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Chile: Selected Issues

This Selected Issues report on Chile was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with this member country. As such, the views expressed in this document are those of the staff team and do not necessarily reflect the views of the Government of Chile or the Executive Board of the IMF.

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INTERNATIONAL MONETARY FUND

CHILE

Selected Issues

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Chile: Basic Data

Social and demographic indicators

Area	756,626 km2
Population (1996)	14.4 million
Population density per sq. km. of agricultural land (1996)	87.2
Annual rate of population increase (1992-96 average)	1.5 percent
Income distribution: percentage of the population below poverty line (1996)	23.2 percent
Life expectancy at birth (1992)	72.2
Infant mortality rate (per thousand, 1993)	13.1
Child death rate (per thousand, 1992)	0.8
Population per physician (1992)	2,152
Population per hospital bed (1992)	318
Population with access to filtered water (1992)	87 percent
Per capita supply of calories per day (1988)	2,544
Per capita intake of protein (grams per day, 1988)	65
Primary school enrollment rate (1992)	97.3 percent
Adult literacy rate (1992)	95.1 percent
Unemployment rate (annual average, 1996)	6.4 percent

GDP (1996)	SDR 49,530 million
	Ch$29,645 million
	US$71,906 million
GDP per capita (1996)	SDR 3,428
	US$4,977

Economic indicators, 1993-97	1993	1994	1995	Prel. 1996	Proj. 1997
			(In percent)		
Origin of GDP					
Agriculture, forestry, and fishing	8.0	8.3	8.1	7.7	...
Mining and quarrying	8.2	8.0	7.9	8.3	...
Manufacturing	17.4	17.1	16.8	16.2	...
Construction	5.6	5.5	5.5	5.6	...
Commerce	17.0	17.0	17.3	17.8	...
Transport, storage, communications	7.4	7.8	8.0	8.2	...
Other	36.4	36.3	36.4	36.2	...
Ratios to nominal GDP					
Exports of goods and nonfactor services	25.8	27.7	28.7	26.0	25.6
Imports of goods and nonfactor services	28.0	26.3	26.7	27.9	27.0
Current account of the balance of payments	-4.5	-1.2	0.2	-4.1	-3.7
General government revenues	23.8	23.3	23.9	23.6	23.2
General government expenditures	21.7	21.1	19.9	20.7	20.2
Nonfinancial public sector savings	6.1	5.8	7.5	6.9	6.9
Combined public sector overall surplus or deficit 1/	0.8	1.2	3.0	1.3	1.2
External public debt (end of year)	19.8	17.5	11.1	7.2	6.3
Interest payments on external public debt	0.2	0.1	0.1	0.1	0.0
Total interest payments on external debt	2.6	2.3	2.0	1.8	1.8
Gross national savings	24.2	25.6	27.6	23.6	23.8
Gross domestic investment	28.8	26.8	27.4	27.7	27.6
Money and quasi-money (end of year)	34.8	34.9	36.5	40.1	42.3
Annual changes in selected indicators					
Real GDP per capita	4.6	2.7	6.9	5.7	4.5
Real GDP	6.3	4.2	8.5	7.2	6.0
GDP at current prices	19.1	18.8	21.8	11.0	12.9
Domestic expenditure (at current prices)	23.6	14.5	21.2	15.6	12.1
Investment	27.8	10.6	24.4	12.2	12.5
Consumption	22.0	16.0	20.1	16.9	12.0
GDP deflator	12.0	13.9	12.2	3.5	6.5
Consumer prices (annual average)	12.7	11.4	8.2	7.4	6.1

	1993	1994	1995	Prel. 1996	Proj. 1997
			(In percent)		
Consumer prices (end of period)	12.2	8.9	8.2	6.6	6.0
General government revenue	20.0	16.1	25.0	9.5	11.1
General government expenditure	23.8	15.5	15.2	15.5	10.0
General government current expenditure	19.6	14.8	15.7	13.8	9.9
Money and quasi-money	27.0	19.3	27.4	22.0	19.0
Money	20.6	20.6	23.5	10.5	19.0
Quasi-money	29.6	18.8	28.9	26.2	19.0
Net domestic assets of financial system 2/	30.8	15.1	16.7	11.5	9.9
Credit to nonfin. public sector (net)	-0.3	-1.9	-1.9	-0.1	-2.6
Credit to private sector	28.1	16.4	18.0	12.6	15.4
Interest rates (short-term annual rates): lending	24.0	20.3	18.2	17.3	...
deposit	18.0	15.1	13.6	13.5	...
Merchandise exports (f.o.b., in US$)	-8.1	26.1	39.1	-4.9	10.0
Merchandise imports (f.o.b., in US$)	10.2	6.9	34.7	12.6	7.6
Terms of Trade	-8.7	10.3	14.8	-16.6	2.4
Nominal effective exchange rate (depreciation -)	15.2	17.6	-2.4	0.4	...
Real effective exchange rate (depreciation -)	0.4	5.8	1.7	3.9	...

General government finances			(in billions of Chilean pesos)		
Revenues	4,397.0	5,102.8	6,377.5	6,982.9	7,759.7
Expenditures	3,997.2	4,615.1	5,317.9	6,143.8	6,759.3
Current expenditure	3,366.9	3,866.6	4,473.0	5,088.3	5,591.5
Current account surplus or deficit (-)	851.3	1,099.1	1,710.3	1,723.5	2,004.2
Overall surplus or deficit (-)	399.8	487.7	1,059.5	839.1	1,000.4

Balance of payments			(in millions of U.S. dollars)		
Merchandise exports (f.o.b.)	9,198.7	11,604.1	16,136.4	15,353.0	16,890.8
Merchandise imports (f.o.b.)	-10,180.8	-10,879.0	-14,655.1	-16,499.8	-17,757.8
Investment income (net)	-1,468.2	-1,743.4	-1,429.5	-2,015.9	-2,360.4
Other services and transfers (net)	373.1	379.2	146.1	244.3	255.3
Balance of current account	-2,077.2	-639.1	147.0	-2,918.4	-2,972.1
Long-term capital (net)	1,707.8	3,222.0	1,002.9	4,797.5	7,154.9
Other capital (net)	1,015.3	1,351.4	307.3	218.7	-1,207.8
Errors and omissions	-70.4	-740.0	-396.4	-917.2	234.0
Valuation adjustment	136.4	473.6	286.8	-506.3	-737.7
Change in net official reserves (increase -)	-711.9	-3,667.9	-1,347.6	-674.3	-2,471.3

International reserve position 3/			(in millions of U.S. dollars, end of period)		
Central Bank (gross)	9,704.1	13,183.6	14,240.8	14,915.1	17,386.4
Central Bank (net)	9,225.2	12,893.2	14,240.8	14,915.1	17,386.4
Rest of banking system (net)	-2,541.7	-2,830.8	-2,365.9	-1,815.0	-359.8
Gross reserves (months of merchandise imports)	11.4	12.6	11.7	10.8	11.7
External public debt 4/	9,019.6	9,135.4	7,500.9	5,163.2	5,039.0
Total external debt	19,184.7	21,471.9	21,736.7	22,979.2	26,292.7

IMF data (as of December 31, 1997)
Article VIII status
Intervention currency and rate   U.S.dollar at Ch$439.18 per US$1
Quota   SDR 621.7 million
Fund holdings of Chilean pesos   SDR 389.7 million
  As percent of quota   62.7
Reserve position in the Fund   SDR 232.0 million
Opertional budget transfers (net)   SDR 304.0 million
Special Drawing Rights Department
  Cumulative SDR allocation   SDR 121.9 million
  Holdings of SDRs   SDR 1.0 million

1/ Includes central bank losses.
2/ Changes as percent of liabilities to the private sector at the beginning of the period. Flows based on end-of-perio exchange rates.
3/ Gold valued at US$42.22 per ounce.
4/ Includes publicly guaranteed private debt.

I. RECENT ECONOMIC PERFORMANCE

Summary

Over the past few years Chile has continued to register strong economic growth with declining inflation, fiscal surpluses, solid external accounts and improved social conditions. The policy framework has remained largely unchanged and continues to aim at fostering sustained growth with a gradual but steady decline in inflation, and the maintenance of a manageable external current account deficit (adjusting for short-term fluctuations in the terms of trade). The authorities have continued to announce a year-end inflation target and use adjustments in short-term real interest rates to keep demand and output growth in line with that target, against the backdrop of a fiscal stance that has remained broadly neutral in terms of its fiscal stimulus to the economy. On the external front, these policies have been accompanied by the management of a fairly wide exchange rate band and a combination of regulations on capital inflows and gradual liberalization of capital outflows. A number of bilateral free-trade agreements have been signed to secure increased access to foreign markets. The authorities also have continued to advance in the area of structural reforms aimed at fostering productivity growth, while maintaining and upgrading as needed the already stringent financial system regulations.

1.   Average output growth exceeded 7 percent in 1995–97 and twelve-month inflation fell from 9 percent at end-1994 to 6 percent at end-1997 (Table 1 and Figure 1). Economic management during this period was complicated by a sharp swing in export prices (mostly copper), and—up to the last quarter of 1997—strong and rising capital inflows. After a surge in 1995, the price of copper declined by over 20 percent in 1996, recovered in early 1997, and fell sharply later in the year, contributing to pronounced fluctuations in the trade and fiscal balances. To limit the impact of these movements on demand and output growth, the monetary stance was tightened in late 1995, gradually eased beginning in early 1997, and tightened again in the latter part of 1997 and in early 1998. Capital inflows slowed in 1995 in the aftermath of the Mexican crisis, but grew markedly in 1996, and further in the first three quarters of 1997. Against this backdrop, the authorities revalued the midpoint of the exchange rate band in early 1997 and fine-tuned regulations on capital inflows in the course of 1996 and 1997, as discussed below.

2.   Both the fiscal and the external positions weakened somewhat in 1996–97 as a result of the above-mentioned movements in copper prices; however, the nonfinancial public sector still posted an average surplus of about 2 percent of GDP, while the external current account deficit was around 4 percent of GDP. On the strength of the large capital inflows just mentioned, the peso appreciated by close to 21 percent in real effective terms from end-1994 to November 1997 (Figure 2), and official reserves rose sharply to US$17.4 billion (about ten months of imports of goods and nonfactor services) by end-1997. In late 1997, the currency came under some pressure as the crisis in Asia intensified, leading to a nominal depreciation of the peso against the U.S. dollar of some 7 percent from mid-October to end-December 1997 and a further weakening in the first few weeks of 1998, despite central bank intervention.

A. Output and Prices

3.   The tightening of credit policy initiated in late 1995 achieved the desired result of slowing the pace of domestic demand and economic activity in 1996 and early 1997 and moderating price pressures. The authorities subsequently eased credit conditions in the course of 1997, as noted earlier, and by the third quarter of the year **output growth** had rebounded to an annual rate of 8 percent and domestic demand was growing even faster. Domestic investment, which had led growth in 1995, remained unchanged in the next two years at 27½ percent of GDP, and the driving force for activity shifted to exports as a result of further gains in market share for noncopper products and a sizable increase in copper production. The savings ratio fluctuated in response to terms-of-trade swings and stabilized at about 23½ percent of GDP in 1996–97 after a strong rise in the preceding two years.

4.   From the standpoint of domestic activities, the adverse effects of natural disasters[1] on the tradables sector—especially farming and fishing—were more than offset by a rapid increase in mining output stemming from the opening of new copper mines and stepped-up investment in gold, silver, and iron projects. The leading activities in the nontradables sector were transport and commerce, while power generation was hampered by the droughts just mentioned (Table 2).

5.   The growth of **employment** has slowed markedly since 1994, to an average of 1.7 percent in 1996–97, but a concurrent slowing in the expansion of the labor force helped keep the unemployment rate at around 5.5–7.5 percent, with year-to-year fluctuations closely following the variations in the pace of domestic activity (Statistical Appendix Table 8). The slowdown in employment appears to be related in part to an increase in the capital intensity of manufacturing as a result of the real appreciation of the currency and higher labor costs in U.S. dollars. The growth of real wages (deflated by the CPI), which had been rapid in 1995 accompanying the rapid expansion of domestic activity, slowed to around 2½ percent by late 1997—more in line with the pace of productivity gains (see Table 1).

6.   **Inflation** was brought down gradually from 20–30 percent in the early 1980s to less than 9 percent by end-December 1994 on the strength of prudent financial policies and the opening of the economy. Notwithstanding the real appreciation of the peso, the task of disinflation was somewhat complicated in more recent years by a number of supply shocks (mostly weather related) that contributed to temporary but significant hikes in food and energy prices, given the pervasiveness of indexation (see below). Nonetheless, consumer price inflation declined to 6.6 percent at end-1996 and 6 percent at end-1997, closely in line with the authorities' targets. Core inflation—excluding from the CPI the 11 most volatile food items—declined from 9½ percent at end-1994 to 5.4 percent at end-1997 (see Table 1, Statistical Appendix Table 10, and Figure 1).

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[1]Droughts in 1996 and early 1997 were followed by severe floods and an earthquake in mid-1997.

7.   **Indexation** is voluntary but pervasive in Chile, affecting about half of private wage contracts, two thirds of private financial assets, and nearly the whole stock of central bank paper. With a view to promoting the acceptance of nonindexed financial instruments, in July 1997 the monetary authorities began issuing short-term paper with a nominal yield instead of the standard indexation to the *Unidad de Fomento* indicator, which tracks inflation with a one-month lag. These securities now represent some 10 percent of total placements of short-term central bank paper.

B. The Fiscal Sector

8.   Since 1988 Chile's **nonfinancial public sector** has registered surpluses that have averaged close to 3 percent of GDP. With transfers from the state copper company (CODELCO) accounting for close to 10 percent of current receipts of the general government, the public finances are influenced by changes in copper prices, although the Copper Stabilization Fund (CSF) partly mitigates this impact.[2] Thus, the fiscal surplus rose to 3.5 percent of GDP in 1995—a year when copper prices peaked at record levels— but declined to about 2 percent in 1996 and the first half of 1997[3] (Table 3). Part of the improvement in the public finances in 1995 also reflected a temporary retrenchment of spending that dampened the buoyancy of absorption, but once adjusted for the impact of terms-of-trade and other short-term fluctuations, the fiscal stance remained broadly neutral in 1996-97 in terms of its stimulus to the economy (Table 4).

9.   Total **public sector revenue** remained stable at 24½ percent of GDP in 1995–96 as the fall in copper income in 1996 was largely compensated by an increase in domestic tax receipts reflecting the strong activity as well as a number of tax hikes (see below). Revenue declined by over 1 percentage point of GDP in the first half of 1997 because of lower tax collections reflecting the slowdown in aggregate spending, and lower transfers from public enterprises (mostly related to the closing of a coal mine). Capital revenue remained at 0.3–0.5 percent of GDP as the government continued with the sale of small public enterprises, including a rail company and part of its share holdings in three electrical companies. The ratio of **public spending** to GDP declined in 1995 as the government tightened fiscal policy, but it rebounded to 22 percent of GDP in 1996–97 on the strength of rising current transfers (mainly to social areas) and investment outlays related to the development of a new copper mine. By contrast, interest payments declined after the treasury prepaid US$1.3 billion of external public debt to the World Bank and the IDB in 1995.

