

CHAPTER 7

Debt-Equity Swaps in Chile

In 1985, the Chilean government set up a program to convert its high foreign debt into Chilean assets. In 1985, the external debt was equivalent to 1.3 times GDP, involving a financial service amounting to net transfers to bank creditors of 5 percent of GDP, much higher than the average for Latin America. The swaps program aimed to reduce the debt volume and its service and as a consequence to resume full access to voluntary lending.

The program was actively supported by the Chilean government and enthusiastically praised by creditors (Central Bank 1988). The latter pointed to the scheme prevailing in Chile as a model for debtor nations. In other circles, however, the official scheme gave rise to various criticisms.

This chapter briefly describes the main features of the more significant forms of debt conversion implemented in Chile and examines the volume and origin of the promissory note transactions recorded. The main effects of the debt-equity swaps are then reviewed, analyzing the costs and benefits involved for Chile. The chapter closes with some conclusions.

Debt-Swap Programs

Proposals for debt conversion have been around for a long time in the academic and applied literature. As a matter of history, in the 1930s many Latin American countries resorted to a form of conversion based on repurchase of their own foreign debt bonds at substantially reduced prices (ECLAC 1965). Chile, for instance, redeemed almost one-third of its debt between 1935 and 1939 at an average discount of 89 percent (Sanfuentes 1987, 29). The present value of all payments (principal and interest), after default had taken place, as a share of principal outstanding

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at default, was estimated at 31 percent (Jorgensen and Sachs 1988, table 1), a discount of 69 percent.

In the course of the 1980s crisis, such proposals were renewed and several countries conducted conversions, either in the framework of official programs or as isolated operations.¹ There was a rapid rise in the volume of swaps. This was encouraged by high discounts of debt notes in international markets. In fact, the average discount rose from 38 percent in 1986 to 66 percent in 1989 (see table 7.1).

The Chilean program was one of the earlier formal schemes and—given the size of the Chilean economy—was relatively the most significant (see table 7.2).² The official scheme was composed of two main elements, one associated with foreign investment and the subject of this chapter. Properly speaking, it was a debt-equity swap program (under Chapter XIX of the Compendium of Rules for International Exchange in Chile). It was available to residents abroad and designed to convert medium- and long-term debt owed by Chilean residents to foreign banks. The latter could use their notes representing loans directly or sell them at a discount to other investors in the international secondary market. The investor then exchanged the debt paper for the debtor's equity capital or with other debtors for cash or notes in Chilean currency. The latter could be sold in the domestic secondary market and then used for equity investment or to purchase productive assets.

When the Central Bank was the debtor involved, it paid with long-term debt notes in Chilean pesos. Hence, it avoided increasing the supply of money. However, it obviously increased the demand for funds on the domestic secondary capital market. This market absorbed the pressure well, both because of its fast growth at this stage of development and because of the emerging surplus in the fiscal budget, leaving space for the additional supply of peso notes from the Central Bank and other debtors. The investor was entitled to buy foreign exchange at the official rate, in order to remit (accumulated and current) dividends abroad after the fourth year following the investment and to repatriate capital after the tenth year.

To promote the dealings of minor investors, the operation of mutual funds by foreigners in Chile under Chapter XIX or Decree 600, which is the legal framework that regulates foreign direct investment (FDI) in Chile, was approved in 1987. These funds were invested in stocks or fixed income assets (which are not really *direct*).

The other formal component of the scheme was not associated with

1. Accounts of programs in the 1980s are found in Bouzas and Ffrench-Davis 1990; and Morgan Guaranty Trust 1987.

2. Studies of the Chilean case are presented in Central Bank of Chile 1988; Elórtgui 1988; Fontaine 1988; and Larraín and Velasco 1990.

FDI. Its aim was to reduce foreign debt (via Chapter XVIII), without subsequent access to the official foreign exchange market for remitting profits or capital. The Central Bank periodically auctioned to residents of Chile the right to purchase debt notes abroad. The auction enabled the bank to capture in 1985–89 around 30 percent of the discount of the Chilean debt notes, the remaining 70 percent being captured by other domestic agents. The purchase of debt paper was paid for with foreign currency obtained in the “informal” domestic market, capital that had previously “fled” abroad, or “laundered” money from other foreign sources.

TABLE 7.1. Market Price of Foreign Debt Notes, by Debtor Country, 1986–91 (face value = 100, annual averages)

Country	1986	1987	1988	1989	1990	1991
Argentina	64	48	24	16	15	27
Brazil	74	53	47	30	25	29
Chile	66	62	58	60	67	84
Colombia	81	79	63	59	62	73
Ecuador	65	44	23	13	17	21
Mexico	58	53	48	39	43	53
Peru	20	11	5	4	5	7
Venezuela	75	64	50	37	44	60
Average LDC ^a	62	52	43	34	33	41

Sources: Estimates based on Merrill Lynch International Bank and Central Bank of Chile for 1986–88 and Salomon Brothers for 1989–91.

