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**CAPITAL INFLOWS AND INVESTMENT PERFORMANCE:  
THE CASE OF CHILE\***

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**CAPITAL INFLOWS AND INVESTMENT PERFORMANCE:  
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**1. Scope and purpose of the paper**

This paper will deal with the recent surge in capital inflows into the Chilean economy and its impact on growth through its effects on investment. There is much that we know about the subject, but much which still remains to be studied with greater detail. The stylized facts of the Chilean story are the following (see Agosin, Fuentes, and Letelier, 1994; Ffrench-Davis, Agosin, and Uthoff, 1995; and Agosin and Ffrench-Davis, 1996):

a) Since 1987, the Chilean economy has been exposed to a large positive balance of payments shock in the form of capital inflows, which have amounted to between 5 and 10% of GDP.

b) The largest component of this capital inflow has taken the form of FDI (about 60%); short-term inflows played an important role in the period 1990-93; and portfolio capital inflows began in earnest in 1992, but have largely disappeared since the end of 1994.

c) The Central Bank has followed a many-faceted policy to deal with inflows, including the following elements: the introduction of reserve requirements and taxes on foreign borrowing and deposits in foreign currencies; discouraging portfolio inflows beginning in mid-1995; changes in exchange rate policy to introduce greater exchange rate uncertainty in the short run while maintaining a long-term commitment to a stable real exchange rate; practicing sterilized intervention on foreign exchange markets; in

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\* Annotated outline for a study.

general, keeping to a tight monetary policy, aided by tight fiscal policy.

d) These policies have been successful in keeping "hot money" (short-term speculative capital and portfolio inflows) within bounds. At the same time, they have been unable to prevent a fairly significant appreciation of the real exchange rate, although it is likely that the appreciation would have been considerably steeper had more *laissez-faire* policies been followed.

e) Both saving and investment rates have risen steadily since the mid-1980s. The ratio of gross fixed capital formation to GDP rose from 17.5% in 1985 to 26% in 1994. At the same time, the ratio of national saving to GDP went from 8 to 27%. On the other hand, foreign saving (as measured by the current account deficit) declined from 10 to 1.5% of GDP. The discrepancy between the large capital inflows as a share of GDP and the relatively small use of foreign saving reflects the fact that Chilean policy makers chose not to use all the foreign capital that was on offer and opted instead for accumulating reserves.

The capital inflow story is fairly well known. What still remains to be determined with greater certainty is the existence of a link, if any exists, between the large capital inflows since the late 1980s and the sharp increase in saving and investment. The paper will deal with the following topics: i) description and analysis of the components of capital inflows and their magnitudes relative to the size of the economy, emphasizing the various agents involved and their different motivations; ii) the policy response: objectives, instruments, and results; and iii) effects of capital inflows on consumption and investment.

## 2. Capital inflows and its components

Voluntary international capital flows began to return to Chile in 1986 (see tables 1 and 2). During the height of the debt crisis (1983-85), there had been substantial international lending to Chile, but the main sources had been the multilateral financial institutions and involuntary lending from private international banks to the Chilean Government. Thus Chile was the first country in Latin America to begin to receive large volumes of private international capital. Later on in the decade, the return of private capital to the region would become generalized, covering countries which had instituted pro-market reforms as well as those that had not (see Calvo, Leiderman, and Reinhardt, 1993; and Ocampo and Steiner, 1994).

The reasons for the surge in capital flows are many. A debt-equity swap program instituted in 1985 began to attract FDI as early as 1986. These flows increased considerably in 1987-91. Of course, these do not constitute net inflows, because there is a counterpart public outflow in the form of debt cancellation. However, the program did attract the attention of international investors, and investment through regular channels (the so-called DL 600) also rose steeply. The improved current account situation of the country owing to higher copper prices and the stringent adjustment in import levels was evidently a positive factor stimulating FDI.

