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Statistical conventions:

... Data unknown.
- Null data or an indication that the corresponding item does not exist.
0 ou **0,0** figure smaller than half the value of the last digit to the right.
* preliminary data.

An hyphen (-) between years (1970-1975) indicates the total of years, including the first and the last. A slash (/) between years indicates the yearly average of such years, including the first and the last, or harvest-year or agreement-year, according to the text.

Any discrepancy between data and totals or percentage variations are due to rounding.

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Foreword

The institutionalization of the Banco Central do Brasil Technical Notes, conducted by the Economic Department, promotes the dissemination of works featuring economic content, attracting both theoretical and methodological interest, giving a view of the short-term developments of the economy and reflecting the work of the Bank's employees in all areas of action. Besides, other works, though foreign to the Banco Central, may be included in this series provided the Bank has afforded institutional support to their preparation.

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Capital Controls in Chile

RENATO BALDINI JR.[1]

1. Introduction

The main capital control instrument used in Chile was the Unremunerated Reserve Requirements – URRs, established in the context of the fast growth of foreign funds entering the country at the end of the eighties. Introduced in June 17, 1991, the URRs aimed at preserving the monetary policy autonomy, avoiding appreciation of the currency and expansion of the money supply. The measure was designed to discourage short-term inflows, deemed as being speculative, without affecting direct foreign investments, thus limiting the volatility associated to the capital account.

At the start, reserves or cash ratio requirements affected foreign loans, except trade credits, at a rate of 20%, and should be maintained in the currency of the loans. The terms for such reserves were:

– 90 days, for credits not exceeding 90 days;
– equal to the operation terms for credits from 90 days to one year;
– one year for credits maturing over one year.

Such retention of funds entered into the country by means of non-remunerated reserves, corresponding to an implicit tax equivalent to the foregone remuneration. This cost declined with the term of the operation, as can be seen in Table 1, especially

Table 1.

Implicit cost of investment of unremunerated reserve requirements in Chile – 1991 to 1997 – % per annum.

Year	Differential of real interest rate	Implicit cost (according to the operation term)		
		3 months	6 months	1 year
1991	3.6	1.5	1.5	1.5
1992 up to April	6.6	1.1	1.1	1.1
1992 after May	6.6	7.7	3.9	1.9
1993	6.4	6.9	3.4	1.7
1994	4.1	9.4	4.7	2.4
1995	4.4	10.3	5.1	2.6
1996	5.2	9.4	4.7	2.4
1997	4.0	9.4	4.7	2.4

Source: ARIYOSHI, A. et al. (1999), p. 72.

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after August 1992, when the retention term came to be the same for all transactions[2]. The implicit tax increased with the augmented reserve rate to 30%, from the previous 20%, in May 1992, and with the increased international interest rates. Increases of country risk premium, which set the cost of foreign capital investments up, may be offset by a reduction in the implicit tax, in order to avoid that the inflow of funds loses all its attractiveness. This was the case in 1998, when the retraction of capital flows following the Asian crisis gave reason for a reduction in the reserve rate to 10% in June, and later to zero, in September.

At the beginning of its application, reserve requirements covered about half of the gross capital inflow, but this coverage declined with the development of alternatives to avoid its incidence. After the controls gained in scope in 1995, coverage increased again, keeping in the range of 30% to 40%[3]. Foreign liabilities that did not result in increase of capital stock were not subject to reserve requirements. Only direct foreign investments and primary issue of ADR were exempt of cash ratio requirements[4].

Development of reserve regulations:

- 6.17.1991: introduction of unremunerated reserve requirements;
- 6.27.1991: borrowers were authorized to comply with the reserve requirements using repurchase agreements in which the Central Bank sold the borrower and repurchased immediately a security amounting to 20% the value of the operation, at a discount based on the Libor rate. Under this arrangement, the implicit tax was collected in advance, making the monitoring of operations easier;
- 7/1991: URRs extended to renewals of loans;
- 1/1992: URRs extended to bank deposits in foreign currency;
- 5/1992: URRs rate increased to 30% (except for direct loans obtained abroad by corporations). The term for retention was unified in one year, despite the maturity of the operation;
- 8/1992: rate unified to 30% on all operations. Discount changed to Libor + 2.5%;
- 10/1992: discount increased to Libor + 4%;
- 11/1994: starting in January 1995, reserves should be deposited in United States dollars only;
- 7/1995: URRs extended to secondary ADRs;
- 12/1995: new credits for prepayment of other loans are exempt of reserves, on grounds that such instrument tends to increase the term of operations;