Note: Averages of monthly observations of buyer prices. The buyer-seller differential was 0.5 to 2 points.

^aAverage of buyer-seller prices for 26 developing countries, weighed by their outstanding bank debt.

TABLE 7.2. Bank Debt Swaps and Total Outstanding Debt, in Selected Debtor Countries, 1989

Country	Amount Converted until 1989 (U.S.\$ millions) (1)	Share of 1985 Total Debt (%) (2)	Total Debt in 1989 (U.S.\$ millions) (3)	Debt/GNP Ratio in 1989 (4)
Argentina	2.5	4.9	65.3	92.9
Bolivia	0.8	16.5	3.6	85.8
Brazil	10.1	9.7	115.9	26.6
Chile	9.0	44.2	18.0	68.8
Mexico	18.3	10.2	28.7	68.3
Philippines	1.4	9.5	93.8	46.9

Sources: Based on World Bank, *World Debt Tables*, various issues.

Other major debt swaps corresponded to loans previously associated with FDI, direct buybacks by the Central Bank, and miscellaneous buybacks, discounts, and debt forgiveness for debtors with financial difficulties. There was broad heterogeneity in the national welfare implications of the diverse swap mechanisms.

Up to December 1989, notes for about 45 percent of the disbursed outstanding debt, amounting to U.S.\$20 billion when the program was launched in 1985, had been transacted (see table 7.3). Notwithstanding the U.S.\$9 billion (at face value) swapped, total debt was reduced by a much smaller amount: roughly U.S.\$2.5 billion, with the drop concentrated in 1988–89. This was the result of new net loans added to the debt stock (see chap. 6), despite the overall negative transfers (new loans and less debt service) from private creditors.³ In particular, there was a significant increase in liabilities with multilateral creditors (the IDB, IMF, and World Bank).

As a result, a major change took place in debt composition, with a substantial rise in the share of official creditors and a significant drop in liabilities with creditor banks. As it will be discussed later, one-third of these so-called operations of reduction implied only a shift in the form of external liabilities (with a corresponding discount), not their elimination. Thus, the total and capitalized debt in Chile was still comparatively high at 75 percent of GDP in 1989. Moreover, its absolute amount was similar to that of 1985 (table 6.1, col. 8).

Effects of Debt-Equity Swaps

Debt-equity swaps involve a change in the composition of debtor countries' net external accounts; interest payments are replaced with profit remittances and principal repayments by depreciation reserves and potential divestment. Thus, part of the external imbalance moves from "debt accounts" to "FDI accounts" in the balance of payments.

A total U.S.\$3.4 billion (equivalent to about 15 percent of annual GDP) was converted under Chapter XIX (U.S.\$3.16 billion) and as direct equity conversion arising from loans originally associated with foreign investment under Decree 600 (U.S.\$280 million). Operations were approved on a case-by-case basis by the Central Bank, with no commission involved. This did not allow the Central Bank to recover a significant portion of the huge costs incurred in the rescue of private

3. The devaluation of the U.S. dollar in 1985–87 contributed to an increase in the dollar value of debt in other currencies, a trend that was reversed in 1988.

TABLE 7.3. Debt Swaps Classified According to Debtor and Channel: Chile, 1985-89 (in U.S.\$ millions)

Debtor	Chapter XIX ^a	Capitalized D.L. 600	Chapter XVIII	Portfolio Swaps	Other ^b	Total
I. Public sector	1,308	—	852	70	1,323	3,553
1. Central Bank	925	—	485	27	876	2,313
2. Banco del Estado	281	—	192	5	—	478
3. Public enterprises	102	—	176	38	448	763
II. Private Sector	1,853	276	1,689	85	1,532	5,435
1. Financial	1,852	153	1,600	78	75	3,758
(a) With public guarantee	1,830	2	1,522	78	—	3,433
(b) Without public guarantee	22	151	77	—	75	325
2. Nonfinancial	1	123	89	7	1,457	1,677
III. Total	3,161	276	2,541	156	2,855	8,988

Source: Central Bank of Chile, *Boletín Mensual* (January 1990). Figures refer to operations already materialized.

^aIncludes U.S.\$91 million operated through investment funds.