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[2]The fund receives transfers from CODELCO when export prices exceed a certain benchmark level, and conversely transfers funds to the treasury when market prices fall below the benchmark. The authorities have preferred to set the benchmark price at a conservative level (currently US$0.96 per pound) and since its creation in 1987 the CSF has mostly *accumulated* resources. By end-1997, these resources amounted to about US$1.8 billion.

[3]Fiscal data are only available with a long lag and preliminary data for the third quarter of 1997 are only available for the general government.

10. In recent years the authorities further expanded the coverage of targeted **social programs** aimed at alleviating poverty and reducing income disparities. Minimum pensions and cash benefits for the elderly were increased in 1995 and 1996, and the government initiated in 1997 an ambitious education reform aimed at expanding schooling hours and upgrading curricula and teachers' training programs. As has been the practice in the 1990s, these stepped-up social transfers were mostly financed by increasing taxes (particularly excises on fuel and tobacco) and maintaining the VAT rate at 18 percent (instead of reducing the rate to 17 percent from January 1996 as planned). In all, social spending has increased to 14 percent of GDP, accounting for almost two-thirds of general government expenditure in 1996 (Statistical Appendix Tables 11, 14, and 15).

11. In the early 1990s the government granted **real wage increases** of 4–5 percent to its employees with a view to reducing the wage differential between the public and private sectors. Since 1996 the increases in basic public wages have been more modest, but have been complemented by performance-related bonuses, particularly in the education and health sectors. Overall, the government wage bill has remained unchanged at just under 4 percent of GDP in 1995–97.

12. In view of the concentration of fiscal spending in the social sectors and of lingering bottlenecks in the area of infrastructure, the authorities established a system of **public works concessions** that started operating in late 1995 in the area of road infrastructure. A number of laws allowing for private participation in the management of ports and water and sewage companies, either through concessions or partial privatization, were approved in 1997. An autonomous holding entity was also established in late 1997 to oversee the operations of the remaining state-owned enterprises.

13. Since the mid-1980s the central bank has registered significant **operating losses** because of the sizable increase in net foreign reserves over the past several years, accompanied by the mismatch between the bank's low-yielding foreign and domestic assets and its high-interest-bearing liabilities.[4] These losses (measured on a cash basis) declined from close to 1 percent of GDP in 1993–94 to about 0.6 percent in 1995–97, reflecting higher earnings on foreign assets and, to a lesser extent, the introduction in 1996 of new procedures for the settlement of the *subordinated debt* (by early 1997 most banks had repaid their subordinated debt to the central bank, although at a discount).

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[4]The bank's assets include foreign reserves, low-yield treasury bonds (mostly dollar-denominated) issued in 1985 to recapitalize the bank, and the subordinated debt (claims against commercial banks related to the purchase of their nonperforming loans during the banking crisis of the early 1980s). On the liability side, outstanding central bank paper, mostly indexed, amounted to close to US$20 billion in September 1997 (25 percent of GDP).

C. The Financial Sector

14.   Against the backdrop of sizable capital inflows and gains in net official foreign reserves, since May 1995 the central bank has been conducting **monetary policy** by targeting the overnight interbank real interest rate, except for the past several weeks when the bank has allowed market rates to jump substantially above its notional target (Figure 3).[5] As noted earlier, since late 1995 the central bank has sought to dampen the growth of credit and domestic demand through staggered increases in the overnight real interest rate to 7.5 percent in the second half of 1996. In view of the slowdown in activity, the overnight rate was lowered in several steps starting in February 1997, to reach 6.5 percent in September 1997 (see Figure 3 and Statistical Appendix Table 18). In early 1998, in response to mounting demand pressures, a sharp deterioration in the terms of trade, and a rapid depreciation of the currency stemming in part from the crisis in world financial markets, the central bank increased the overnight rate to 7 percent and tightened short-term liquidity, letting money market rates jump to 12–15 percent in real terms by mid-January.

15.   The process of financial deepening continued in 1995-97 and financial system liabilities to the private sector (including pension fund liabilities) grew from 81 percent of GDP in 1994 to 86½ percent in September 1997 (Table 5).[6] Mirroring the periodic adjustments in the stance of monetary policy mentioned above, **credit expansion** fluctuated in 1996-97, slowing from 28 percent in 1995 to about 20 percent in 1996 and stabilizing at that pace in the year ending September 1997. Throughout the period, consumer and mortgage loans exhibited the fastest growth rates (about 30 and 20 percent, respectively, in real terms); however, since both loan categories started from a relatively low base, they still represent a relatively low share of total bank credit (10 and 14 percent, respectively, as of September 1997). High equity requirements on mortgages and strict procedures for the valuation of collateral also are in place to guard against the emergence of asset price inflation and protect the integrity of the financial system.

16.   More generally, **bank performance indicators** have improved throughout the 1990s, and, in particular, the ratio of nonperforming to total loans declined from nearly 2 percent at end-1990 to about 1 percent in 1995–97. Over these past three years, banks have undergone a gradual process of modernization that included a number of mergers and increased foreign investment. Chilean purchases of banks in neighboring countries also increased. At the same time, the supervisory and regulatory system has been periodically updated and strengthened, including through the establishment of revised risk-rating ratios and the introduction of qualitative indicators of management performance and adequacy of internal control systems.

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[5]As noted above, most financial instruments in Chile are indexed and most interest rates (including the overnight rate) are set in real terms. For further details on this and other aspects of monetary policy see SM/95/204, Chapter II, and SM/96/219, Box 1.

[6]Excluding pension fund liabilities, the ratio increased from 40 percent to 45 percent during the period.

In the same vein, a new banking law was enacted in November 1997 that increased the banks' capital requirements (in line with the Basle Committee recommendations) and regulated their access to new areas of business both domestically (including factoring, underwriting and insurance brokerage) and abroad. As of September 1997, foreign currency operations accounted for a small share of banking operations in Chile (2–3 percent of deposits and about 10 percent of loans), reflecting widespread domestic indexation and a number of additional regulations that limit the foreign currency exposure of Chilean banks.[7]

17.   Also reflecting the firming of credit conditions, both narrow and broad **money growth** slowed in 1996. With lower inflation and lower interest rates, the demand for currency increased and narrow money growth rebounded to about 23 percent in the year ending September 1997, while broad money growth remained stable at about 20 percent. The widest monetary aggregate (including the liabilities to the private sector of pension funds) followed the same trend slowing to about 17 percent in 1996 and roughly stabilizing at that pace in the following three quarters.

18.   **Stock prices** in dollar terms fell by about 27 percent in the first quarter of 1995 in the aftermath of the Mexican crisis, but later recovered and remained roughly stable through September 1996. After a slump in late 1996 related to the weak performance of the power utilities (which represent nearly 40 percent of stock market transactions in Chile),[8] stock prices rebounded strongly in the first half of 1997 driven by strong demand from foreign investors. Part of these gains were reversed in the latter part of the year in the wake of the Asian financial crisis, but for 1997 as a whole, stock prices in dollar terms were up by 9 percent (Figure 4).

19.   **Private pension fund operations** also continued to grow faster than nominal income, reflecting a steady increase in remunerations and in workers' affiliation to the funds, and pension fund assets exceeded 40 percent of GDP by September 1997 (representing about half of total financial system liabilities to the private sector). After showing small negative results in 1995, mostly related to poor stock market returns, the real yield on the pension funds' portfolio averaged 3.2 percent in 1996–97. Pension fund holdings of foreign assets increased to a little over 1 percent of their total assets in 1997, still far below the statutory ceiling of 12 percent of total assets (Statistical Appendix Tables 22 and 27).

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[7]Including a cap in the currency mismatch between banks' assets and liabilities equal to 20 percent of their capital and reserves, and a nonremunerated 30 percent reserve requirement on foreign borrowing and deposits of foreign residents.

[8]The drop in the shares of power companies reflected the decline in their profitability stemming from the drought and protracted wrangling with the power sector regulatory agencies.

D. The External Sector

20.   As noted earlier, movements in Chile's **external current account position** in recent years have followed closely the large swings in copper export prices, shifting from a small surplus in 1995 to a 4 percent deficit in 1996 that narrowed to an estimated 3.7 percent of GDP in 1997 in spite of weakening in copper export prices in the last quarter of the year. By contrast, the surplus on capital transactions increased during the year—notwithstanding a weakening in the last quarter. Official reserves grew by US$2.5 billion, to US$17.4 billion at end-1997 (about ten months of imports of goods and nonfactor services), despite the central bank's foreign exchange intervention in the wake of the crisis in world financial markets during the closing weeks of the year.

21.   Chile's **export** receipts remain highly concentrated on copper and other commodities, which together accounted for an average of 60 percent of total exports in 1995–97 (fruit and other natural-resource-based products accounted for another 15 percent). After growing rapidly in 1995, on the strength of record-high copper prices, exports slumped in 1996 but rebounded again in 1997 (Table 6 and Figure 5). Measured in constant prices, the ratio of exports to GDP increased to close to 40 percent in 1997, reflecting strong export volume growth. The growth of **copper export** volume in particular increased markedly, reflecting the completion of a number of foreign investment projects in the sector, and brought Chile's share in world copper output from 25 percent in 1990 to 34 percent in 1996. Also, reversing an earlier decline, the share of copper in total exports increased slightly, to 42 percent in January–November 1997. **Noncopper export** receipts also have fluctuated widely in recent years, partly reflecting the volatility of woodpulp and fishmeal export prices. Volume growth slowed from the early part of the decade, mostly because of the effect of bad weather on fruit and fish output. The volume of **nontraditional exports** (mostly manufactures) continued to grow rapidly, maintaining their share at about one-fourth of total exports[9] (Statistical Appendix Table 31).

22.   With slower domestic demand and output growth in 1996–97, the growth of **imports** decelerated, notwithstanding the effective reduction of import duties in the context of regional trade agreements and sizable investments in the mining sector (about one-fourth of total imports were capital goods during the period). The ratio of imports to GDP has remained roughly stable (see Table 1). Net payments of **financial services** have increased steadily in recent years, to US$1.8 billion in January–September 1997, owing to a sharp increase in profit remittances (measured on a cash basis) associated with the sizable inflows of direct investment (FDI). By contrast, interest payments have declined somewhat. Higher profit remittances have contributed to the widening in the current account deficit since 1996, but they also tend to reduce the vulnerability of the Chilean economy to foreign shocks since they tend to fluctuate along with changes in the terms of trade.

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[9]Export behavior, including the effect of external competitiveness, is discussed in Chapter II of this report.

23.   Net capital inflows (after errors and omissions) slowed in 1995 in the aftermath of the Mexican crisis but recovered sharply in the following years with **investment flows**, both direct and portfolio, replacing medium- and long-term debt as the main source of foreign financing (see Table 6). FDI flows—concentrated in the mining and, to a lesser extent, the utilities and manufacturing sectors—surged to over US$4 billion in 1996 and remained high in 1997 (US$3.3 billion in January–September). Portfolio inflows (mostly bonds and ADR purchases), which were relatively small in 1995, also rose strongly in January–September 1997 to US$2.2 billion. These inflows were only partly offset by higher Chilean investment abroad in the period to September 1997, although it appears that outflows increased markedly in the latter part of the year as a result of developments in Asia. The strong turnaround in net **medium-and long-term debt flows** (from net outflows in 1995 to sizable inflows in January–September 1997) partly reflected extraordinary public debt prepayments in 1995–96.[10] Gross medium- and long-term disbursements also increased, to US$4.5 billion in January-September 1997 (from US$3.4 billion in the same period of 1996). By contrast, net short-term outflows in the first half of 1997 reflected a sharp reduction in the short-term debt of Chilean banks. In all, as of November 1997 Chile's **total external debt** (including trade credit lines) amounted to US$28.2 billion (equivalent to 37½ of GDP, or over 140 percent of exports of goods and nonfactor services). Of this total, over 80 percent was held by the private sector, and only 10 percent was in short-term maturities. During the first three quarters of 1997, **debt service** payments accounted for just over 20 percent of exports of goods and nonfactor services, with interest payments accounting for only 6 percent of exports.

E.   The Exchange and Trade System

24.   The **Chilean peso** is allowed to fluctuate within a band, the midpoint of which is pegged to a basket of currencies (comprising the U.S. dollar, the German mark, and Japanese yen), and is adjusted daily on the basis of inflation differentials. There is also a small informal exchange market, whose importance has been declining in line with the progressive liberalization of exchange transactions (see below); the spread between the official and informal exchange rates has been under 0.5 percent during 1995–97.

25.   The peso depreciated markedly against the U.S. dollar in early 1995 in the aftermath of the Mexican crisis, moving close to the midpoint of the band. However, it soon strengthened and moved back close to the most appreciated end of the band, as had been the case during most of the 1990s (see Figure 2 and Statistical Appendix Table 38). In this context, two successive modifications to the exchange rule were introduced. In November 1995, a 2 percent annual appreciation was incorporated into the formula used to calculate the midpoint as a rough proxy for productivity gains; and in January 1997, as the appreciation of

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[10]As mentioned earlier, the treasury prepaid US$1.3 billion of debt to the World Bank and the IDB in 1995. Moreover, the central bank prepaid about US$90 million to the IDB and all of its remaining obligations to the Fund (SDR 144 million) in 1995, and all its outstanding liabilities to foreign private banks (US$1.4 billion) in 1996.

the U.S. dollar against other key currencies pushed again the interbank rate very close to the more appreciated end of the band,[11] the authorities increased the share of the U.S. dollar in the currency basket from 45 percent to 80 percent, widened the band to 12½ percent on each side of the midpoint, and revalued the midpoint rate by 4 percent. The authorities also continued to gradually liberalize capital outflows while periodically fine-tuning existing requirements on inflows (Box 1).

26.   Chile maintains an open **trade system** and a flat customs tariff of 11 percent, but the negotiation of a number of bilateral trade agreements in the 1990s has reduced the actual average nominal tariff rate to 8-9 percent. With a view to gaining greater access to foreign markets, Chile has signed free trade agreements with Colombia, Mexico, and Venezuela, and a cooperation agreement with the European Union. In October 1996, Chile joined Mercosur as an associate member, and in July 1997 it ratified a free-trade agreement with Canada that immediately eliminated tariffs on most bilateral trade items.

Box 1. Regulations on Capital Transactions

Through the 1990s the authorities have progressively liberalized regulations on capital outflows while introducing certain restrictions on capital inflows.