2/ According to ARIYOSHI, A. et al. (1999, p. 72), the implicit tax may be estimated by the expression: $t=[r(i^* + s)T/(I - r)[/D$, where t represents the tax rate; r, the rate of required reserves; i* the nominal interest rate of the currency in which the reserve is kept; s, the premium incurred by the borrower in obtaining funds to cover the reserve requirement (country risk premium, plus the borrower's credit risk); T, the term in which the reserve is kept; and D, the investment term.

3/ ARIYOSHI, A. et al. (1999), p. 70.

4/ IMF (1998), p. 176.

- 5/1996: URRs extended to modes of direct foreign investment that are potentially speculative. This speculative character of operations, understood as a non-productive investment, was determined by the committee in charge of approving foreign investment projects;
- 12/1996: small-value credits, lower than US$200,000 or US$500,000 cumulative in twelve months were exempted, with the aim of reducing administrative costs;
- 3/1997: exemption limited to credits lower than US$100,000;
- 6/1998: reserves ratio reduced to 10%, except for short-term credits and deposits in foreign currency, in response to a retraction in international capital flows;
- 9/1998: ratio reduced to 0%. The mandatory permanence for one year in the country was maintained for financial and foreign direct investments;
- 4/1999: suspended the requirement of an average maturing term of at least four years for securities issued abroad by Chilean corporations;
- 6/2001: URRs are eliminated.

Application of reserve requirements was accompanied by other measures, such as enlarging the fluctuation band and permitting the outflow of capitals.

Changes to the fluctuation band regime:

- 1992: enlarged to +/-10%, from +/- 5%;
- 1997: enlarged to +/- 12.5%;
- 6/1998: reduced to 5.5%;
- 9/1998: enlarged to 7%;
- 12/1998: enlarged to 16%;
- 9/1999: formal commitment to fluctuation bands eliminated. The Central Bank announced that interventions in the exchange market would be made in special cases only.

Evolution of capital outflow regulation:

- 1991: banks are authorized to invest abroad up to 40% of their foreign exchange deposits. These investments are limited to bonds and securities issued or guaranteed by foreign governments, central banks or private corporations[5];
- 1/1992: pension funds were authorized to invest abroad up to 1.5% of their assets;
- 3/1992: the limit for bank positions in foreign currency is increased to 20%, from 10%;

5/ Investments abroad by banks, pension funds and insurance corporations were limited to minimum risk assets. In the case of banks, the lower classification admitted for investment was BBB. In April 2001, these restrictions were lifted.

– 3/1993: restrictions to profit remittances abroad were softened;
– 8/1994: restrictions to profit remittances abroad were lifted;
– 9/1994: banks are authorized to invest abroad up to 20% of their capital and reserves;
– 11/1994: the ceiling for pension funds is increased to 6% of their assets. Limits to invest abroad were then 10% of assets for insurance corporations, and 30% for open-end investment funds;
– 5/1995: ceiling for pension funds is increased to 9%;
– 8/1995: minimum permanence in the country for a direct foreign investment is reduced to one year;
– 4/1996: ceiling for pension funds is increased to 12%;
– 1/1998: ceiling for banks is increased to 70% of capital and reserves;
– 6/1998: eliminated the ceiling for open-end investment funds;
– 2/1999: increased the limits for investment abroad: pension funds to 16%, life insurance corporations to 15%, general insurance corporations to 20%;
– 5/2000: eliminated the minimum term of one year for foreign investments.

Decree-Law 600 and Chapter XIV of the Central Bank *Compendio de Normas de Cambios Internacionales* (International Exchange Rules Compendium) regulate foreign investments in Chile. Foreign investors have the privilege of selecting between two systems of income tax. The first is similar to that applicable to domestic investors and consists in the application of a rate of 35% on profits, subsequently deducted from the 15% income tax. The other system corresponds to a tax of 42%, guaranteed for 10 years[6].