^bIncludes U.S.\$440 million that correspond to two auctions made by the Central Bank; U.S.\$357 million that correspond to support for fruit traders affected by the sabotage in the United States of Chilean grape exports; and U.S.\$506 million in prepayments in pesos according to the restructuring agreement of the external debt.

debtors. A liberal attitude generally prevailed for authorizing swaps, except in the case of large copper-mining operations and other projects likely to receive contributions in foreign currency.⁴ Nonetheless, as will be shown, the value of net cash FDI was low until 1989, which suggests that in practice there was some crowding out by investment financed with notes. In fact, a study by the World Bank revealed that there was substitution in the case of nonbank investors (Bergsman and Edisis 1988). I shall return to this later.

Direct Investment and Debt Response during the Cycle

It has been repeatedly contended that debt-equity conversion improves the country's defense against the dangers of economic cycles. It is worthwhile to examine whether or when this statement is valid. It is useful to distinguish between the capital stock, its flow, and the return on investment.

Undoubtedly, FDI shows a different behavior than do short-term flows. It is led by agents with long horizons of optimization, which

4. See Fontaine 1988. In 1989, a step in the opposite direction was taken, allowing operations in the copper mining industry.

implies that FDI determinants respond to variables linked more closely with medium- and long-term fundamentals. Therefore, FDI flows tend to continue in times of recession or crisis while short-term flows tend to do the reverse, mainly for expectations of devaluation. With regard to the outstanding stocks, FDI principally consists of highly irreversible fixed assets, while short-term flows, such as financial credits and stock market investments, are very liquid.⁵ Consequently, it is common to observe a falling stock of short-term liabilities in critical situations; that is, a sudden stop and reversal of flows.

When we deal with long-term credits, the difference with FDI diminishes, particularly in the case of credits associated with FDI and long, fixed maturity terms. Also, suppliers' credits for equipment tend to have a stable supply. It is the demand for them, however, that tends to be weakened by the fall in domestic investment during a crisis.

On the other hand, it is claimed that swapping debt for capital has a stabilizing or countercyclical effect because profits are more sensitive to the economic cycle, tending to fall in periods of recession and vice versa. On the contrary, interest rates tend to rise during a recession. Assuming that the decision to borrow or accept FDI was made under "normal" conditions, under unchanged contracts, the debt-equity swap would imply a countercyclical change in capital service during the different stages of the economic cycles in the host country.

Several qualifications can be made to this simple case. One of these reinforces the conclusion in favor of debt capitalization. Several work in the opposite direction.

Capitalization of Self-Loans in Transnational Companies (TNCs)

The case of FDI capitalization of debt with the parent firm is clear-cut. Since it is an exchange of foreign assets within the same firm, the total gross return to capital would tend to remain unaffected. What formerly was distributed as interest payments becomes profits after capitalization. If the same taxes apply to both forms of return on capital, there is no effect on the net capital service for the debtor country. If, for instance, only profits were taxed, the net capital service would be reduced, improving the position of the debtor country. The situation in Chile, with taxation much higher on profits than on interest, comes very close to this case. This helps to explain the scarce conversion of credits associated with FDI.

5. In order not to be misled, it is important to control the statistics of FDI for "reinvested profits." These are partly in financial investments; thus, they are not necessarily irreversible and tend to be withdrawn at critical junctures.

Why do creditors capitalize some debt in this case? One reason is that the risk of suffering the rescheduling of capital and interest payments is larger than in the case of "risk capital." This was actually the case in debtor nations in the 1980s. As a matter of fact, there was a restructuring of the debt service, while arrears were common in many countries. Risk capital was hardly risky in this respect.

Variable Share of Profit Remittances

Indeed, not all profits are remitted instantaneously, as they are generated. Investors usually remit abroad a variable proportion of annual profits. Available evidence suggests that the share of total profits that is remitted is procyclical. This, in fact, happened in Latin America in the 1980s: the share of FDI profits that was reinvested in Latin America fell steeply.

The more accessible data for Latin America, which refer to FDI originating from U.S. companies, show that after the 1981–82 shocks FDI profits dropped considerably but remittances increased slightly in current dollars. Thus, the remittance rate (remittances as a percentage of net earnings) rose from 46 percent in 1980–81 to 88 percent in 1984–86.⁶ Thus, FDI tended to enjoy more flexibility than the loan's creditor to withdraw remittable profits and reserves for depreciation during the debt crisis.

For short-run macroeconomic stability, it is the net availability of foreign currency that matters. Thus, another important item is the net flow of FDI; in recessions or under otherwise critical conditions, this flow also tends to be procyclical. Actually, during the debt crisis net FDI dropped sharply in Latin America, but the net flow always remained positive.