•   With respect to **outflows**, access to the official exchange market was expanded in steps to include most capital and all current transactions by April 1997 (the previous ceiling of US$3,000 a month per individual, which had been increased to US$15,000 per month in April 1996, was eliminated). Chapter XIX, which established restrictions on the remittances of profits and a three-year holding period for remittances of capital related to the purchase of selected Chilean debt foreign debt at a discount in the 1980s, was eliminated in August 1995. Surrender requirements on export proceeds also were eliminated from June 1995. Pensions funds and other institutional investors were allowed to invest part of their portfolio abroad from 1992 and the ceilings on these investments have been increased in several steps to 12 percent for pension funds, 15 percent for insurance companies, and up to 100 percent for mutual funds. The ceiling on foreign investment by banks was increased to 40 percent of their capital and reserves in the context of a new banking law enacted in November 1997 that allows them to engage in credit operations in countries that meet certain conditions.

•   All capital **inflows** to Chile are subject to a one-year minimum holding period. Issues of ADRs and foreign bonds by Chilean companies are subject to minimum amount and minimum rating requirements. **Most importantly, foreign loans and deposits by nonresidents are subject to a nonremunerated 30 percent reserve requirement for one year (independently of the maturity of the loan or deposit). This requirement was extended in 1995 to most financial investment (excluding FDI and first issues of ADRs).** Further minor changes in these regulations were introduced in 1996–97, mostly with a view to reducing the scope for companies to evade the reserve requirement by reporting financial investment as FDI—e.g., the maximum proportion of foreign investment projects that can be financed through debt was lowered from 70 percent to 50 percent; and the minimum eligibility for exemption from the nonremunerated reserve requirement was raised from US$25,000 to US$1 million, with projects above US$15 million subject to a special review by the central bank.

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[11]A nominal appreciation of the dollar against the mark or the yen results in a nominal depreciation of the midpoint peso/dollar rate.

Table 1. Chile: Selected Economic Indicators

	1993	1994	1995	Prel. 1996	Proj. 1997
(Annual percentage change)					
Real GDP	6.3	4.2	8.5	7.2	6.0
Real domestic demand	8.9	3.2	12.9	7.9	6.1
Consumption	7.5	4.1	10.6	8.1	5.8
Investment	12.5	1.0	19.0	7.4	6.7
Consumer prices					
End of period	12.2	8.9	8.2	6.6	6.0
Average	12.7	11.4	8.2	7.4	6.1
Core inflation 1/	13.4	9.5	7.5	7.4	5.4
Real wages 2/	3.3	5.0	6.7	3.8	2.6
Exports (U.S. dollars)	-8.1	26.1	39.1	-4.9	10.0
Imports (U.S. dollars)	10.2	6.9	34.7	12.6	7.6
Terms of trade	-8.7	10.3	14.8	-16.6	2.4
Real effective exchange rate 3/	0.4	5.8	1.7	3.9	...
I. Money and Credit					
Broad money (M3)	27.0	19.3	27.4	22.0	19.0
Credit to the private sector	36.6	19.0	22.8	16.1	19.5
Interest rate (90-day central bank paper) 4/	6.5	6.4	6.1	7.3	6.8
Velocity of money	10.6	10.5	10.3	10.4	9.8
(In percent of GDP)					
II. Savings and Investment					
Gross domestic investment	28.8	26.8	27.4	27.7	27.6
External savings	4.5	1.2	-0.2	4.1	3.7
National savings	24.2	25.6	27.6	23.6	23.8
Public 5/	5.1	4.9	6.9	6.2	6.3
Private	19.1	20.7	20.7	17.4	17.5
III. Public Sector					
Operations of the general government					
Revenue	23.8	23.3	23.9	23.6	23.2
Expenditure	21.7	21.1	19.9	20.7	20.2
Nonfinancial public sector					
Overall balance (deficit -)	1.8	2.2	3.5	2.0	1.8
Central bank losses	-1.0	-0.9	-0.6	-0.7	-0.6
Combined public sector					
Overall balance (deficit -)	0.8	1.2	3.0	1.3	1.2
Net foreign financing	-1.4	-0.5	-3.1	-2.3	0.3
Net domestic financing	0.6	-0.7	0.1	1.0	-1.5
IV. Balance of Payments					
Current account balance	-4.5	-1.2	0.2	-4.1	-3.7
Trade balance	-2.2	1.4	2.2	-1.6	-1.1
Exports	20.1	22.2	24.0	21.4	21.2
Imports	22.3	20.9	21.8	22.9	22.3
Capital account	5.8	7.3	1.4	5.7	7.8
Overall balance of payments	1.3	6.1	1.6	1.6	4.0
Gross official reserves (in months of imports of goods and nonfactor services	9.1	11.5	9.5	8.9	9.7
Total external debt	47.8	46.8	36.5	34.4	33.2
Debt service 6/	19.6	18.0	25.1	31.8	20.3
LME copper price (U.S. cents per pound)	86.7	104.9	133.2	103.2	103.2

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Excluding the eleven most volatile food items. End of period.
2/ Data for 1997 is January-November.
3/ Twelve months ended December. Decline indicates depreciation of the Chilean peso.
4/ Percent per annum over monetary correction.
5/ Net of estimated losses of the central bank.
6/ As percent of exports of goods and nonfactor services.

Table 2. Chile: Sectoral Origin of GDP

(At constant 1986 market prices)

	1992	1993	1994	1995	1996	Prel. Jan.-Sep. 1996	Prel. Jan.-Sep. 1997
(Billions of Chilean pesos)							
GDP at market prices	5,284.9	5,616.4	5,855.0	6,355.3	6,814.4	5065.5	5370.1
Agriculture and forestry	383.5	389.6	416.4	436.3	442.9	356.1	347.5
Fishing	58.6	59.1	70.2	77.3	80.0	64.8	66.6
Mining	454.5	458.7	471.0	504.9	564.8	412.6	459.9
Manufacturing	928.6	975.6	1,003.8	1,069.1	1,106.5	821.3	850.5
Electricity, gas, and water	147.3	153.6	160.6	171.6	174.6	132.3	139.2
Construction	277.9	316.8	323.0	346.8	381.7	279.7	298.4
Commerce	880.7	956.6	993.4	1,098.6	1,212.5	901.3	954.3
Transport, storage, and communications	387.8	418.3	454.3	510.3	561.3	411.3	458.5
Financial services	665.8	711.4	744.7	802.3	858.6	630.1	667.3
Other services 1/	1,100.2	1,176.8	1,217.6	1,338.2	1,431.6	1056.0	1109.9
(Annual percentage change)							
GDP at market prices	11.0	6.3	4.2	8.5	7.2	7.1	6.0
Agriculture and forestry	7.0	1.6	6.9	4.8	1.5	0.5	-2.4
Fishing	10.5	0.8	18.8	10.1	3.4	3.1	2.8
Mining	2.0	0.9	2.7	7.2	11.9	10.4	11.5
Manufacturing	11.0	5.1	2.9	6.5	3.5	2.6	3.6
Electricity, gas, and water	20.7	4.3	4.5	6.9	1.7	4.0	5.1
Construction	12.8	14.0	2.0	7.4	10.1	11.2	6.7
Commerce	18.2	8.6	3.8	10.6	10.4	11.0	5.9
Transport, storage, and communications	13.8	7.9	8.6	12.3	10.0	9.8	11.5
Financial services	9.9	6.8	4.7	7.7	7.0	6.9	5.9
Other services 1/	9.4	7.0	3.5	9.9	7.0	7.1	5.1
(As percent of total)							
GDP at market prices	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture and forestry	7.3	6.9	7.1	6.9	6.5	7.0	6.5
Fishing	1.1	1.1	1.2	1.2	1.2	1.3	1.2
Mining	8.6	8.2	8.0	7.9	8.3	8.1	8.6
Manufacturing	17.6	17.4	17.1	16.8	16.2	16.2	15.8
Electricity, gas, and water	2.8	2.7	2.7	2.7	2.6	2.6	2.6
Construction	5.3	5.6	5.5	5.5	5.6	5.5	5.6
Commerce	16.7	17.0	17.0	17.3	17.8	17.8	17.8
Transport, storage, and communications	7.3	7.4	7.8	8.0	8.2	8.1	8.5
Financial services	12.6	12.7	12.7	12.6	12.6	12.4	12.4
Other services 1/	20.8	21.0	20.8	21.1	21.0	20.8	20.7

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Includes imputed banking charges, import duties, and value-added tax on imports.

Table 3. Chile: Summary Operations of the Combined Public Sector 1/

(In percent of GDP)

	1992	1993	1994	1995	1996	Prel. January-June	
						1996	1997
Nonfinancial Public Sector							
Total revenue	25.4	24.6	24.3	24.4	24.4	24.5	23.2
Current revenue	25.0	24.4	23.6	24.2	24.1	24.0	23.2
General government 1/	23.3	22.9	22.7	23.2	23.0	23.2	22.4
Net surplus of public enterprises	1.7	1.5	0.9	1.0	1.1	0.7	0.8
Operating surplus of public enterprises	6.2	5.0	4.8	6.1	5.1	5.4	4.8
Net transfers from public enterprises	-4.5	-3.5	-3.9	-5.1	-4.0	-4.7	-4.0
Capital revenue, net 2/	0.3	0.2	0.9	0.2	0.3	0.5	0.0
Total expenditure	22.5	22.8	22.2	20.9	22.4	20.9	21.3
General government current outlays 3/	18.2	18.2	17.6	16.8	17.2	16.7	16.6
Fixed investment	4.3	4.5	4.5	4.1	5.2	4.2	4.7
General government 4/	2.7	3.0	3.1	2.8	3.2	2.8	2.7
Public enterprises	1.7	1.6	1.4	1.3	2.0	1.5	2.1
Overall surplus or deficit	2.9	1.8	2.2	3.5	2.0	3.6	1.9
Deposited to the Copper Stabilization Fund	-0.3	0.2	-0.2	-1.0	-0.3	-0.5	-0.2
Central bank cash result	-1.1	-1.0	-0.9	-0.6	-0.7	...	...
Combined public sector overall balance	1.8	0.8	1.2	3.0	1.3	...	...
Financing	-1.8	-0.8	-1.2	-3.0	-1.3	...	...
Foreign (net)	0.6	-1.4	-0.5	-3.1	-2.3	...	...
Foreign, total	0.4	-1.5	-0.5	-3.1	-2.3	...	...
Net on-lent to private sector	0.2	0.0	0.0	0.1	0.0	0.1	0.0
Domestic	-2.4	0.6	-0.7	0.1	1.0	...	...
Memorandum items:							
Nonfinancial public sector							
Current account balance	6.9	6.1	5.8	7.5	6.9	12.6	12.6
CODELCO taxes and transfers 5/		5.6	8.1	11.8	6.9	9.2	8.2

Sources: Ministry of Finance; Central Bank of Chile; and Fund staff estimates.

1/ Excludes taxes paid and transfers made by the public enterprises.
2/ Net of financial investment and expenditure related to sale of assets.
3/ Includes amount transferred directly by CODELCO for military purchases.
4/ Includes capital transfers to the private sector, net of capital transfers to other public entitites.
5/ In percent of the current receipts of the general government.

Table 4. Chile: Fiscal Impulse 1/

	1990	1991	1992	1993	1994	1995	Prel. 1996	Proj. 1997
			(In percent of nominal GDP)					
Actual								
Revenue 2/	19.5	21.6	21.6	22.4	21.4	21.0	22.1	21.4
Expenditure 3/	18.3	19.0	18.9	19.3	19.0	18.0	19.1	18.7
Trend								
Revenue	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
Expenditure	20.2	20.1	19.2	19.3	19.7	19.3	19.2	19.3
Actual less trend								
Revenue	-1.7	0.4	0.4	1.2	0.3	-0.1	0.9	0.3
Expenditure	-1.9	-1.1	-0.3	0.0	-0.7	-1.3	-0.1	-0.6
			(In percent)					
Total impulse 4/	-0.2	-1.3	0.7	-0.4	0.2	-0.2	0.1	0.2
Revenue impulse 5/	1.7	-2.1	0.0	-0.8	0.9	0.4	-1.1	0.7
Expenditure impulse 5/	-1.9	0.8	0.8	0.4	-0.7	-0.6	1.2	-0.5

Sources: Ministry of Finance; and Fund staff estimates.

1/ Operations of the general government only.
2/ Excludes proceeds from privatization and taxes and transfers from CODELCO.
3/ Excludes interest payments, transfers to private pension funds for balances accumulated under the previous public pension scheme, and purchases financed by transfers from CODELCO.
4/ Sum of the revenue and expenditure impulses.
5/ Change in the difference between actual and trend revenue (expenditure) in relation to the preceding year.

Table 5. Chile: Selected Indicators of the Financial System 1/

	1993	1994	1995	1996	QI 1997	QII 1997	QIII 1997

I. Central Bank

(Annual change in millions of U.S. dollars)

Net international reserves	712	3,668	1,348	674	2,484	2,824	2,957
Medium- and long-term foreign liabilities	-83	21	-442	-1,488	-110	0	0

(Annual percentage change with respect to liabilities to the private sector)

Net domestic assets 2/	-50.3	-239.1	-91.8	-107.9	-164.6	-175.7	-192.5
Net credit to nonfinancial public sector	1.4	-48.3	-19.1	-21.5	-53.2	-55.1	24.6
Net credit to financial intermediaries	-171.6	-233.8	-103.2	-119.7	-141.8	-171.2	-184.7
Central bank promissory notes	-2.2	-13.2	-29.5	-62.9	-93.2	-128.4	-136.3
Other	122.2	56.2	60.0	96.2	123.6	179.0	104.0
Liabilities to private sector	21.1	14.5	17.7	9.5	7.1	10.4	14.2

II. Financial System

(Annual change in millions of U.S. dollars)

Net international reserves	719	3,379	1,812	1,225	2,991	4,334	4,329
Medium- and long-term foreign liabilities	-134	64	-68	-1,478	-90	-153	-241

(Annual percentage change with respect to liabilities to the private sector)

Net domestic assets 2/	30.4	15.1	16.7	11.5	13.3	10.5	10.0
Credit to the private sector 2/	28.1	16.4	18.0	12.6	14.7	15.1	15.2
Liabilities to private sector	34.3	24.4	21.0	16.9	19.9	19.4	18.7
Of which : pension funds	19.6	15.1	7.6	6.2	8.8	9.5	8.2

(As percent of GDP)

Narrow money (M1A) 3/	9.4	9.6	9.7	9.6	8.7	9.2	9.1
Broad money	34.8	34.9	36.5	40.1	37.0	38.0	39.1
Liabilities to private sector 4/	77.9	81.3	80.8	85.1	80.1	84.3	86.5
Of which : pension funds	37.1	41.1	38.8	39.4	37.4	40.2	40.7
Credit to private sector	64.3	64.4	64.9	67.9	62.9	66.3	69.0

(Annual percentage change)

Memorandum items:							
Growth of credit to private sector	36.6	19.0	22.8	16.1	18.5	19.2	19.2
Growth of credit to private sector, excluding pension funds	29.5	15.3	27.5	20.8	19.6	19.0	20.3
Inflation rate (CPI)	12.2	8.9	8.2	6.6	6.8	5.3	6.0
Narrow money (M1A)	20.6	20.6	23.5	10.5	15.8	23.3	22.8
Broad money	27.0	19.3	27.4	22.0	21.9	17.1	17.7

(In percent: annual average) 5/

Interest rates (in real terms) 6/							
Commercial banks deposits	6.4	6.4	5.9	6.9	6.8	6.4	6.3
Commercial banks loans	9.2	9.3	8.5	9.3	9.1	8.8	8.6
On 90-day central bank promissory notes	6.5	6.4	6.1	7.3	7.1	6.8	6.6

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Flows measured at constant end-of-period exchange rates. The financial system comprises the central bank, commercial banks, nonbank financial institutions, and private pension funds.
2/ With respect to liabilities to the private sector at the beginning of the period.
3/ Defined as currency plus sight deposits.
4/ Includes time and savings deposits, private sector deposits with pension funds and deposits in U.S. dollars.
5/ Quarterly data correspond to quarterly averages.
6/ Annual average yield on indexed operations for 90-365 days operations.