FDI has remained strong throughout the period under analysis, even though the debt-equity program has not been used since 1991. Chilean debt paper has increased in value on secondary markets to the point where debt swaps are no longer a profitable option for

investors. Net FDI has remained large and has constituted the main variable accounting for capital inflow.<sup>1</sup>

FDI has concentrated mainly in mining (on average, about 60% of total flows in the nineties), although there have been important investments in other sectors such as pulp and paper, forestry, banking, hotels, and telecommunications. It is very likely that investments in most of these sectors would not have been undertaken at all in the absence of foreign investors. Even in cases where FDI constitutes a purchase of existing assets, there is evidence that the purchase was only a way of entering the Chilean market, with considerable investment to expand productive capacity and improve efficiency taking place at a later stage (Riveros, Vatter, and Agosin, 1996). Thus, we can establish one important link between capital inflow and total investment: the large share of FDI in total flows.

But there have been other sources of foreign capital where the link between investment and inflows is much more tenuous, if not negative. Short-term flows attracted by interest rate differentials between Chile and international markets and by the prospect of exchange rate appreciation became important in 1990-93. As discussed below, the monetary authorities responded to this inflow with a battery of policies aimed at discouraging them. These flows abated considerably since 1993.

Portfolio capital also made a significant contribution total flows since they were first authorized in the late 1980s. Up until 1991, the main inflows were related to foreign portfolio investments by so-called Chile Funds. In 1992, Chilean companies began to place ADRs in United States equity markets, and these became the dominant form of portfolio flows. There are two forms

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<sup>1</sup> Since 1991, there have been large and increasing outflows of FDI by Chilean corporations investing in neighboring countries.

that ADR investments take. One is the original placements on United States markets. These are called "primary issues". However, there are also "secondary issues", which consist of purchases in Chile by foreigners of the stock of the companies that have issued ADRs, for their subsequent conversion into ADRs. In the period 1992-94, these secondary issues exceeded the primary ones. In 1995, there was a net "flowback" (sales of such shares exceeded purchases). These operations, which are mainly speculative and do not involve an increase in the assets of domestic companies, introduce an additional degree of instability into the economy, affecting key variables for economic development such as the exchange rate and the interest rate.

Long-term lending resumed in 1987 and has risen sharply since 1992. This, together with the placement of ADRs and even some bonds, means that large Chilean firms have, in fact, returned to international credit markets and have become fully creditworthy. Undoubtedly, these flows have eased the credit constraints faced by domestic firms -and the foreign exchange constraint of the economy as a whole- and, therefore, must account for part of the increase in the economy's investment ratio.

### **3. The policy response**

The impact of foreign capital on investment cannot be understood without taking into account the policy response of the economic authorities. In the 1990s the Chilean authorities adopted a battery of policies toward the surge in capital inflows. On the one hand, the Central Bank has attempted to discourage short-term and speculative capital inflows while maintaining open access to the economy for FDI. On the other, it has sought to insulate partially the domestic economy from the impacts of capital inflows by intervening in foreign exchange markets so as to prevent an excess supply from unduly appreciating the real exchange rate, and by



sterilizing almost completely the monetary effects of the rapid accumulation of international reserves.

The main consideration of exchange rate policy has been to protect the growth model adopted by the authorities, which is one based on the expansion and diversification of exports. In order for exports to continue to be the engine of growth of the Chilean economy, the level and stability of the real exchange rate are crucial. This objective could have been placed in jeopardy if capital inflows caused excessive exchange rate appreciation and greater future volatility when the direction of net flows went into reverse. On the other hand, sterilized intervention was deemed necessary in order not to fall short of the inflation targets of the Central Bank.

The Chilean authorities opted to regulate the foreign exchange market in order to prevent large misalignments in the real exchange rate relative to its long-term trend. The option chosen to make the long-term fundamentals prevail over short-term factors influencing the exchange rate assumes (correctly, in our view) that there exists an asymmetry of information between the market and the monetary authorities, because the latter have a better knowledge of the factors driving the balance of payments; and that they have a longer planning horizon than agents who operate intensely at the short-term end of the market. However, in the face of uncertainty, rather than a unique price, the authorities have used an exchange rate band centered on a reference price; this is linked to a basket of three currencies, in which the dollar, the deutsche mark and the yen are represented with fixed weights associated to their share in Chilean trade.<sup>2</sup>

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<sup>2</sup> For a comparative analysis of bands in Chile, Israel and Mexico, see Helpman, Leiderman and Bufman (1994). For an analysis of Chile, Colombia and Israel, see Williamson (1996).

