered desirable in the light of medium- and long-term objectives: an approach which involves a high degree of intervention in order to sterilize the monetary effect of the accumulation of reserves.

The sterilization option involves costs as long as the interest rates that the Central Bank must pay on its debentures are higher than those it receives on its foreign currency deposits, but these costs are not always of a permanent nature.

Most of the countries of the region have opted at one time or another for sterilizing intervention, but have been faced with severe conflicts between the management of their exchange and monetary policies. In order to mitigate such conflicts, complementary measures have been used: fiscal discipline in order to regulate aggregate demand; special funds to stabilize the prices of their main export products (e.g., copper in Chile and coffee in Colombia) and thus soften the impact of the price cycles of those products; incomes policies to keep relative factor prices in line with changes of productivity; and measures to change the composition of capital flows by encouraging those of a long-term nature (through intervention at the third level—reserve requirements or taxes—and exchange measures designed to generate greater uncertainty in the minds of those envisaging short-term capital operations).

Through exchange rate management it is sought not only to reduce the tendencies towards appreciation of the real exchange rate but also to do away with incentives for international interest rate arbitrage. This is done, in particular, by increasing the uncertainty over the evolution of currency prices through mechanisms that provide greater scope for intervention by the authorities,

for example, by permitting a dirty float within a preset range around a reference value of the currency fixed according to the market conditions of the various trading partners.

By actively affecting the monetary aggregates, sterilizing intervention policies avoid excessive spending—especially of the private sector—by preventing artificial transitory surges in domestic expenditure which would cause a substantial drop in national saving.

The main differences between the results obtained by countries which have adopted one of these two alternatives are in the extent of the exchange rate appreciation and its effect on the makeup of the balance of payments imbalance; in the rapidity with which inflationary pressures are reduced, and in the effects on national saving and investment. The exchange rate appreciation and its effect on the trade and current account deficits of the balance of payments is greater in the case of countries which have not adopted a sterilization policy. The achievements in terms of reduction of inflation are much greater among these same countries, but in them national saving is displaced more rapidly by external savings, thus affecting overall investment levels.

(Original: Spanish)

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