Table 6. Chile: Summary Balance of Payments

(In millions of U. S. dollars)

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1996	Jan.-Sep. 1997
Current account	-699	-2,077	-639	147	-2,919	-1,256	-1,600
Trade balance	771	-982	725	1,481	-1,147	-85	4
Exports	10,008	9,199	11,604	16,136	15,353	11,851	12,959
Copper	3,886	3,248	4,242	6,487	6,029	4,574	5,464
Other	6,122	5,951	7,362	9,649	9,324	7,277	7,494
Imports	-9,237	-10,181	-10,879	-14,655	-16,500	-11,936	-12,954
Financial services	-1,860	-1,468	-1,743	-1,480	-2,016	-1,238	-1,824
Other services and transfers	390	373	379	146	244	68	220
Capital account	2,884	2,723	4,573	1,310	5,017	2,134	4,742
Net foreign investment	684	1,158	1,858	1,221	4,195	3,282	4,241
Assets	-378	-524	-1,277	-709	-1,216	-832	-1,250
Liabilities	1,063	1,682	3,135	1,930	5,412	4,114	5,491
Direct investment	731	863	1,876	1,881	4,173	2,850	3,313
Portfolio investment	332	819	1,259	49	1,239	1,264	2,179
Medium- and long-term capital (net)	589	834	1,427	-82	608	-129	2,181
Disbursments	1,704	1,978	2,845	3,408	5,286	3,427	4,466
Public sector	636	399	402	212	992	361	458
Private sector	1,067	1,579	2,443	3,196	4,294	3,066	4,008
Refinancing	490	320	274	-1,834	-2,713	-2,245	-960
Scheduled amortization	-1,605	-1,464	-1,691	-1,656	-1,965	-1,311	-1,325
Short-term capital 1/	1,611	732	1,288	171	214	-1,019	-1,680
Public sector	279	87	-121	8	106	123	119
Private sector	1,332	645	1,409	163	107	-1,142	-1,799
Errors and omissions	314	-70	-740	-396	-917	-13	-210
Overall balance of payments 2/	2,499	575	3,194	1,061	1,181	865	2,933
Valuation adjustment	-106	136	474	287	-506	-406	-698
Changes in official reserves (increase -) 3/	-2,393	-712	-3,668	-1,348	-675	-459	-2,235
Memorandum items:							
Current account (percent of GDP)	-1.6	-4.5	-1.2	0.2	-4.1	-2.4	-2.7
Copper price (LME) (U. S. dollars per pound)	104	87	105	133	103	106	109

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Includes chages in medium- and long-term assets held overseas by Chilean residents.
2/ Excludes the effects of valuation adjustments.
3/ Based on stocks valued at exchange rates at the beginning of the year. Excludes short-term loans to the Central Bank of Chile.

Figure 1. Chile: Selected Economic Indicators
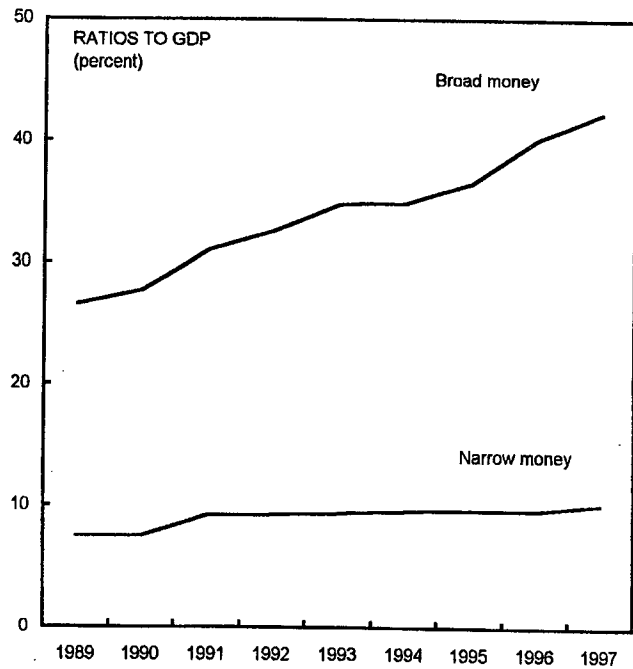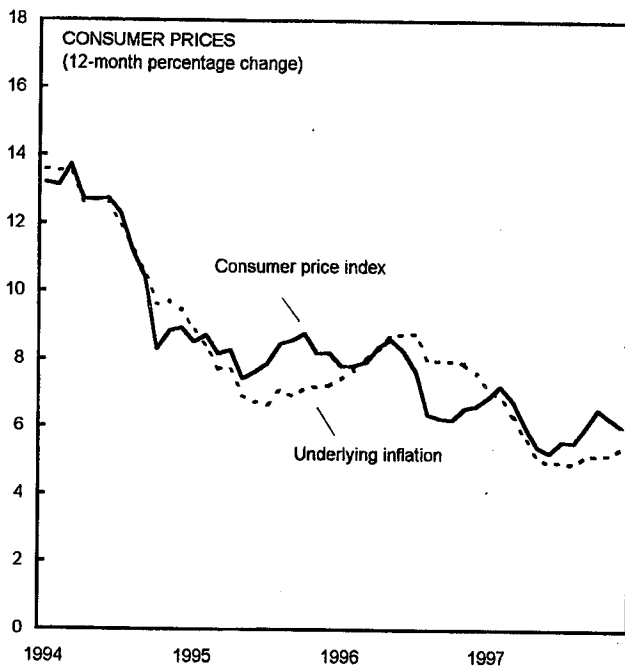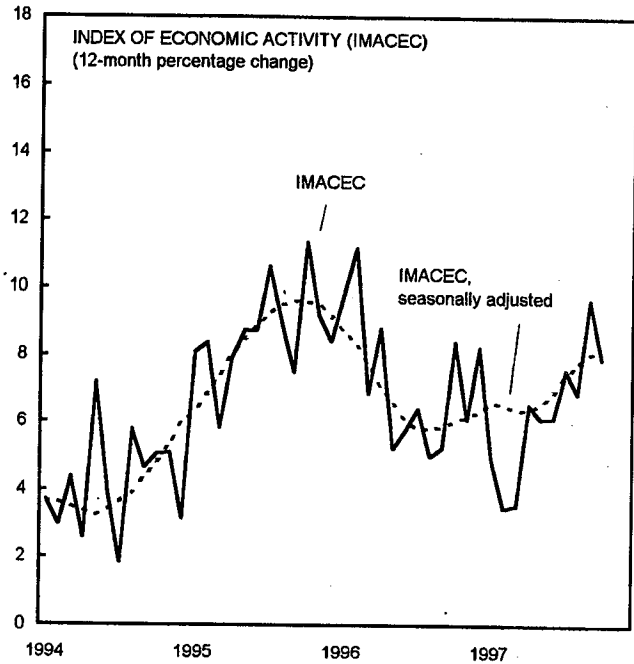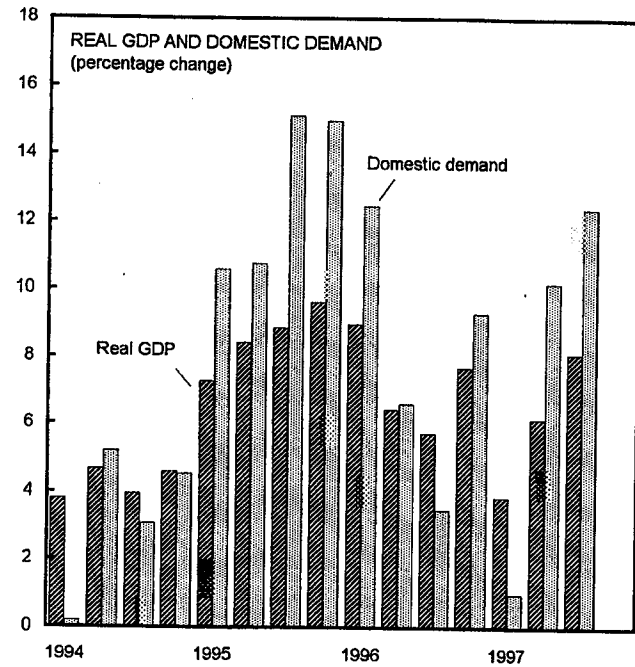
Sources: Central Bank of Chile.

Figure 2. Chile: Exchange Rate Developments

EXCHANGE RATE
(Chilean pesos per U.S. dollar)

Exchange band

Interbank rate

REAL EFFECTIVE EXCHANGE RATE 1/
(1990 = 100)
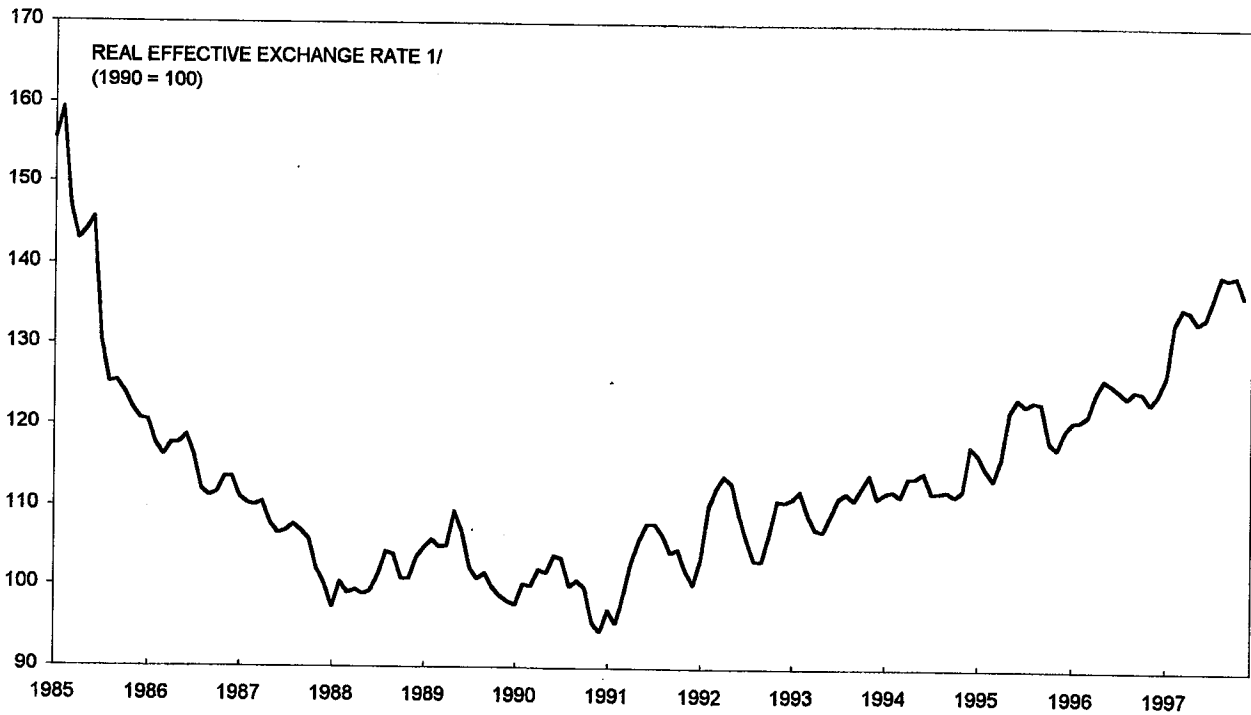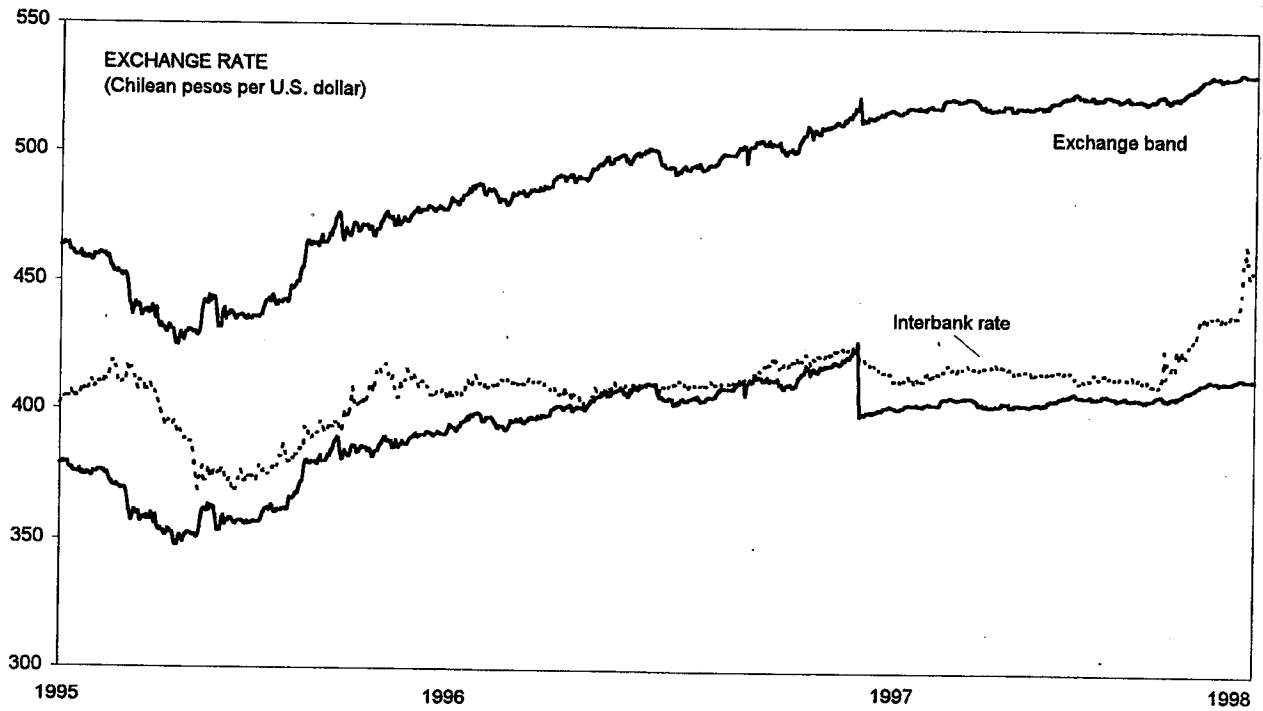
Sources: Central Bank of Chile; and the Information Notice System of the IMF.