The same procyclical behavior was exhibited by FDI in Chile (table 7.4). Net FDI experienced a sharp drop from a yearly average of U.S.\$332 million in 1980–82 to U.S.\$84 million in 1983–86. Additionally, a substantial change can be observed in net transfers between Chile and foreign investors, from a positive figure close to U.S.\$217 million per annum in 1980–82 to a negative level of U.S.\$32 million in 1983–86. But undoubtedly this behavior was much more favorable than that of creditor banks and short-term flows (see table 6.3). Subsequently, there

6. These figures are based on the U.S. Department of Commerce's *Survey of Current Business*. In the period 1980–81, annual remittances averaged U.S.\$1.68 billion; they were U.S.\$1.92 billion in 1983–86. In 1983, remittances were larger than profits; thus there was a divestment of the undistributed earnings of previous years. As FDI lost relative importance as a result of the accelerated increase of bank debt in the 1970s, the figures involved became small in comparison with interest payments, which amounted to U.S.\$30 billion annually.

TABLE 7.4. Capital Flows, Profits, and Net Transfers from FDI, 1974–89
(U.S.\$ millions)

	Foreign Direct Investment ^a (1)	Profit Remittances ^b (2)	Net Transfers (1) – (2) (3)
1974	-16.7	8.9	-25.6
1975	-4.2	7.5	-11.7
1976	-1.2	5.3	-6.5
1977	21.4	23.9	-2.5
1978	181.1	35.3	145.8
1979	244.5	41.1	203.4
1980	213.2	85.7	127.5
1981	383.0	126.0	257.0
1982	400.8	134.0	266.8
1983	131.8	90.7	41.1
1984	71.8	116.8	-45.0
1985	72.1	129.2	-57.1
1986	60.3	126.2	-65.9
1987	105.0	151.8	-46.8
1988	124.2	206.5	-82.3
1989	269.2	261.3	7.9

Source: Central Bank of Chile, *Balanza de Pagos*, various issues.

Note: Figures differ notoriously from those of the Foreign Investment Committee owing to different definitions.

^aColumn 1, net investment. Excludes investment financed with debt-equity swaps and loans.

^bColumn 2, profit remittances after taxes.

was some recovery of net FDI, but profit remittances grew notably faster, as shown in table 7.4.⁷

Old Debt Is Riskier for the Supplier than “Risk Capital”

Under “normal” circumstances, the present value of profit flows tends to exceed that of interest flows if both are calculated with the same pure interest rate; the difference would be associated with the larger risk taken by “risk capital.” Under the abnormal circumstances following 1982, however, it seems likely that captive bank credit was more risky for creditors than typical FDI.

Creditors recognized that the hopes for normalization of relations with the debtor countries were unrealistic.⁸ The prevailing perception

7. In the 1980s, the Central Bank only recorded distributed profits, disregarding undistributed profits. Notice that a sizable portion of investment by TNCs was financed with loans from parent or other sources. These are not included in the FDI figures. They were included in the foreign debt of Chile, although they were excluded from debt renegotiations.

8. The radical changes in market sentiment took place in the early 1990s, though predominantly with nonbank creditors. See Ffrench-Davis 2000, chap. 5.

was that bank debt was facing a high probability of one of two alternatives. The first was the long-term rescheduling of outstanding debt, with interest capping or "involuntary" financing of interest payments. The other was the "involuntary swapping" of old for new debt with a discount in favor of debtors. The discount could be related to the market discounts, which in 1989 averaged 66 percent for LDCs' debt notes. On the other hand, it appears to be more troublesome for the debtor nation (or less "worthy" since FDI was much smaller than debt) to modify the rules that apply to FDI remittances. In fact, debt service was "subordinated" to the service of FDI.

Consequently, leaving aside the capital gain implied by the note discount captured by the investor, it is likely that in order to reach an "indifference point" the expected rate of profit should be lower than the interest rate. The evidence suggests that the opposite was the case in debt-equity swaps. The domestic stock of productive capital was offered at prices punished by the recession and at additional discounts for investors under Chapter XIX. Therefore, for investors it turned out to be more profitable to operate through this channel than through direct credits.

Table 7.5 shows that Chilean debtors captured, through Chapter XIX, roughly only twelve percentage points of the 39.5 percent average discount on the international secondary market in 1985-89. If market trends are taken into account, a growing discount, and the mounting proposals by international authorities to give way to some form of replacement of old debt for discounted new debt, the twelve percentage points of discount captured by Chile seem to be a remarkable underestimate of potential discounts in the period under study. In fact, the Central Bank received a discount between 42 and 50 percent in two buyback payment operations in 1988 and 1989.