Exchange rate policy has experienced substantial change over time. The use of a fixed nominal exchange rate in 1979-82, in the context of an increasing and eventually complete liberalization of capital account transactions, was abandoned after the crisis of 1982 during which GDP declined by 15%. In 1983 through 1989 the authorities utilized a strict crawling peg, with a floating band of  $\pm 2\%$  (expanded to 3% in 1988 and  $\pm 5\%$  in mid-1989). The "official" rate was devalued daily, in line with the differential between domestic inflation and an estimate of external inflation. On a number of occasions, discrete nominal devaluations were added, helping to achieve a remarkable real depreciation following the 1982 crisis (119% between 1981 and 1988).

The excess supply of foreign exchange began in mid-1990. The changes taking place in global markets, the increasing international approval of Chilean economic policies, high interest rates in Chile, and the fact that the uncertainty stemming from the 1988 plebiscite and from the induction into office of President Aylwin was quickly dispelled stimulated a growing inflow of capital to Chile. These events were quickly reflected in a real appreciation of the market exchange rate. Beginning in July 1990, the market rate moved from the top to the floor of the band. The strong inflows of capital continued, with the Central Bank making large purchases of foreign exchange in the market. Recurrent runs on the dollar and in favor of the peso were reinforced with expectations of a revaluation (and drops in domestic interest rates), which hampered monetary policy.

In early 1991, the strict crawling peg system was modified and, in order to introduce exchange rate "noise" with the aim of discouraging short-term flows, the rate was abruptly revalued by a small amount on three occasions and then, in compensation, devalued in the following months. Since these exchange rate changes were unanticipated by the market, they were an effective tool for temporarily stemming the excess supply of foreign exchange.

However, the measure could not be repeated too often, since the market would then anticipate the revaluation, and the policy would lose its effectiveness.

In June 1991, in addition to a small (2%) revaluation of the official rate and a drop in the import tariff from 15 to 11%, a non-interest bearing reserve requirement of 20% was established on external credits. The reserves had to be maintained with the Central Bank for a minimum of 90 days and a maximum of one year, which meant that their impact fell mostly on short-term flows. At the same time, a stamp tax on domestic credit, at an annual rate of 1.2% on operations of up to one year, was extended to apply to external loans. In July, an alternative to the reserve requirement was allowed for medium-term credits which consisted in making a payment to the Central Bank of an amount equivalent to the financial cost of the reserve requirement. The financial cost was calculated applying LIBOR plus 2.5% to the amount of the reserve requirement. The reserve requirement, the option of paying its financial cost and the tax on foreign credits all have a zero marginal cost for lending which exceeds one year, and, as discussed below, they are particularly onerous for lending at very short maturities.

Pressures on the foreign exchange market continued in the ensuing months, partly owing to capital inflows (interest rates were low and declining in the United States, Chile's principal international capital market) and partly to a favourable current account. In January 1992, the official exchange rate was revalued by 5% and the floating band in the formal market was expanded to  $\pm 10\%$ . In order to deter interest arbitrage by creating more uncertainty for short-term transactions, in March 1992 the Central Bank initiated dirty floating within the band.

In the ensuing months, United States interest rates continued to decline, exerting pressure on the Central Bank. However, since

the Chilean economy was booming, for reasons of macroeconomic equilibrium, the Central Bank wanted to increase rather than lower domestic interest rates. To avoid encouraging arbitrage, it decided to augment the reserve requirements on capital inflows. In May 1992, reserve requirements on external credits were raised to 30% and were subsequently extended to time deposits in foreign currency; in October, the period during which the deposit had to be maintained was raised to one year regardless of the maturity of the loan. At the same time, the spread charged over LIBOR in the option of paying the financial cost of the reserve requirement was raised from 2.5 to 4%.

In July of the same year, the dollar peg of the official rate was replaced by a peg to a basket of currencies as the new benchmark exchange rate. Given the instability of international exchange rates, these measures were intended to make interest rate arbitrage between the dollar and the peso less profitable by introducing greater exchange-rate uncertainty for speculative capital flows in that currency.

Since 1991 an attempt has been made to ease capital outflows as a way of alleviating downward pressures on the exchange rate. However, since the rate of return on financial assets remains considerably higher within Chile than outside, these measures are unlikely to ease the pressure on the exchange rate, and, in the short run, may instead act as an incentive to additional inflows (Williamson, 1992; Labán and Larraín, 1993). Moreover, in the long run, such policies risk leaving too many doors open for outflows, which could be massive in case of market nervousness and shifts to expectations of currency depreciation. A careless financial liberalization may pose significant obstacles to exchange rate policy and macroeconomic management, generating sources of instability. The recent Mexican crisis is a clear example of this.