1/ Trade-weighted index of nominal exchange rate delated by seasonally-adjusted relative consumer prices; increase indicates appreciation.

Figure 3. Chile: Overnight Interest Rate
(Annual rate in percent over monetary correction)
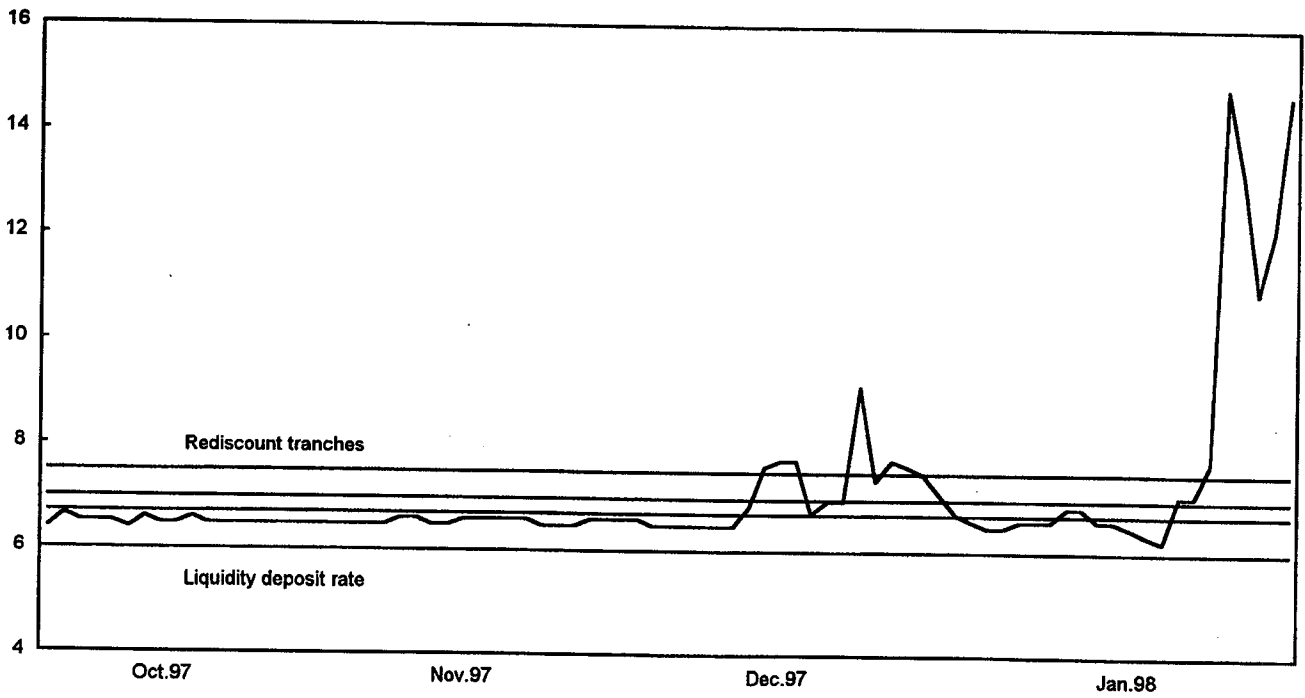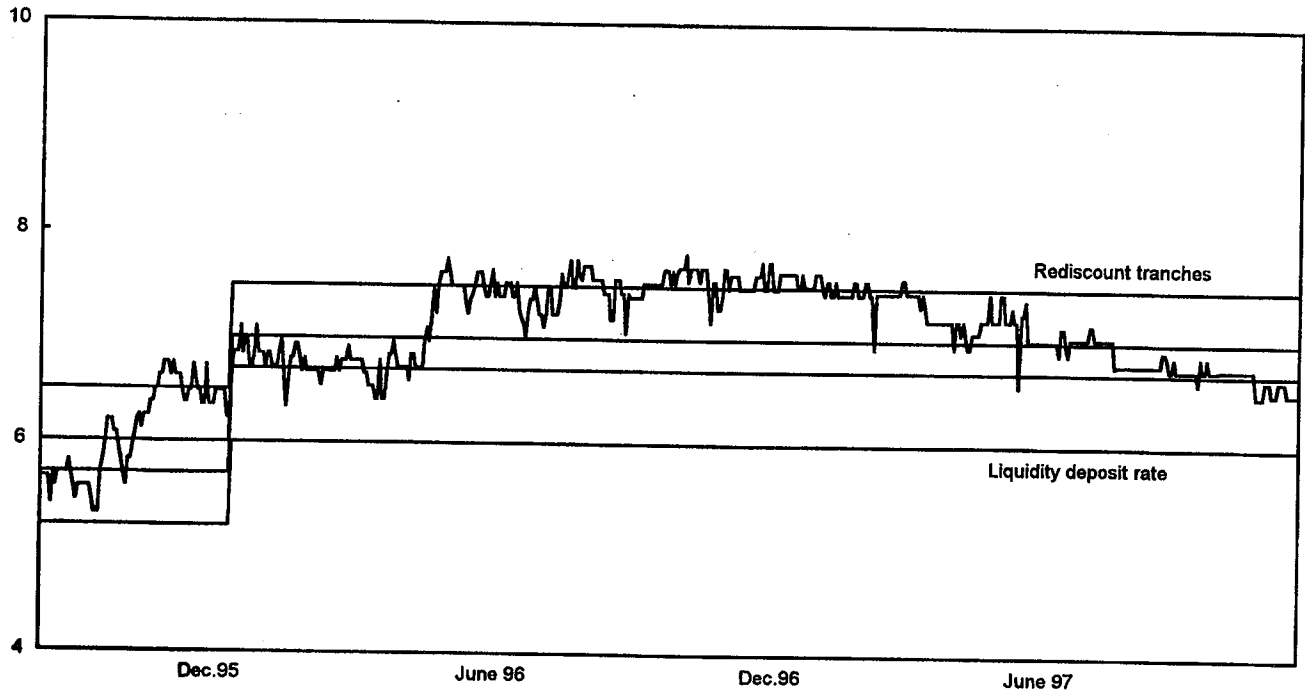
Source: Central Bank of Chile.

Figure 4. Chile: Stock Prices 1/
(Index number, in U.S. dollar terms, December 31, 1994=100)
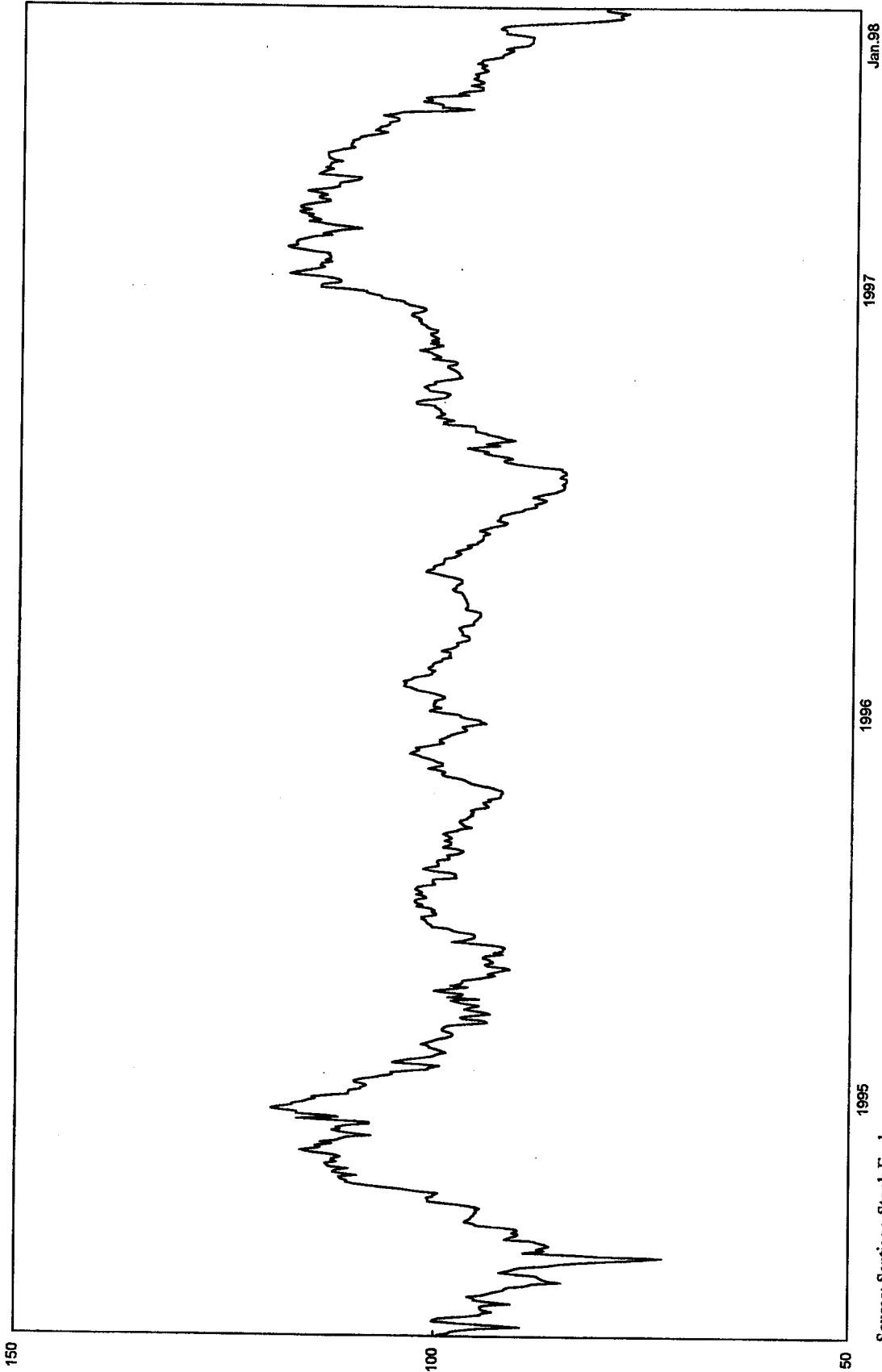
Source: Santiago Stock Exchange.

1/ IPSA, or index of the prices of the 40 most traded stocks, divided by the daily average interbank exchange rate.

Figure 5. Chile: Selected Indicators of the External Sector
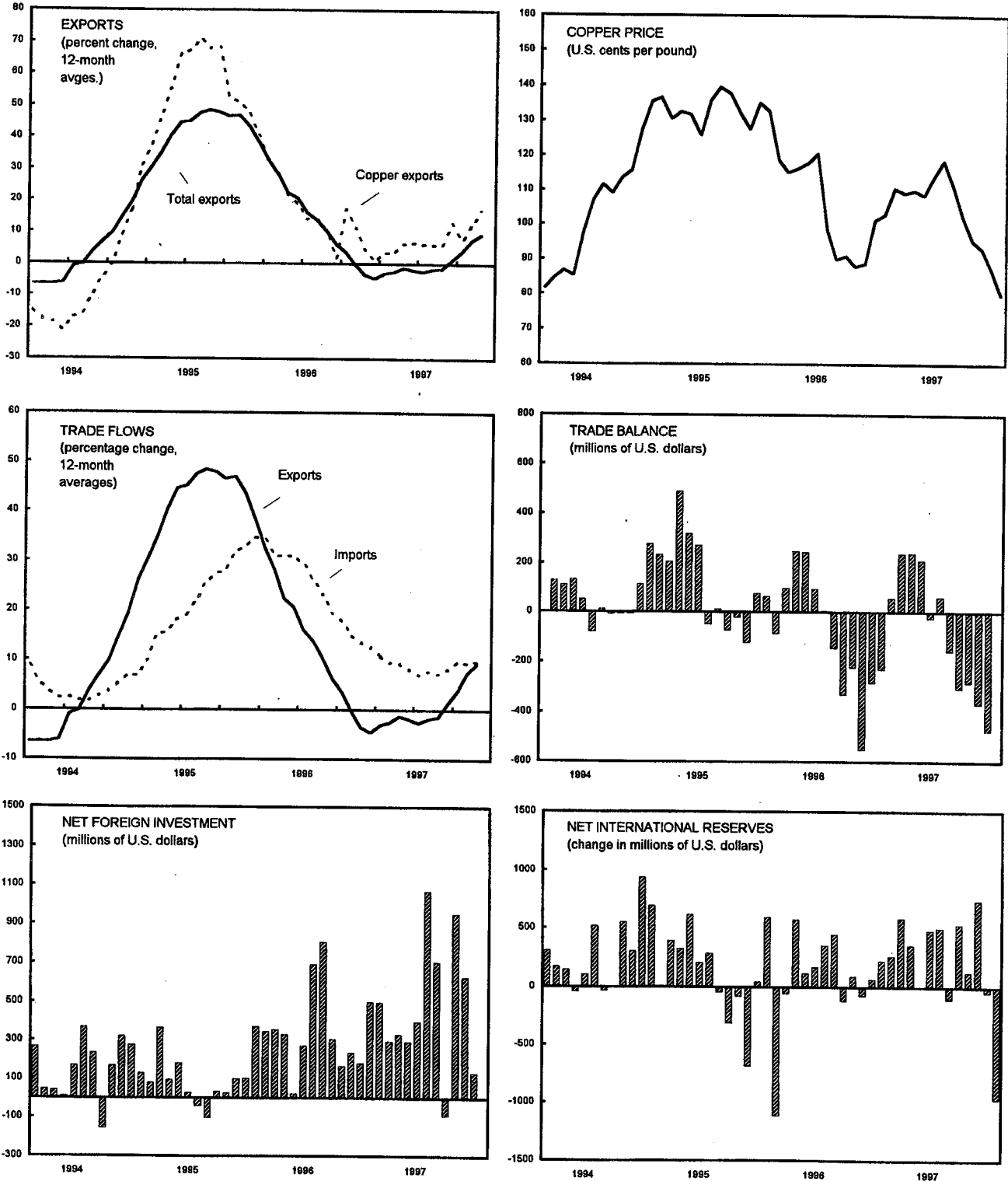
Sources: Central Bank of Chile.