TABLE 7.5. Debt-Equity Swaps: Volume and Prices, 1985-89

	1985	1986	1987	1988	1989	Total
I. Debt-equity swaps (U.S.\$ billions)						
1. At face value	32.3	213.5	707.3	885.9	1,321.8	3,160.8
2. At international prices	21.3	143.6	436.0	515.7	796.4	1,913.0
3. At redenominating prices in Chile	30.0	198.9	659.3	791.3	1,105.1	2,784.8
II. Prices (% of face value)						
1. International secondary market (I.2/I.1)	65.9	67.3	61.6	58.2	60.2	60.5
2. Redenomination in Chile (I.3/I.1)	93.0	93.2	93.2	89.3	83.6	88.1

Sources: I.1 are the Chapter XIX swaps recorded by the Central Bank from June 1985 to December 1989. I.2 was calculated with monthly figures of volume of swaps and prices in the international secondary market. I.3 is based on monthly estimates of redenomination in the domestic market.

If the real rate of return for the investor after taxes of equity swapped happened to exceed 7 percent (for a redenominated value of 88 percent), this would have implied that equity capital servicing for Chile was to become larger than real interest payments saved at prevailing high rates (10 percent nominal and 6 percent real, including spreads). Evidence suggests that profits doubled that benchmark. Later on, however, we will refer to the positive implications of the chronological sequence.

The Pricing of Swapped Equity

A third effect operating in the same direction—in favor of the foreign investor converting debt into equity capital in the debtor country—is that in periods of recession the price of domestic productive assets declines; stock prices in fact tend to be very procyclical. Table 7.6 shows the strong real fluctuations of the stock price index (in pesos) in the Santiago Stock Exchange in the 1980s.⁹ These fluctuations become more intensive when the index is expressed in its U.S. dollar equivalent (which allows us to cross it with equity swap figures). Adjustment by the real exchange rate shows a notably depressed index apart from its instability. Between the second half of 1980 and 1985, for instance, real prices in pesos dropped by 64 percent. If the recession involves an exchange rate devaluation as an adjustment mechanism, in the face of an external shock, this trend is enhanced when stock market prices are expressed in U.S. dollars, showing an even larger real price drop of 77 percent. Therefore, when debt-equity swaps were initiated in 1985 the space for recovery was enormous. In fact, until 1989 the real index in U.S. dollars recovered by 187 percent. If these prices are used as a reference for an evaluation of FDI, which was concentrated in the purchase of existing local enterprises, the differential between the expected present value of profit rates and the interest rate, which is negative for the host country, will jump.

A strong increase in stock market prices in 1989 involved a substantial capital gain for “early” investors and a smaller one for “late” investors. This rise in prices was partly stimulated by the overheating of the Chilean economy (see chap. 6) but also by the intensity of debt-equity swaps, including the initiation of “foreign investment funds.” Nevertheless, in 1989 it was still possible to buy 38 percent more shares with a real U.S. dollar than in 1980.

Devaluation is the best switching mechanism in an adjustment program facing external restrictions. Naturally, this also implies that the country’s assets in U.S. dollars become cheaper for foreign buyers. This

9. I am aware of the problems of making comparisons of the index over time. Aside from the dividends policy and new stock issues, the Chilean economy did suffer dramatic changes of firm ownership, firm boundaries, and asset and liability structures.

means that, hypothetically, many debtor countries could be "bought up" easily by their creditors. A significant share of debt-equity conversions was associated with privatization of public enterprises or firms temporarily under government administration as a result of the economic crisis of 1982. Consistent with the government's desire to privatize as quickly as possible, with either local or foreign buyers, the rates of return on converted capital were considerably higher than interest rates.

The creditor banks, which made some of the largest transactions directly and held 40 percent of the gross capitalization, thus converted "bad" (risky) loans into "good" equity capital (Dornbusch 1988). Increasingly, nonbank firms became involved, too. After acquiring debt notes in the international secondary market, they also acquired existing local private companies and initiated some new ventures.

TABLE 7.6. Indexes of Stock Prices in Pesos and Converted to U.S. Dollars of 1980 (1980 = 100)

		Real Exchange Rate ^a (1)	Stock Price Index		
			In Pesos, Nominal (2)	In Pesos, Real ^b (3)	Converted to U.S.\$, Real ^c (4)
1980	I	104.2	87.5	93.1	89.4
	II	95.8	112.5	105.6	110.2
1981	I	87.2	102.9	88.0	100.9
	II	82.4	87.2	71.3	86.6
1982	I	81.4	79.9	64.4	79.2
	II	111.5	78.3	56.5	50.7
1983	I	120.8	65.3	41.5	34.4
	II	116.1	63.0	35.6	30.7
1984	I	119.6	78.7	41.5	34.7
	II	127.0	77.4	36.8	29.0
1985	I	140.4	87.3	35.1	25.0
	II	161.9	113.1	40.9	25.3
1986	I	164.7	164.0	54.1	32.8
	II	168.1	229.1	70.6	42.0
1987	I	170.9	318.7	89.2	52.2
	II	176.2	394.8	100.4	57.0
1988	I	186.5	407.8	97.2	52.1
	II	183.5	461.9	104.5	56.9
1989	I	176.0	629.7	131.5	74.7
	II	185.0	686.3	129.2	69.8

Sources: Based on data from the Central Bank of Chile and the Santiago Stock Exchange, average per semester of monthly figures.