As already noted, disincentives to short-term capital inflows have not prevented a significant real appreciation of the currency.<sup>3</sup> The appreciation was strongest between early 1991 and late 1992. Although there was a lull during 1993, owing to a sharp decline in export prices, the trend towards exchange rate appreciation reasserted itself in 1994. The terms of trade recovered strongly and, as already noted above, there was a surge of both FDI and portfolio capital inflows. Faced with the need to continue to purchase large quantities of foreign exchange in the market to keep the dollar from piercing the floor of the floating band, the Central Bank revalued the central point of the band by 10% in November of 1994.

In the first quarter of 1995, there was a lull in the trend toward currency appreciation, mainly as a consequence of the Mexican crisis which momentarily caused a drying up of portfolio capital inflows. However, these pressures reasserted themselves toward the middle of the year. In order to stem these pressures, the Central Bank, in July 1995, extended the reserve requirement obligation of 30% to all foreign financial investments into the country (particularly to the purchases of Chilean stocks by foreigners, or so-called secondary ADRs).<sup>4</sup>

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<sup>3</sup> It must be noted that Chile was coming out of a profound debt crisis which was accompanied by a sharp exchange rate depreciation. Consequently, there was space for some appreciation. However, as Chile was moving from a restricted to an overabundant supply of external savings, the authorities wanted to avoid an overadjustment of the exchange rate. One specifically troublesome feature is that, as expectations of suppliers change to optimism, they seek to reach a new desired stock of investment in the "emerging market" over a short period. This implies excessively large inflows for a while. Obviously, these are transitory rather than permanently higher level of periodic inflows.

<sup>4</sup> It is not difficult to impose reserve requirements on foreign portfolio investments. If the funds that will be used for the investment are deposited with a Chilean bank, the foreign deposit is liable to reserve requirements. For those funds that do not use a Chilean bank as intermediary, the reserve requirement can be imposed at the moment the asset is registered in the name of an agent with a foreign address. In order to be converted into ADRs, they must also go through registration with the Central Bank.

The definitive study on the efficacy of the measures utilized for deterring short-term flows and preventing excessive exchange rate appreciation has yet to be written. However, there is some econometric evidence that they have worked rather well. A recent study indicates that the combination of disincentives to short-term inflows with the reforms in the exchange rate régime was able to reduce significantly the inflow of short-term, interest-arbitrage funds (Agosin, 1996).

Some observers have claimed that the efficacy of measures to discourage capital inflows is only temporary, as private sector operators find ways to evade them. In principle, this can be done through three mechanisms. One is the underinvoicing of imports or the overinvoicing of exports. The second one is to delay payment for imports or accelerate export receipts. Thirdly, it is possible to bring in funds through the informal exchange market.<sup>5</sup> While some evasion is inevitable, there is no hard evidence that the measures to discourage short-term capital inflows have been massively evaded. In fact, as shown in table 1, short-term flows (as a share of GDP) have tended to decrease. In the absence of the policy measures taken, they might have been considerably larger.

The imposition of reserve requirements on portfolio flows also appears to have been very timely. In 1994 alone, the gross inflows of portfolio capital represented about 3.5% of GDP. Thus the extension of reserve requirements to these inflows can be considered to have been a pre-emptive strike to deal with an incipient problem which was already causing difficulties in policy management and which could become even more important in the future. Although significant, in comparison with Mexico the

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<sup>5</sup> Potentially, there is also the possibility of registering short-term funds as FDI. However, this could be a costly option, since Chilean law requires that FDI remain in the country for one year before repatriation. It should be noted that the loans associated with FDI are subject to the reserve requirement. Since the average maturity of these loans is about seven years, the incidence of the restriction is low.

internationalization of the Chilean stock exchange was just beginning.

#### 4. The impact on investment

In the case of Chile, there is a positive correlation between capital inflow and the rate of investment. In other words, the return of foreign capital has coincided with a steep rise in the ratios of fixed investment and saving to GDP (see figure 1). This is in contrast to the experience of other Latin American countries, where the foreign capital surge has been accompanied by stagnant investment and falling domestic saving. This positive correlation, which of course does not necessarily mean causation, needs to be explained.