II. COMPETITIVENESS AND THE EVOLUTION
OF THE REAL EXCHANGE RATE IN CHILE[12]

27.   The steady real effective appreciation of the Chilean peso since the late 1980s has raised concerns about the country's competitive position, especially with respect to its nontraditional export sectors. This paper reviews the evolution of certain price and nonprice competitiveness indicators that may shed light on this issue. All indicators confirm that notwithstanding the peso's slow but steady appreciation during the period, the pecuniary loss of competitiveness appears to have been well compensated in the case of noncopper exports by productivity gains and adjustments in factor intensity, particularly in the manufacturing sector. Also, as noted in the overview chapter of this report, the peso has undergone a real depreciation since late 1997. However, a return to a pattern of real appreciation of the currency could start to weaken the profitability of noncopper activities since intra-firm productivity gains are likely to face decreasing returns, and there may be limited room for further adjustments in factor intensity toward capital intensive technologies. This highlights the importance of addressing a number of policy issues, including proceeding with structural reforms to increase productivity, reassessing the tax treatment of the mining sector, and rebalancing the macroeconomic policy mix to ease the burden on monetary policy and reduce incentives for speculative portfolio inflows.

28.   Section 1 provides a brief analytical review of the relationship between the real exchange rate and competitiveness. Section 2 examines the evolution of conventional price- and cost-based measures of competitiveness during the period 1980–96.[13] Section 3 discusses the evolution of other indicators of Chile's export performance over the same period, while Section 4 offers concluding remarks.

A. Competitiveness and the Real Exchange Rate: Main Conceptual Issues

29.   The real appreciation of a currency is often interpreted as a loss in competitiveness for the economy. However, the relationship between changes in the competitive position of a country and movements in its real exchange rate (RER) is not as straightforward. A RER appreciation may or may not compromise the competitive stance of a country. In fact, an appreciation may reflect either a loss of competitiveness, when a misalignment situation originates; or an improvement in competitiveness, when the movement in the RER is due to fundamental reasons such as productivity gains. Thus, it is the underlying sources of RER movements which determine whether competitiveness is hurt by, or is itself the cause of the

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[13]Developments in 1997 were not included for lack of data.

movement in the RER. Competitiveness is affected only when the observed RER departs significantly from its equilibrium value (ERER). A standard practice in the recent literature is to define the RER as the relative price of tradable to nontradable goods, since such price will guide the allocation of resources between sectors to reach internal and external equilibria. In this vein, the ERER could be defined as the RER consistent with equilibrium in the nontradable market in every period, i.e., $S^{NT} = D^{NT}$ $\forall t$, and intertemporal solvency of the current account (CA), i.e., $CA_i \neq 0$ for any i **but** $\sum_i \beta_i CA_i = 0$. The latter is also called the current account sustainability condition, or more generally, the non-Ponzi game condition.

30. The view that the ERER varies according to its fundamentals in contrast to the static concept posited by the purchasing power parity (PPP) theory[14] has been well recognized in the literature. The ERER depends on such things as the differential rates of total factor productivity (TFP) growth in the tradables and nontradables sectors, the relative factor endowment of the country, the terms of trade, the taste parameters, the composition of government expenditures, the tariff structure, the extent of access to capital markets, etc.[15] In other words, the ERER is determined by both supply and demand side factors.

31. On the **supply side** the main determinants of the ERER are the relative TFP growth (usually called the Balassa-Samuelson effect)[16] and the relative factor endowment of a country:[17]

• The **Balassa-Samuelson effect** indicates that any process leading to a faster rate of productivity growth in the *tradables* than in the *nontradables* sector in a country (compared with the situation in the rest of the world) will induce an ERER appreciation reflecting the increased competitiveness of the economy. The usual explanation assumes a small country with constant-returns-to-scale technologies for both the tradable and nontradable sectors, and the prevalence of the law of one price for the tradable goods and the capital market, i.e., $p_T = p^*_T$ and $r = r^*$. Then, an increase in productivity in the production of tradables will tend to increase the marginal productivity of labor in that sector. This will be matched by a rise in wages so that, with perfect labor mobility across sectors, the price of nontradables will increase accordingly, leading to a RER appreciation. This factor is generally recognized as a prime component behind an ERER appreciation. Accelerated structural reforms and market liberalization, as observed in many emerging market economies since the late 1980s, are likely

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[14]See Balassa (1964) and Samuelson (1964) for a discussion of PPP. It is Harrod (1939) who initially recognized the shortcomings of the PPP theory on grounds of the degree of mobility of goods and production factors.

[15]On this see, for example, Edwards (1989), Harberger (1986) and Neary (1988).

[16]Hsieh (1982) is regarded as one of the first econometric attempts to identify such effect.

[17]As shown by Bhagwati (1984).

to have led to a significant relative TFP growth vis-à-vis the rest of the world and a currency appreciation that reflects the increased competitiveness of these economies.

•   The **relative factor endowment argument** suggests that countries with significantly different factor endowments will show different nontradable prices (cheaper services in Bhagwati's words) and thus different ERERs. The assertion rests on a stylized 'three-by-two' framework—three goods: one importable, one exportable, and one nontradable; and two factors of production: labor and capital—in which there is more than one cone of diversification and more than one relative factor price. Relatively labor-abundant countries will exhibit lower relative wages and lower nontradable prices. It should be pointed out, though, that capital accumulation will not be translated into continuously higher wages, but will result instead in discrete changes when the country enters a new diversification cone. Hence, the ERER will depend upon the relative factor endowment and the path of capital accumulation, but with step instead of continuous adjustments.

32.   On the **side of demand** the ERER will appreciate when aggregate demand shifts towards nontradable goods, which can be a result of increased government expenditures, nonhomothetic private preferences—with the assumption that nontradables are luxuries and tradables necessities—or simply changes in tastes of private agents. Nevertheless, these demand-side effects can be considered to be mostly confined to the short term, since in the long run the adjustment of the capital stock—assumed rather fixed in the short run—will imply, with constant returns to scale, relatively flat supply curves (in which case any demand shift will only affect output composition rather than prices).[18]

33.   Beyond these general considerations, the real appreciation of the currencies of a number of emerging market economies in recent years has prompted renewed interest in several specific factors behind the evolution of RERs, particularly the following:

•   The **extent of access to foreign capital markets**. Capital has flowed to emerging economies in higher volumes in the 1990s. This was in part due to domestic reasons such as the easing of capital account restrictions, credible stabilization and fiscal solvency efforts that led to lower country risk, and the flare-up in profit opportunities induced by comprehensive structural reforms. But it also reflected an exogenous abundance of foreign resources.[19] The relationship between capital inflows and the appreciation of the RER raises the issue of potential misalignment, but with no straight answer.[20] With respect to the effect on the ERER,

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[18]See for example Bergstrand (1991), De Gregorio, Giovannini and Wolf (1993), De Gregorio, Giovannini and Krueger (1993), and Micossi and Milesi-Ferretti (1996).

[19]See for example Frankel and Froot (1990), and Calvo, Leiderman and Reinhart (1993).

[20]The question of the driving forces underlying capital flows also brings out a key distinction between *sustainability* and *intertemporal solvency* of the current account. For a discussion of

capital inflows may finance an expansion and upgrading of the country's productive capacity leading to direct and indirect productivity gains in the tradable sector, and a rather permanent currency appreciation with no competitive loss. This is because the enhanced productive capacity of the country's tradable sector may permit the future trade balance to exceed the servicing needs of the accumulated debt and the remittances of foreign direct investment. However, inflows may also finance higher consumption (which may overshoot the new permanent income) and low-productivity investment (undertaken under over-optimistic expectations), which will have to be repaid with a reallocation of resources towards tradables, requiring a more depreciated currency in the future. Whether the immediate appreciation exerted by capital inflows exceeds the equilibrium value will depend on the quality and availability of information, the efficiency and accountability of the domestic financial system to intermediate foreign finance, and the degree of *exuberance* exhibited by players in financial markets. Lack of adequate information, deficient regulatory frameworks, expectations of financial bailouts, and excessive over-optimism contributing to "bubbles" may result in excessive short-term appreciation with attendant competitive losses. However, this risk may be lower in the case of Chile since the external financing has mostly been channeled to capital formation and the financial sector's prudential regulations are stringent.

- **"Dutch disease,"** or the loss of competitiveness suffered by nontraditional export sectors because of currency appreciation resulting from a booming traditional sector.[21] This is equivalent to a negative pecuniary externality from the traditional to the nontraditional export sector. Thus, the competitive stance of some sectors cannot be appraised without taking into account the negative external effects other sectors can impose on them. In that case, an appreciation of the ERER may still generate problems on two counts. First, if it is perceived that a less-diversified export sector entails more risk to the country's external position (in the absence of hedging policies); and second, when there is the potential danger of a relatively sudden disappearance or severe contraction of the traditional booming exporting sector with potentially severe balance of payment problems—i.e., through technological improvements that turn the exported good obsolete or dispensable.[22] The issue of potential disappearance hinges on 'time-to-build' arguments for the emergence and reappearance of new export sectors—be it for the accumulation of traditional physical capital or of human capital, including "know-how"—and on potential financial constraints for consumption smoothing during the transition. In the same vein, mining activities tend to make a more intensive use of nontradables during the usually lengthy investment stage (infrastructure building), producing a nonmonotonic RER behavior with a relative appreciating bias during the investment phase. This can exacerbate the Dutch disease effect, since sectors that will be profitable once the

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[20](...continued)
this issue see the next chapter of this report.

[21]See Corden and Neary (1982) for a detailed discussion of this issue.

[22]A textbook example is that of nitrates in Chile early this century.

investment period is over may severely underinvest or even disappear during the prolonged investment phase, with the consequent costs associated with rebuilding them and the potential weakening of the country's external position.

• The impact of **government spending** on currency appreciation. Higher government outlays can lead to a more appreciated RER because they will likely produce a net increase in aggregate demand. The magnitude of the effect will depend on the offset coefficient between public and private savings. But even if there is a perfect offset, the different 'tastes' between the public and private sectors can result in a shift in the demand for nontradables and a consequent appreciation. As noted before, this government spending effect should appear, with constant returns to scale, mostly in the short run, where the capital stock is rather fixed.[23]

B. Real Exchange Rate Indicators

34. The real effective exchange rate, which measures the evolution of relative prices and costs denominated in a single currency, remains the most commonly used indicator of competitiveness. This indicator, as mentioned before, may either over or understate changes in a country's competitive position. Its practical limitations, related to data pertinence and comparability across countries, have been widely documented.[24] Nonetheless, it provides a useful first approximation to the issue.

35. This section examines the behavior of a number of RER indices for the Chilean peso, both at an aggregate level and with respect to the main trading partners. Following common practice, not a single but a battery of indicators are reviewed to gain a better understanding of the various underlying forces at play. The discrimination by trading partners is particularly relevant for an economy like Chile with a relatively diversified export sector. If tradable goods were perfectly homogeneous and standardized commodities, it would be immaterial to consider their origin and destination for the purpose pursued in this section. But if this is not the case and some tradable goods are not perfectly homogeneous, then it is necessary to assess the competitive stance of a country in the light of the situation of its trading partners and potential competitors, as advanced by Armington (1969).

36. Figure 1 displays the behavior of four alternative measures of the real effective exchange rate for Chile—based on consumer prices, wholesale prices, GDP deflators, and unit labor costs in manufacturing. In each case, foreign prices and costs have been calculated on

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[23]Several papers have found the government expenditure effect in Chile to be relatively small. See for example Schmidt-Hebbel and Servén (1995), Arellano and Larraín (1996), and Soto and Valdés (1997).

[24]See for example Marsh and Tokarick (1994), Turner and Van't dack (1993), Lipschitz and McDonald (1991), and Wickham (1993).

the basis of a weighted basket of 17 countries that include Chile's main competitors.[25] All indicators coincide in showing two clear successive trends: a marked depreciation in the 1980s followed by a moderate but steady appreciation in the 1990s. The CPI-based REER depreciated by 58 percent from 1981 to 1988 and then appreciated by 25 percent over the following eight years (Table 1). Changes in the REER based on GDP deflators are broadly of the same magnitude, while those based on the WPI indicator are somewhat less intense (a maximum depreciation of 45 percent followed by a 20 percent appreciation). The movements in the ULC-based REER are more abrupt either way, with a much faster initial depreciation (71 percent) and a more rapid subsequent appreciation (54 percent). In all cases however, the later appreciation is less pronounced than the earlier depreciation, so that by the end of the period (1995 or 1996, according to the indicator) all indices are close to the levels registered in 1985–86.

37.   The evolution of the ratio of the domestic prices of nontradable goods to the prices of tradable goods—often referred to in the literature as the internal real exchange—illustrates trends in internal price competitiveness. The evolution of the internal RER, calculated from sectoral value-added deflators, is shown in Figure 1. It shows the same two successive trends of depreciation followed by appreciation, although with a lesser earlier movement (a depreciation of about 35 percent), followed by an appreciation of about 29 percent in the 1990s.

38.   Figure 2 and Table 2 disaggregate the evolution of the CPI-based REER by trading partners or groups of trading partners. Movements in the REERs with respect to industrial economies mirror relatively closely the movements in the aggregate measure. By contrast, with respect to Latin America the RER exhibits a pattern of lesser depreciation and subsequent relative stability. In the 1980s the peso depreciated by 60–70 percent with respect to the industrial countries, but only by 43 percent with respect to Latin America; in the 1990s, it appreciated by 30–40 percent with respect to the OECD, but stayed roughly constant with respect to Latin America. This different trend with respect to Latin America may reflect the regional character of changes in some of the determinants of the region's RERs, including the access to foreign finance and the implementation of market deregulation and comprehensive structural reforms.

39.   In sum, all broad measures considered show that the RER has appreciated in the 1990s, but that it is still below the 1980–85 levels. This result does not lead to any strong conclusion on the issue of competitiveness, since it is arguable that in the late 1980s the RER was, if anything, undervalued. Also, it is quite likely that the ERER has since appreciated as a result of increased productivity in the tradables sector stemming from the comprehensive structural

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[25]All real effective exchange rate indicators have been computed following the standard Fund methodology according to which: (i) partner country weights are adjusted to take into account third country competition in foreign markets, and (ii) fixed levels of weights are calculated for each trading partner through a double-weighting method applied to bilateral trade flows. For details on this methodology, see Zanello and Desruelle (1997).

reforms that have been undertaken. However, when the RER is computed considering exchange rate movements of Latin American partners the result shows an interesting diverging trend: it depreciated in the 1980s and remained roughly constant since then. This is especially relevant for noncopper exports where the above-mentioned *Armington assumption* may apply. Further, if it is true that some tradable goods have imperfect substitutes and the *Armington assumption* matters, then relative productivity differentials should also be evaluated in light of trading partners' performance in that area. Given the recent deregulation and structural reform efforts in several major Latin American partners of Chile, it can be argued that its ERER vis-à-vis Latin America has appreciated less (or might even have remained relatively constant) than it did with respect to industrial countries where the rate of productivity growth in the tradables sector is lower. Nonetheless, there is a point where productivity-induced gains in competitiveness may allow exports to enter and compete in *higher trade leagues*, where goods are still not perfect substitutes, as with commodities, but are subject to stronger competition from more diverse sources. In that case, the *Armington assumption* will be less relevant and the broad (as opposite to regional) RER would be more appropriate for assessing competitiveness.