^aNominal rate deflated by the CPI and inflated by the index of external prices faced by Chile.

^bGeneral stock price index deflated by the CPI.

^cEquivalent to (3) \times 100/(1).

The Multiple Preferential Exchange Rate: An Implicit Subsidy for Foreign Investors

Given the discounts in the international secondary market, there was an inherent economic rent to be distributed among agents participating in swaps. Potentially, the discount could have been captured by debtor nations. It would have been a counterpart of or compensation for the sizable costs involved in the adjustment process since the early 1980s.

Chapter XIX implied a considerable capital gain or implicit subsidy to creditors or investors operating with debt notes. As a consequence, the note discount tended to crowd out foreign investment in cash for investment with notes. The first four and a half years during which Chapter XIX had been in force, the foreign debt notes were recognized in Chile at an average of 88 percent of their face value. The discount, therefore, was captured to a substantial extent by the foreign investor. In fact, only between one-fifth and one-third of the market discount went to the Central Bank or other debtors (table 7.5), with an average of 30 percent (i.e., twelve of thirty-nine percentage points). The remaining 70 percent was captured by creditors or foreign investors. This economic rent, which was distributed without an auctioning process or any other transparent allocation mechanism, amounted to U.S.\$870 million (table 7.5, lines I.2 and I.3).

The same result, observed from the foreign exchange market standpoint, implies that the investor swapping debt notes under Chapter XIX benefited from the equivalent of an exchange rate substantially higher than the official, and even the "informal," market rate (Gemines 1987). On average, for the whole period the seller of the notes received, on a peso basis, 88 percent of the face value.¹⁰ Since notes had been acquired at 60.5 percent of the face value, the peso amount received per U.S. dollar spent was 46 percent higher than the official rate. Why was there a preferential exchange rate for foreign investment that arrived in notes?¹¹

10. Initially, the notes delivered by the Central Bank were quoted at approximately 93 percent. Commercial bank notes were priced between 92 and 98 percent (Gemines 1987, 22). The domestic secondary market discount was associated with the interest rate that the Central Bank paid on its notes, which initially was 0.5 percent less than the market rate (90 to 365 days maturity). The Central Bank modified the discount on several occasions according to the market rate. On demand by operators, the bank also issued notes in U.S. dollars.

11. The Pinochet government contended that "the present provisions allow the domestic debtor to capture the corresponding portion of the benefit" for the country. As a share of 70 percent of the benefits in favor of the creditor bank or investor was difficult to justify as an appropriate distribution, it was then pointed out that the investor resigned the state guarantee offered under Decree 600 and became submitted to restrictions not applicable to nationals, which—in the government view—allowed the conclusion that "the

Of course, an implicit exchange rate differential of 46 percent had significant distributive and allocative implications. It should be recalled that later, upon the withdrawal of capital and profits, investors would be entitled to the official exchange rate.

Justifiably, some representatives of the Chilean entrepreneurs complained about this notorious discrimination against domestic investors in areas in which their activities competed with foreign investors benefiting from financing with foreign debt notes at a significantly preferential implicit exchange rate.

The Net Flow of Actual Foreign Investment

The issue of the crowding out of FDI with fresh money is more difficult to tackle. How much FDI would have occurred in the absence of debt-equity swaps? There are direct and indirect effects and a variety of chronological sequencings.

One sort of information, obviously incomplete, is the data on FDI flows. The total recorded flow (of investment in cash plus that financed with notes) grew notably after Chapter XIX went into effect. However, an overwhelming share was covered by debt-equity swaps. In fact, the net FDI financed in cash was *still* significantly lower in 1989 than levels reached in the early 1980s.

Obviously, the option of financing investment with debt notes transacted at a substantial discount in international markets and then redeemed in Chile at close to face value tends to be more profitable for the foreign investor than cash direct investment in Chile. Net cash FDI averaged U.S.\$97 million per year in 1986–88, down from U.S.\$332 million in 1980–82 (see table 7.4) and substantially below the official estimate of U.S.\$315 million per year that had been projected in mid-1985 for 1986–88 (Ministry of Finance 1985).

Net FDI recovered in 1989, reaching U.S.\$270 million; a significant new component, with U.S.\$87 million corresponding to investment funds that were authorized to operate in the stock market at a reduced tax rate on profit remittances (a distortion that rewarded “financial” investment instead of the creation of productive capacity).