One element of the explanation is already in place: the composition of capital inflow has been peculiar to Chile, where FDI has been the main element. Moreover, FDI, which directly enhances productive capacity has been in sectors where foreign firms are unlikely to compete with domestic firms. Therefore, foreign investors have probably not crowded out domestic investors. A fairly significant share of the increase in investment since the mid-1980s is accounted for by the rise in FDI. A recent study estimates this proportion as 40% for the period 1987-91 (Agosin, Fuentes, and Letelier, 1994, pp. 137-138).

In order to understand the impact of capital inflow on investment, it is necessary to build a model of the relationships involved. Following Rama (1993) and Solimano (1990), we will adopt an eclectic view, considering that investment is a function of price factors (as reflected in Tobin's Q), the stage of the business cycle (as reflected by the shortfall of actual output from full-capacity output), credit and foreign exchange constraints, and

the variability of relative prices (proxied by the variance of the real exchange rate) :

$$I = I (Q, y, CR, R, \sigma_e) \quad (1)$$

where

I	=	gross fixed private investment
Q	=	Tobin's Q
y	=	deviation of actual from full-capacity output
CR	=	credit to the private sector
R	=	reserves-to-import ratio
$\sigma_e$	=	variance of the real exchange rate

In the world of equation (1), the economy is composed of heterogeneous firms, some of which are able to maximize discounted profits without constraint, while others are constrained by the unavailability of long-term credit from capital markets and/or foreign exchange. In addition, investment is affected by the variance of expected returns, which depends on the variance of relative prices (see Agosin, 1995). Most empirical work on investment has included a combination of these variables.

Capital inflow affects private investment through most of the variables included in equation (1). For Chile since 1986, we can consider CR to be an exogenous variables, since capital inflow has been effectively sterilized. Therefore, in order to complete the model, we need equations only for Q, y, and R:

$$Q = Q (r, e, y) \quad (2)$$

$$y = y (Q, e) \quad (3)$$



$$R = R \left( F, \frac{P_x}{P_m} \right) \quad (4)$$

Equation (2) tells us that  $Q$  depends on the real interest rate, the real exchange rate, and the deviation of actual from potential output. Higher real interest rates depress stock prices and  $Q$ . The larger is excess capacity (here proxied by  $y$ ) the lower will be  $Q$ . And an appreciation (decrease) of the exchange rate lowers the replacement value of the capital stock and, therefore, increases  $Q$ . Equation (3) makes the stage in the business cycle depend on variables which affect aggregate demand ( $Q$  is positively associated with investment and  $E$  with net exports). In equation (4), the reserves-to-import ratio depends (positively) on the terms of trade and capital inflow.

How does the Chilean case fit into this model? Even though the monetary authorities have not allowed capital inflows to swell the money supply or to ease monetary conditions, portfolio capital inflow has indeed relaxed the credit constraints of a few large corporations that have been issuing stock on United States capital markets, and this must have had a positive effect on investments by these firms. However, the capital inflow has appreciated the exchange rate, making it less profitable to invest in marginal projects for export markets by firms without access to international capital markets. Over the past decade, most of the increase in manufactured exports has come from small and medium-size firms, which are now being adversely affected by the appreciation of the real exchange rate.

This is not a distributive problem only. It also has profound long-term implications for growth. Chile has embarked on an export-oriented growth strategy, which depends heavily on the continued diversification of exports. Premature exchange rate appreciation can have very adverse long-term impacts on growth via discouraging

investments in new export products. Moreover, exchange rate appreciation fosters investments in sectors which have a relatively short cycle: non-tradables in general, but especially residential construction for the rich. Real estate booms are short-lived, with overinvestment being a common occurrence.

The Central Bank has attempted to prevent real exchange rate appreciation, but it has not been completely successful in doing so. The measures adopted have been by and large correct, but insufficient in magnitude and coverage. Once the capital inflows go into reverse, as they have in many countries in the region, exchange rate depreciation is inevitable, and this will have adverse consequences on the variability of exchange rates and on future investment expenditures.