C. Indicators of Export Performance

40.   This section reviews indicators of export performance that may serve to assess and qualify the impact of the appreciation of the RER described in the previous section. These include changes in export composition, export market shares, and relative unit labor costs. The main finding is that, in the aggregate, manufacturing exports have been able to cope well with the appreciation in the 1990s, but with different effects across sectors. The RER appreciation, partly fueled by a booming copper sector, prompted noncopper sectors to try to compensate for the pecuniary loss in competitiveness through productivity-induced competitive gains, i.e., an *inverse Balassa effect* (where the direction goes from currency appreciation to productivity gains). Also, those manufacturing sectors with access to more capital-intensive technologies seemed able to cope better with the appreciation by adjusting their factor intensity to the lower relative cost of (mostly imported) capital, replicating the factor intensity of mining sector.

Export composition

41.   Chile's export performance through the 1990s has been remarkable. Total exports grew by 11 percent a year, almost twice as fast as in the 1980s. Total export volume also grew by 11 percent on average, and the export-to-GDP ratio rose to 23 percent from 21 percent. An important new trend, however, has been the behavior of copper exports. These showed an average volume growth of 10 percent in the 1990s, compared to 4 percent in the 1980s, while growth of export volume of noncopper products slowed to 11 percent in the 1990s from 13 percent in the 1980s. Reverting a previous, decade-long trend of declines, the share of copper has increased markedly, from 35 percent of total exports in 1993-94 to over 40 percent in 1996, and it is expected to continue increasing through the coming decade. This reversal is partly due to the introduction in the 1980s of new technological processes that

permit the exploitation of low-yield copper deposits at a relatively low cost.[26] This technological change has fueled higher investment flows (mostly foreign) and significantly altered Chile's factor endowment. As a result, Chile's share of world copper output has grown from 25 percent in 1990 to 34 percent in 1996.[27] The increased weight of copper in the economy and related capital inflows are likely to have contributed to the appreciation of the peso, which points to the need to pay closer attention to the potential for Dutch disease.

Export market shares

42.   The evolution of sectoral market shares in a context of currency appreciation can bring additional information on competitiveness. A strong increase in market shares is likely to reflect productivity gains, which may themselves be causing the appreciation or be induced by the appreciation to maintain competitiveness. However, a flat trend in market share may also reflect attempts by domestic producers to maintain their foreign market position by raising productivity (which may face rapidly decreasing marginal returns), and possibly squeezing profit margins (given sunk capital). An unsustainable reduction of profits will obscure in the short term the true deterioration in competitiveness and may lead to an overestimation of productivity gains. However, any country undergoing comprehensive structural reforms is likely to go through a process of sectoral shifts with some sectors expanding and others contracting or even disappearing. This would become a source of concern only if the dislocations in the economy posed balance of payment problems.

43.   Figure 3 and Table 3 show the evolution of Chile's export market share with respect to its main trading partners. It suggests that since the mid-1980s Chile has continuously increased its overall export market share. This trend holds even excluding trade in copper and copper products, pointing to productivity-induced competitive gains for noncopper goods in light of the currency appreciation. Chile's export share in Latin America has increased even more markedly, doubling over the past ten years. This is all the more relevant in view of the dynamic market profiles for Chilean exports—i.e., markets where demand growth has been in line with, or faster than, world aggregate import demand.[28]

44.   Working with market shares allows to control for external demand conditions in the absence of sectoral deflators. It can thus be assumed that the country's market share in a specific sector depends on the competitive stance of this country's sector, which itself can be decomposed into two components: a pecuniary source of competitiveness, linked to the RER, and a real component reflecting productivity differentials, the tariff structure, relative prices,

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[26]Known as solvent extraction and electrolytic refining, or SX/EW processes.

[27]Over one third of Chile's refined copper output is produced through the SX/EW processes, compared with 9 percent worldwide.

[28]On this, see the next chapter of this report.

and other factors.[29] Clearly, the two sources are intrinsically related, especially at the aggregate level and for relatively lengthy spans. Any disentangling at the sectoral level implicitly assumes that the evolution of the RER is relatively exogenous, as would be the case in a *Dutch disease* episode.

45.   In the case of Chile, the lack of data precludes a direct estimation of total factor productivity (TFP) at the sectoral level, and the exercise can only attempt to identify the underlying trend in market shares, once the RER effect has been controlled for.[30] Two caveats apply: first, and as mentioned before, the underlying trend may be driven by other factors besides productivity; second, and more importantly, changes in productivity can themselves be induced by movements in the RER, i.e., some sectors can react to a pecuniary loss of competitiveness (induced by an appreciating RER) by improving productivity. There may be a traditional colinearity problem making it difficult to identify both effects separately.

46.   The impact of currency appreciation on the behavior of export market shares by sectors was tested using a seemingly unrelated regression (SUR) approach. Each sector's market share was regressed against a trend[31] and the real exchange rate. Export market shares were then estimated at a constant exchange rate,[32] i.e., the market shares that would have prevailed if the exchange rate had not changed in the period being considered. The comparison of actual and estimated markets shares can be used to portray the magnitude of the appreciation effect in the 1990s vis-à-vis the effect of a composite of productivity gains, changes in the tariff structure, and other unspecified factors. In other words, what matters for the actual trend of market shares is not the RER effect *per se*, but the RER effect in relation to productivity gains. Figure 4 plots the results of this exercise: controlling for RER movements, most sectors present a significant underlying trend (shown as broken lines). However, the extent to which the underlying trends (productivity gains and other factors) and the currency appreciation offset each other varies by sector:

•   for wood manufactures, there is a large exchange rate effect that significantly reduces the steep underlying trend; while for animal feed products, the flat underlying trend shifts downward under the effect of appreciation;

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[29]The implicit export supply curve is inversely related to the real exchange rate, and shifts with changes in TFP, in the importance of trade integration agreements, etc.

[30]This assumes, for simplicity, that the RER is exogenous to the manufacturing sectors considered, i.e., that it is basically driven by the copper sector.

[31]The specification allowed the trend to be different in the 1980s and in the 1990s.

[32]Note that the exchange rate determines the abscissa or level of the estimated series, while the slope (the relevant factor for the exercise being performed) remains invariant to the RER chosen.

• for chemicals, beverages, fish and fish products, fruits and wood chips, and lumber, the RER effect is significant, but the actual trend appears to be driven to an important extent by the underlying trend;

• for metal goods, paper, and pulp, the appreciation does not seem to have a significant impact, i.e., the actual and underlying trends coincide.

47. In sum, some manufacturing sectors appear to have suffered considerable competitive losses from the appreciation while others seemed to have been quite resilient to it. One reason for this contrasting evolution may be the difference in productivity gains across sectors, which has allowed some of them to cope with the pecuniary loss of competitiveness from the currency appreciation. In addition, there seems to be a negative correlation between the degree of hardship imposed by the RER appreciation and the capital intensity of the export sector. The capacity to adjust the factor intensity and increase the use of capital (a factor increasingly less costly than labor in dollar terms) may have also helped to cope better with the appreciation. Because of this effect, it is difficult to find an adequate proxy for productivity at the sectoral level in Chile. Unit labor costs, for example, are driven both by productivity gains and by factor intensity adjustments related to the real appreciation.

Relative unit labor costs

48. Although direct indicators of sectoral profitability, effective costs and productivity trends are not available, partial cost or productivity indicators can be constructed.[33] For instance, a measure of unit labor costs in the manufacturing sector, adjusted to value added, can be constructed for Chile and most Latin American economies.[34] Figure 5 and Table 5 show that this indicator has increased in Chile (relative to the Latin American average) since approximately the mid-1980s, with a step increase in 1990 that is consistent with significant wage growth at that time, and a soft slope afterwards. Movements in the following years are clearly more dispersed across countries, with very large increases in labor costs relative to

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[33]Direct information on labor productivity also is lacking, but labor productivity trends can be roughly inferred from national accounts and employment surveys available since 1986. These suggest that labor productivity has grown by 2.3 percent a year from 1986 to 1990, then accelerated to 4.7 percent a year. In the late 1980s productivity growth was faster in the nontradable sectors. This pattern was reversed in the 1990s, with faster productivity growth in the tradable sectors (5 percent a year, compared with 4 percent in the nontradable sectors). Higher productivity growth in the tradable sectors was associated with a significant slowdown in employment growth, which declined from 6 percent a year from 1986 to 1990 to barely 0.5 percent a year from 1990 to 1996.

[34]Adjusting to value added allows to capture the impact of changes in other costs such as intermediate inputs and to better approximate trends in the return on capital in the manufacturing sector. It does not, however, reflect the impact of changes in the capital/labor ratio. Data to perform this exercise was only available for Latin American economies.

Peru and Argentina, but moderate growth or even declines with respect to other Latin American trading partners. This trend holds across several manufacturing sectors, independently of the degree of labor intensity of the sector. Given the context of continued real wage growth and currency appreciation in the 1990s, the evolution of relative ULC appears consistent with sizable productivity gains in the manufacturing sector.

49.   The data on export market shares and unit labor costs trends, however partial, seems to support the hypothesis that overall, manufacturing exports have remained competitive despite the appreciation of the RER in the 1990s, although with different degrees of difficulty across sectors. The appreciation of the currency, partly fueled by a booming copper sector, has prompted noncopper sectors to try to compensate for the RER-induced loss of competitiveness through productivity-induced competitive gains. This pattern of transmission from exchange appreciation to productivity gains is not new and has been emphasized recently in various countries of the region experiencing appreciations, particularly Argentina. In addition, various manufacturing sectors with access to more capital-intensive technologies appear to have coped better with the appreciation by adjusting their factor intensity to the lower relative cost of capital.

D. Concluding Remarks and Policy Issues

50.   All indicators confirm that the Chilean peso has appreciated slowly but steadily since the late 1980s. The question that this paper has sought to address is whether this appreciation has inflicted competitive losses on the Chilean economy, or whether it is merely the result of more competitive tradable sectors. As mentioned in Section 2, there are various exchange rate determinants that could serve to explain the observed pattern. In the case of Chile, a number of factors may have been at play besides productivity growth: a strong investment rate for a prolonged period contributing to changing the relative factor endowment and supporting an equilibrium appreciation; the increasing weight of Chile's copper sector as a result of technology-expanded reserves; a sharp increase in the extent of access and availability of foreign capital; and the increase in government spending as a proportion of GDP over the 1990s (likely to have impacted mostly in the shorter term). However, even if these factors imposed a pecuniary loss of competitiveness on noncopper exports, this loss appears to have been compensated by productivity gains, particularly in the manufacturing sector (inverse Balassa effect). In fact, overall manufacturing exports seem to have coped relatively well with the appreciation of the RER.

51.   Nonetheless, a further real appreciation could become problematic since intra-firm productivity gains are likely to face decreasing returns, and factor intensity adjustments toward capital intensive technologies have limits.[35] This leaves open the question as to future prospects—namely, whether the return to a pattern of persistent currency appreciation would

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[35]From a different perspective, Soto and Valdés (1997) found that in 1997 the exchange rate was at or slightly below its equilibrium level, pointing also to the need to carefully monitor future developments.

start to impose a severe hardship on noncopper exports. In this context, a number of policy initiatives—which have intrinsic merits on their own—would need to be addressed:

- Measures that can foster further sizable productivity gains, but are not under the direct control of private entrepreneurs include the improvement in infrastructure, particularly with respect to ports, road infrastructure, and sewage; and the upgrading of the regulatory framework to ensure that the pricing of key services (particularly energy and domestic telecommunications) is in line with international standards. The issue of deepening the structural reform process with a view to increasing productivity and competitiveness acquires special importance when considered vis-à-vis the progress of those reforms in Chile's major Latin American trade partners.

- A rebalancing in the macroeconomic policy mix (aiming at easing the burden on monetary policy) and possible modifications to the tax treatment of the mining sector could reduce pressures for currency appreciation stemming from strong capital inflows.

- More specifically, in view of the increasing weight of copper in the economy, a careful review of the policy toward the taxation of mining rents may be warranted. Royalty taxes on nonrenewable resources may be justifiable in light of intergenerational redistribution arguments and if nontraditional exporting sectors exhibit sizable (broadly defined) time-to-build properties. But if there is the potential for mining resources to become obsolete in a relatively short period and if royalties were to significantly deter new projects, then royalties may contribute to lower total fiscal revenues from mining. In that case, a wider income tax base would be more adequate.

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Table 1. Chile: Real Effective Exchange Rates

	Index numbers, average 1980-94 = 100					Annual percentage change 1/				
	Real effective exchange rates based on				Prices of	Real effective exchange rates based on				Prices of
	CPI	WPI	GDP defl.	ULC	NT/T	CPI	WPI	GDP defl.	ULC	NT/T
1980	141.2	128.6	143.3	142.0	107.2	16.2	20.1	13.1	14.4	...
1981	169.4	141.3	161.2	217.8	120.9	19.9	9.9	12.5	53.4	12.8
1982	154.3	124.8	149.3	169.1	127.3	-8.9	-11.7	-7.3	-22.4	5.3
1983	125.3	118.5	124.7	124.5	111.1	-18.8	-5.1	-16.5	-26.4	-12.7
1984	122.3	119.6	116.5	119.2	106.0	-2.4	0.9	-6.6	-4.3	-4.6
1985	97.7	106.5	93.6	60.4	102.7	-20.1	-10.9	-19.7	-49.3	-3.1
1986	80.7	93.7	78.9	66.0	99.6	-17.4	-12.0	-15.7	9.3	-3.0
1987	75.1	89.5	76.6	63.0	92.3	-6.9	-4.5	-2.9	-4.4	-7.3
1988	71.3	78.4	77.4	64.9	79.4	-5.1	-12.4	1.0	2.9	-14.0
1989	75.3	79.7	79.1	65.8	84.3	5.6	1.7	2.3	1.4	6.1
1990	72.5	76.9	73.9	69.7	86.2	-3.7	-3.6	-6.6	6.0	2.3
1991	74.5	82.9	76.6	79.1	86.6	2.7	7.9	3.7	13.4	0.4
1992	78.8	87.4	81.8	83.3	92.8	5.8	5.4	6.8	5.3	7.2
1993	80.1	86.7	82.0	86.2	101.6	1.6	-0.9	0.2	3.5	9.6
1994	81.7	85.4	85.0	89.2	102.1	2.0	-1.5	3.7	3.4	0.4
1995	86.4	90.4	94.4	97.4	...	5.7	5.8	11.0	9.2	...
1996	89.4	93.8	94.7	...	...	3.5	3.8	0.3	...	...

Source: Fund staff estimates.

1/ An increase indicates an appreciation.