The gap between projections and the actual results was partly the result of a possible overestimation of the flow of FDI in government projections and of the negative effects of other variables influencing FDI behavior, but it could also reflect cash investments that were crowded out by debt notes.

operation is balanced.” See the statement of Minister of Finance Hernán Büchi in *El Mercurio*, December 10, 1987. The huge amount swapped in 1987–88 and the low FDI, in cash, suggest that this statement was mistaken.

In some cases, the implicit subsidy was undoubtedly the determining factor in the investment decision. In other cases, the existence of the implicit subsidy was an incentive for any foreign investor to change the form of the financial investment it had intended to make in any event. Instead of financing it with fresh money, which would be subject to the official exchange rate, the investor naturally preferred to cover it with notes bought at a discount. Given the fact that operations under Chapter XIX were launched simultaneously with privatization of Chilean enterprises, under weak local acquisition capacity and a depreciated exchange rate, the price of the companies turned out to be low for foreign investors and expected profitability was high.

The tendency to crowd out cash investment could have been counterbalanced by provisions requiring a specific contribution in cash for every conversion of notes. In Chile, some important operations comprised both forms of foreign investment. This is one way to encourage cash contributions, conditioning to them the transferring of part of the implicit subsidy or preferential exchange rate (see Bouzas and Ffrench-Davis 1990).

There is a second piece of information, at the microeconomic level, which is drawn from a survey conducted by the International Finance Corporation (IFC) (Bergsman and Edisis 1988) among swap investors in Argentina, Brazil, Chile, and Mexico. The data presented here are aggregated for the four countries but differentiate between bank and nonbank investors. In the case of the former, the survey reveals that none of the investments made by banks would have occurred without a swap program (8), that is, what is denominated 100 percent "additionality." In the case of nonbanks, 33 percent of the transactions studied were additional and 10 percent were partly additional; consequently, more than half were not. The latter reveals a significant degree of crowding out of FDI in cash.

What would 100 percent additionality imply? Frequently, there is a misunderstanding about the contribution of swaps to the financing of capital formation. If there is zero crowding out (100 percent additionality), this implies that there are no net capital inflows resulting from the swaps: cash FDI remains constant, and debt-equity swaps do not contribute fresh funds. Additionality below 100 percent implies a negative net capital inflow for the debtor country.

Hence, swaps by themselves reduce debt but do not provide net financing in the capital account. The standard literature mistakenly tends to associate the volume of swaps with additional capital inflows that contribute to increasing net domestic investment (see several essays in Central Bank 1988).

If there is a debt-equity swap over an already existing domestic firm, there is no direct effect on overall domestic investment. It is only a transfer of productive assets. If the swap is used to create new produc-

tive capacity directly, *ceteris paribus* there is a rise in capital formation. However, this is in fact not financed by net capital inflows but by the domestic capital market — as, for instance, with the proceeds received by the investor that sells, in the domestic secondary market, the peso notes delivered by the Central Bank. The sale of these notes tends to put upward pressure on interest rates and crowd out domestic investment. To save space, we will not examine all the other effects that are set in motion. What matters here is that swaps do not directly provide foreign financing, and in many cases they are limited to the purchase of existing assets. But they could contribute to changing the mood of the market.

Other Effects

Direct effects on the balance of payments are extremely important in a debt crisis, but there are other major effects as well. A few of these are outlined here.

One of the most significant is the relation between FDI and national productive development and the ability to sustain an autonomous national economic policy. Can FDI be reconciled with national development and a national policy? Of course it can be reconciled, and it may even be a significant complement. FDI can contribute financing, technology, and improved market access for exports.

The last argument is more valid when, instead of denationalization of existing firms, the FDI principally contributes to an increase of productive capacity along with vigorous investment by local firms. What happened to domestic investment *pari passu* with debt-equity swaps? The gross investment ratio in 1987–89 was consistent with around a 4 percent growth of productive capacity (chap. 1; Marfán 1992, table 5). We will consider two alternative interpretations for the increase in the investment ratio from 14.8 percent in 1985 to 17.4 percent of GDP in 1987–89 (all figures in 1977 prices).

An extremely conservative interpretation assumes that the capital formation ratio in 1985 reflected a stable trend value.¹² Obviously, the assumption that a capital formation ratio of 14.8 percent was a stable value is hard to justify. This rate was only capable of supporting a capacity growth of 2.5 percent per annum (see chap. 1). Therefore, the investment ratio in 1985 was notably lower than that of the 1960s, when growth and investment rates of 4.6 and 20.2 percent, respectively, were recorded.