There are reasons to believe the foreign exchange bonanza could begin to dry up in the near future. The terms of trade, favourable to Chile since 1987, have begun to deteriorate. The large inflows of FDI that Chile has been experiencing represent a typical stock adjustment process which may be close to its termination. And, as already noted, portfolio investments have already dried up and may not resume in the near future.

Where does all this leave us? The capital inflow, coming at a time of strongly improving terms of trade, relaxed the foreign exchange constraint of the economy and allowed private investment to increase. The seeds for the long wave of rising investment rates, mainly in tradables and which has contributed to the strong increase and diversification of exports, had been planted in the mid-1980s with the sharp real exchange rate depreciation forced by the debt crisis which was (correctly) perceived as permanent by economic agents and which encouraged investment in exportables. And the increase in investment was made possible by the favourable developments in the balance of payments. As already noted, certain other aspects of the capital inflow were also positive to

investment: the strong concentration on FDI and the relaxation of the borrowing constraint of the large firms that were able to place ADRs.

There are no data on investments by sector, so that we don't know the figures for investments in exportables. But, as a consequence of the real exchange rate appreciation that has taken place since 1992, it would not be surprising to find that they have declined in the recent past, and the decline could be accelerating.

As already noted, the authorities also acted to prevent an undue appreciation of the exchange rate which would have enlarged current account deficits and made them unsustainable in the long run. In this sense, the policies followed were designed not to use all the foreign capital that was on offer to the Chilean economy. By and large, these policies were successful. However, the authorities have been repeatedly forced to exchange rate appreciations, and, in this sense, they have failed to protect the long-term process of export diversification. In particular, the imposition of reserve requirements on foreign purchases of domestic financial assets came too late and when portfolio investments were already declining. As balance of payments conditions worsen, as they surely must with a deterioration of the terms of trade and a probable fall in capital inflow, the real exchange rate could be forced down by market forces, increasing its volatility and adversely affecting investment.

Moreover, the capital inflow episode has been accompanied by a boom in private consumption. At the same time, domestic saving has been increasing, so that there does not seem to be much cause for concern. However, the appreciation of the exchange rate has increased wages relative to import prices, and the stock market boom (to which portfolio capital flows has contributed) has had wealth effects on consumption. All of this means that, had the authorities employed more decisive policies to defend the exchange

rate and nip in the bud the inflows of portfolio capital, consumption would have expanded less and the saving rate would have been higher.

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**Table 1**  
**Capital flows to Chile, 1983-95**  
(millions of US\$)

	Inward FDI	Outward FDI	Portfolio inflows <sup>a</sup>	Medium and long-term lending	Short-term inflows	Total private	Public <sup>b</sup>	Total flows
1983	135	-3	-	-	-473	-341	917	576
1984	78	-11	-	-	635	702	1,425	2,127
1985	144	-2	-	-	163	305	1,009	1,314
1986	383	-3	-	-	481	861	103	964
1987	1,115	-7	-	266	-226	1,148	-295	853
1988	1,415	-16	-	191	-230	1,360	-461	899
1989	1,600	-10	87	219	310	2,206	-1,063	1,143
1990	1,339	-8	359	281	895	2,866	39	2,905
1991	858	-122	225	233	728	1,922	-795	1,127
1992	750	-378	452	496	1,484	2,804	-53	2,751
1993	1,433	-432	1,067	638	881	3,587	-912	2,675
1994	2,608	-926	1,022	1,225	438	4,367	-484	3,883
1995	2,672	-668	19	713 <sup>c</sup>	-107 <sup>c</sup>	2,630	-1,644 <sup>c</sup>	986

**Source:** Banco Central de Chile.

<sup>a</sup> In 1994 and 1995, item reflects net inflows. Recorded portfolio outflows were zero until 1992; in 1993 through 1995, they were US\$ 90 million, US\$ 351 million and US\$ 14 million, respectively.

<sup>b</sup> Includes mostly debt amortization and the decline in debt-owing to debt equity swap and buyback programs.

<sup>c</sup> First three quarters only.