All capital inflows and most outflows shall be channeled by institutions authorized to operate in the formal foreign exchange market, and shall be informed to the Central Bank. In April 2001, the new edition of the International Exchange Rules Compendium authorized the use of the informal foreign exchange market for transactions related to imports and exports. This document, besides, has eliminated:

– limits for special clauses on advances of foreign credits;
– restrictions to the minimum risk classification and minimum weighted terms for the issue of bonds;
– restrictions regarding the currency in which a foreign debt could be issued or agreed;
– need of previous authorization for: inflow of capitals associated to foreign credits, investments, capital contribution, debt securities and ADRs; outflow of foreign currency related to capital returns, dividends and other benefits related to capital contributions, investments and advances of foreign credits; capital returns and other benefits associated to investments of residents abroad.

6/ The rate may be guaranteed for up to 20 years for investments in excess of US$50 million.

2. Efficiency of reserve requirements

Different studies on the performance of the Chilean economy during the nineties indicated that reserve controls enabled the maintenance of high domestic interest rates and won relative success in favoring the channeling of capital inflows to middle and long-term investments[7]. Econometric estimates on the reduction of short-term inflows were inconclusive, among other reasons because the data on short-term operations may be underestimated for being disguised as long-term operations to avoid compliance with the reserve requirements[8]. There is little evidence on the influence of reserves on restraining the inflow of capitals. Regarding the foreign exchange rate, which appreciated 4% between 1991 and 1997, the effect on its path appears to be small, though the controls may have been relevant to reduce its volatility.

The most important result may have been a contribution towards increasing the average term of maturity of the Chilean foreign debt. Short-term debt, which corresponded to 25% of the total, were down to 12% of the total in 1998[9]. The use of unremunerated reserves "... seems to have increased the reach for conducting the monetary policy. It meant a contribution to change the mix of inflows, towards larger maturity terms. On the other hand, it caused a drop in short-term flows, which were only partially offset by an increase in the inflow of long-term capitals"[10]. According to the International Monetary Fund (IMF), data related to the Chilean foreign debt indicate that capital controls affected the composition of capital inflows, but only when such controls were strengthened, in 1995[11]. Statistics from the Bank for International Settlements (BIS) on bank credit of 17 rich countries channeled to emerging countries show that short-term loans to Chile "... substantially exceed those related in Chilean sources and suggest the existence of a large volume of loans in foreign currency issued by Chilean branches of foreign banks, pending import credits (both types of loans are not included in official data of foreign short-term debt) or significant omission of foreign liabilities". According to BIS data, loans maturing up to one year represented 49% of total loans in foreign currency, while, considering the Chilean sources, such component meant just 11% of total foreign debt[12].

During the nineties, Chile was less exposed to financial volatility than other emerging economies. The main economic indicators show intense growth of product, low inflation and controlled fiscal deficit. However, it is difficult to assess whether this results from a policy of restrictions on inflow of short-term capitals or it is a consequence

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7/ ARIYOSHI, A. et al. (1999, p. 74 to 76) exhibits a summary of quantitative studies on the effect of mandatory reserves made by Eyzaguirre and Schmidt-Hebbel (1997), Herrera and Valdés (1999), Valdés-Prieto and Soto (1998), Soto (1997), Edwards (1998) and Laurens and Cardoso (1998), compiled by Nadal-De Simone e Sorsa (1999).

8/ ARIYOSHI, A. et al. (1999), p. 76.

9/ Idem, p. 75.

10/ DAILAMI, M. (1999). This assessment coincided with that of FFRENCH-DAVIS, R. and UTHOFF, A. (1994), p. 9.

11/ IMF (1998), p. 177.

12/ Idem.

of a favorable situation of the Chilean economy, which exhibited sound macroeconomic foundations and solid prudential structure. Jadresic and Zahler, in a recent study, reached a conclusion that the fast Chilean economic growth in the nineties was an effect of the use of adequate economic policies and the democratization process, but the work fails to include any reference to the application of capital controls[13].

13/ JADRESIC, E. and ZAHLER, R. (2000).

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