Given the exposed background information together with the information that FDI also rose under Decree 600, it is easy to deduce that

12. Agosin 1998 empirically tests the behavior of the investment ratio for Chile. The macroeconomic atmosphere and the right alignment of macroprices are determinants of investment performance. All were recessive outliers in 1985. See also Servén and Solimano 1993.

gross investment in fixed capital under the control of local investors (less assets transferred to foreigners) diminished between 1985 and 1987–89. This reflects the massive transfer of existing firms to foreign debt swappers without sufficient creation of new capacity by national producers. It is definitely clear that in spite of a considerable quantity of conversions and the recovery of FDI overall investment continued at levels significantly below historical achievements (see chap. 1).

The verification that a high percentage of the initial operations was merely a transfer of existing assets and to producers of nontradables proves to be quite illustrative. According to Central Bank records, less than half of the amount operated prior to July 1990 corresponded to new projects or extensions. This average changed eventually with time, achieving an expansion in the production of exportables.

The transfer of assets producing nontradables implies that there is no contribution to better access to export markets and that profit remittances will not be compensated for by an increase in the foreign exchange supply. Naturally, the same would be true in the case of operations with the existing exportables if export volume did not increase considerably afterward.

At the beginning of the 1990s, the Central Bank announced a more selective policy for operations under Chapter XIX. The following investments were excluded: investment in real estate, insurance, private social security, investment funds, stock dealers, and financial services. Priority was given to the creation and expansion of firms specialized in the production of tradables (Garcés 1990). Following the resurgence of the private capital supply in the early 1990s, prices of notes increased rapidly, especially for Chilean paper. Thanks to the quality of the democratization process and macroeconomic policy, they rose above 90 percent in 1992.¹³ Thus, the official conversion mechanism had a natural end between 1990 and 1991.

Some Conclusions for Debtor Nations

It was frequently said that reducing creditors' exposure with debt-equity swaps would contribute to the resumption of voluntary lending. First, it should be understood what the assertion refers to. There was no voluntary refinancing of old debt.¹⁴ On the one hand, in the late 1980s several

13. In 1990, U.S.\$1.1 billion were reconverted, of which U.S.\$418 million corresponded to Chapter XIX, with an average price of 67 percent and a redenomination of 81 percent. This way, the economic rent captured by intermediating agents diminished from twenty-three points in 1989 to fourteen in 1990.

14. Due to herd behavior among bankers, countries with improved fundamentals continued to be negatively affected by the high exposure of the remaining debtors (Devlin

LACs enjoyed some access to the voluntary financing of profitable investment projects, as happened increasingly in Chile. How much did this depend on Chapter XIX or investment opportunities, improved macroeconomic balances after seven years of highly recessive adjustment, and the export strategy in the debtor country? It is likely that the latter three were determinant. On the other hand, the decisive role of high copper prices cannot be ignored. In 1988–89, they contributed greatly to the balance of payments, with an unexpected inflow equivalent to about 8 percent of (the 1989) GDP. Given that exceptional inflow of foreign currency, the binding external restriction in the Chilean economy disappeared.

Second, debt-equity swaps were stimulated by the discounts in the secondary debt market. Nonetheless, the discount itself discouraged the renewal of voluntary credits, for once granted their market value would fall below parity. From 1985 on, a rising volume of debt-equity swaps took place *pari passu* with a drop in note prices in secondary markets; average prices fell from 62 percent in 1986 to 34 percent in 1989 (see table 7.1). Still, in 1989 the perception that the debt problem was not being solved prevailed over the demand pressure exerted by swappers.

Third, in the case of Chapter XVIII the capital service was clearly reduced. However, under Chapter XIX the future capital service tended to increase, with a higher rise for profit remittances than the drop in interest payments.

The positive effects of the debt-equity swap were mainly concentrated in the savings of interest payments in a framework of extreme scarcity of external financing; it also contributed to a better knowledge of the national economy by foreign investors and as a variable for negotiation with creditors. At the same time, there were a variety of disadvantages and risks, as described in this chapter. This means that there were positive and negative conversions. It has been shown throughout the chapter that this diversity was present in the Chilean experience.

Debt-equity swaps could play a positive role whenever the following rules were enforced. First, the discount should be retained by the debtor country, either through negotiation or by auction. This involves a note price rather similar to the quotation in the international market, as happened in debt prepayments by the Central Bank, and not at a price substantially higher, as happened under Chapter XIX. It cannot be justified that foreign investors receive a preferential exchange rate in contrast with the remaining national and foreign investors. Second, priority should be given to increasing productive capacity, principally in exportables, in order to relieve future external restrictions.

1989). This herd effect was harmful even for countries such as Colombia, which had made moderate and efficient use of foreign capital (Bacha 1983).