**Table 2**  
**Capital flows to Chile, 1986-95**  
(as a percentage of GDP)

	Inward FDI	Outward FDI	Portfolio inflows	Medium and long-term lending	Short-term inflows	Total private	Public	Total flows
1986	2.2	-	-	-	2.7	4.9	0.6	5.4
1987	5.4	-	-	1.3	-1.1	5.5	-1.4	4.1
1988	5.9	-0.1	-	0.8	-1.0	5.6	-1.9	3.7
1989	5.7	-	0.3	-0.8	1.1	7.8	-3.8	4.1
1990	4.4	-	1.2	0.9	2.9	9.4	0.1	9.6
1991	2.5	-0.4	0.7	0.7	2.1	5.6	-2.3	3.3
1992	1.8	-0.9	1.1	1.2	3.5	6.6	-0.1	6.4
1993	3.1	-0.9	2.3	1.4	1.9	7.9	-2.0	5.9
1994	5.0	-1.8	2.0	2.3	0.8	8.4	-0.9	7.4
1995	4.5	-1.2	-	1.2 <sup>a</sup>	-0.2 <sup>a</sup>	4.4	-2.7	1.6

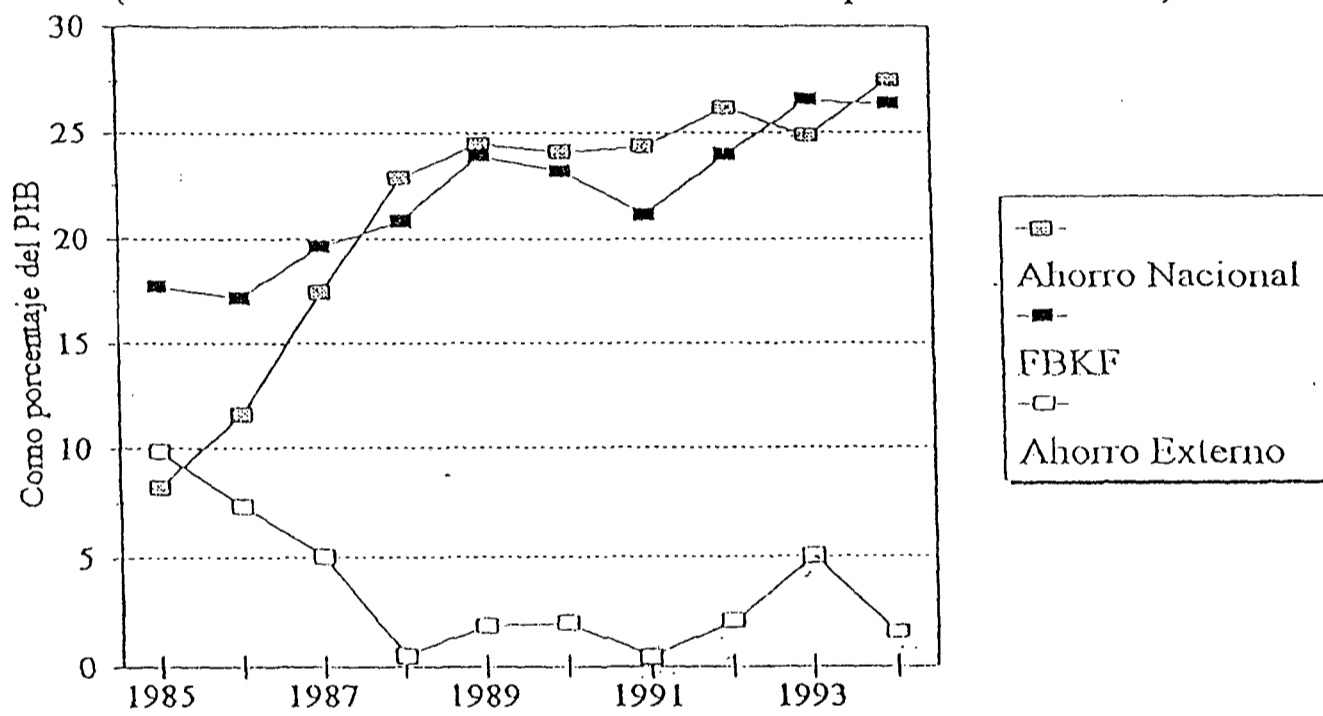
Source: Banco Central de Chile.

<sup>a</sup> First three quarters only.



# Gráfico 1 Ahorro e Inversión sobre PIB

(Cifras reales calculadas con el deflactor implícito de la FBKF)



Fuente: Banco Central de Chile