Table 2. Chile: Real Effective Exchange Rates with Selected Trading Partners

	Index numbers, average 1980-94 = 100						Annual percentage change 1/					
	All trading partners	USA	Japan	European Union	Latin America	Asia excl. Japan	All trading partners	USA	Japan	European Union	Latin America	Asia excl. Japan
1980	141.2	158.4	170.6	128.2	122.5	130.7	1.6	13.9	23.5	14.1	7.1	15.7
1981	169.4	172.0	190.2	171.7	133.0	148.0	19.9	8.7	11.5	33.9	8.5	13.2
1982	154.3	143.1	182.9	157.3	141.5	132.4	-8.9	-16.8	-3.8	-8.4	6.4	-10.5
1983	125.3	108.7	135.4	131.1	132.0	107.5	-18.8	-24.0	-25.9	-16.7	-6.7	-18.8
1984	122.3	100.9	128.0	134.2	122.1	106.3	-2.4	-7.2	-5.5	2.4	-7.5	-1.1
1985	97.7	77.8	101.1	106.8	102.7	89.2	-20.1	-22.9	-21.0	-20.4	-15.9	-16.1
1986	80.7	75.5	69.9	80.1	97.8	88.4	-17.4	-3.0	-30.9	-25.1	-4.7	-1.0
1987	75.1	76.8	63.2	70.6	97.5	85.8	-6.9	1.7	-9.6	-11.8	-0.3	-2.9
1988	71.3	75.8	57.1	68.0	92.7	80.6	-5.1	-1.3	-9.6	-3.7	-5.0	-6.0
1989	75.3	77.6	64.5	74.1	91.7	77.7	5.6	2.5	13.0	9.0	-1.0	-3.6
1990	72.5	81.1	72.4	67.5	76.8	83.6	-3.7	4.5	12.1	-8.9	-16.2	7.6
1991	74.5	82.9	69.4	70.5	73.6	86.6	2.7	2.1	-4.1	4.4	-4.2	3.6
1992	78.8	89.6	71.6	73.1	75.9	93.3	5.8	8.1	3.1	3.7	3.0	7.6
1993	80.1	87.9	62.6	81.9	71.2	94.6	1.6	-1.9	-12.5	12.0	-6.2	1.4
1994	81.7	81.8	66.5	75.1	83.6	87.2	2.0	-7.0	6.1	-8.3	17.4	-7.8
1995	86.4	102.5	64.7	87.1	74.8	100.7	5.7	25.3	-2.6	16.0	-10.5	15.5
1996	89.4	102.8	77.2	89.0	75.5	102.1	3.5	0.3	19.4	2.2	0.9	1.4

Source: IMF, Information Notice System.

1/ An increase indicates an appreciation.

Table 3. Chile: Market Share in Main Export Markets

(Percentage of trading partners' total imports)

| | Main trading partners | | Latin America | |
	Total	Excl. copper	Total	Excl. copper
1980	0.28	0.09	1.07	0.50
1981	0.23	0.07	0.67	0.31
1982	0.25	0.09	0.74	0.27
1983	0.29	0.10	0.85	0.49
1984	0.24	0.10	0.97	0.50
1985	0.24	0.10	0.96	0.49
1986	0.23	0.11	1.18	0.65
1987	0.24	0.12	1.37	0.68
1988	0.29	0.13	1.18	0.52
1989	0.32	0.14	1.41	0.77
1990	0.29	0.13	1.27	0.82
1991	0.29	0.15	1.27	0.87
1992	0.31	0.17	1.16	0.81
1993	0.30	0.17	1.17	0.92
1994	0.31	0.18	1.29	0.97
1995	0.37	0.20	1.47	1.04
1996	0.37	0.20 ...	...	

Source: Fund staff estimates from the United Nations trade database.

Table 4. Unit Labor Costs in U.S. dollars (Value-Added Adjusted) in the Manufacturing Sector

(Annual percentage change)

	Chile	Argentina	Bolivia	Brazil	Colombia	Mexico	Peru	Uruguay	Venezuela
1981	25.5	-4.1	-25.3	11.0	-4.2	2.1	-6.1	-10.7	2.3
1982	-16.3	-15.3	-65.5	4.5	10.0	-1.3	4.6	-7.5	-3.6
1983	-12.2	20.9	233.9	-15.9	2.1	-30.1	3.6	11.9	-0.9
1984	-5.5	24.5	77.9	-8.6	2.5	-10.4	-9.0	-24.8	-4.6
1985	-8.7	-22.6	-37.4	17.8	-13.1	-1.2	0.6	19.0	-4.0
1986	29.1	-16.1	-41.5	-0.1	2.0	-4.8	9.7	7.1	-1.9
1987	1.4	18.4	81.3	-8.1	-6.6	-6.0	0.3	4.0	-9.3
1988	6.0	7.4	-22.7	6.0	-5.6	-2.8	-11.0	4.2	-0.6
1989	1.6	-14.5	7.4	-6.6	-4.4	-2.5	-21.3	-12.6	-20.3
1990	16.9	-3.9	-12.5	-6.5	-5.3	-0.8	-22.7	-13.0	3.6
1991	1.4	-27.5	-5.2	-7.9	-0.8	1.4	-18.0	-3.1	14.2
1992	-2.0	-18.7	13.5	18.1	-8.1	-9.7	-43.3	-1.1	-13.5
1993	-8.9	...	....	-2.8	-2.2	...	-2.1	-6.7	-0.9
1994	2.8	...	...	-0.7	...	...	...	-12.5	...

Source: Fund staff estimates from ECLAC's database of industrial surveys.

Figure 1. Chile: Evolution of the Real Effective Exchange Rate
(Index numbers, average 1980-94=100)
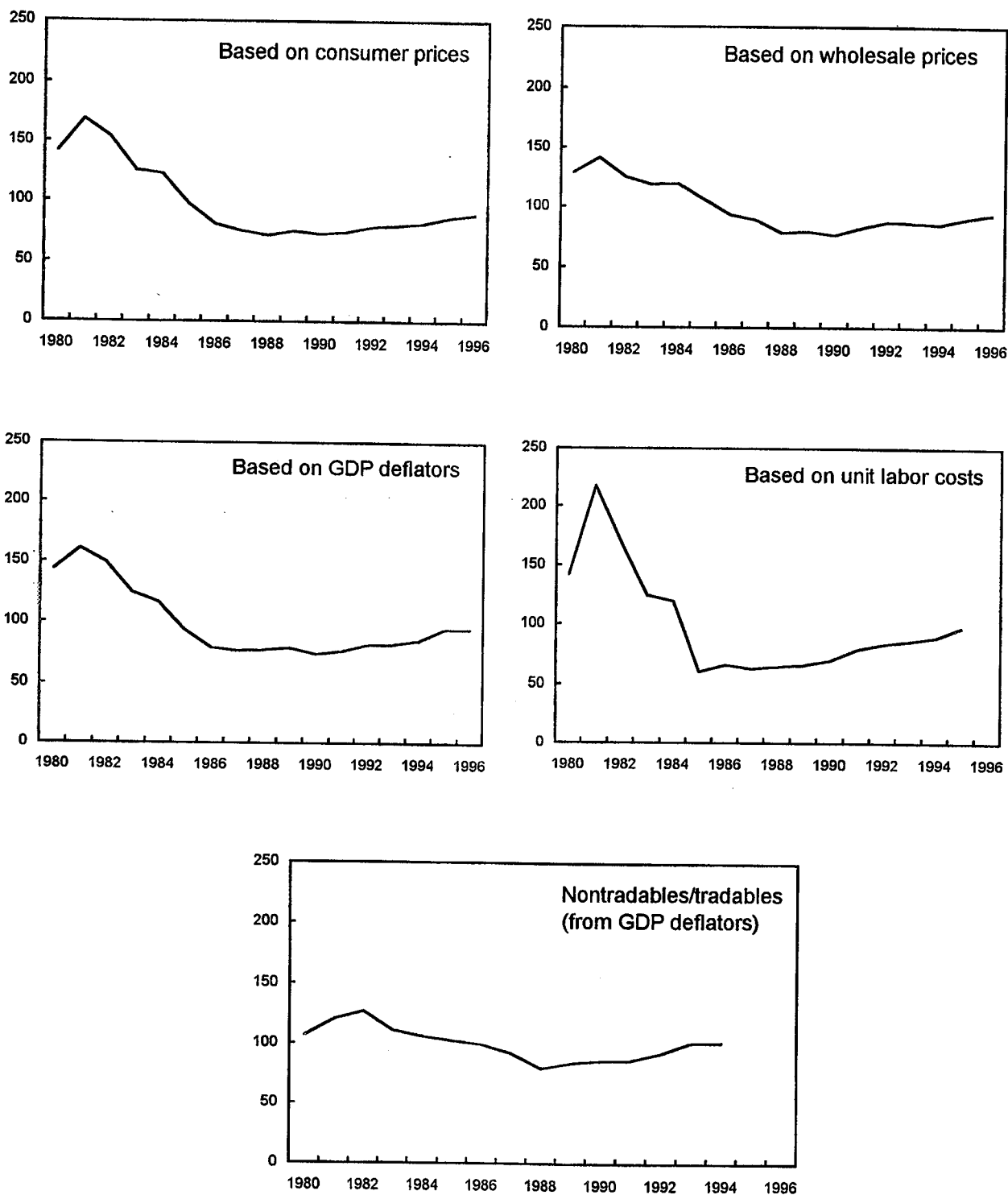
Source: Staff estimates.

Figure 2. Chile: Real Effective Exchange Rates with Selected Trading Partners
(Index numbers, average 1980-94=100)
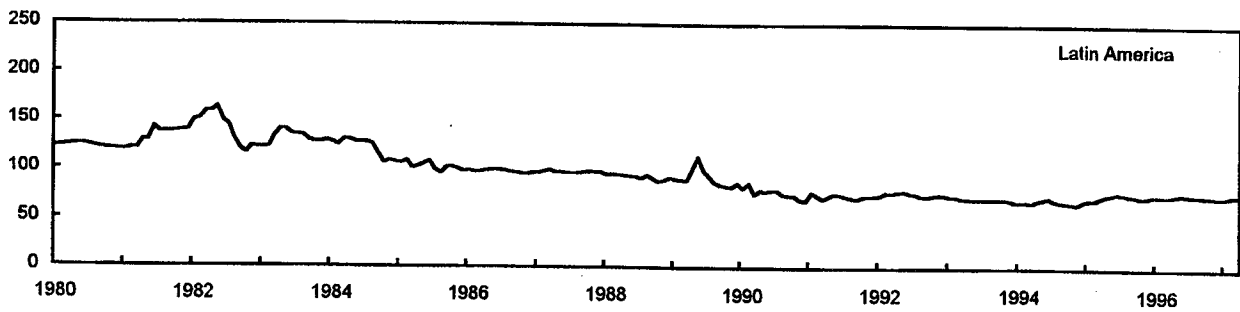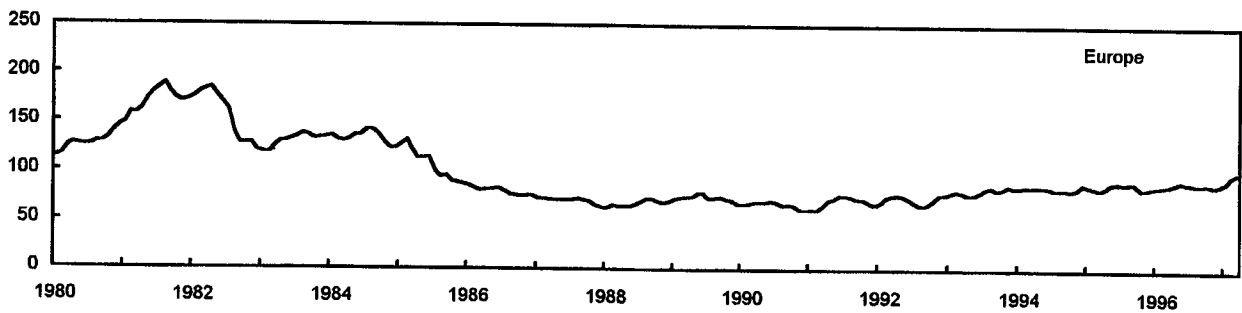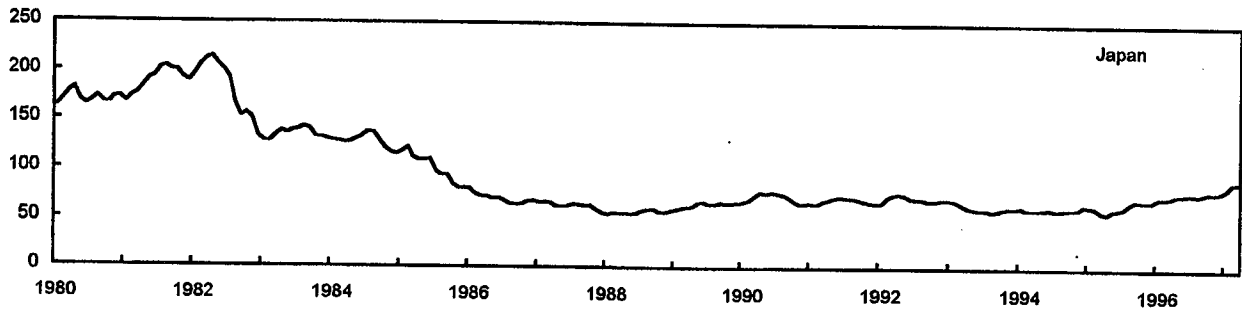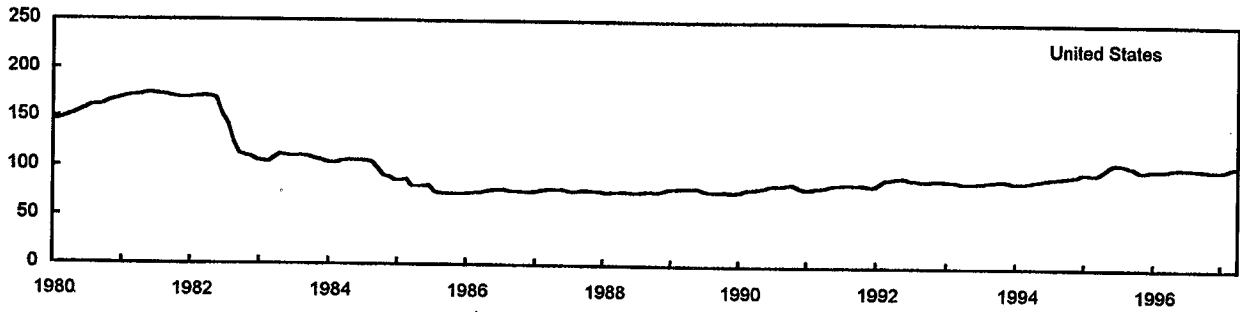
Figure 3. Chile: Market Share in Main Export Markets
(Percentage of total imports of main trading partners)
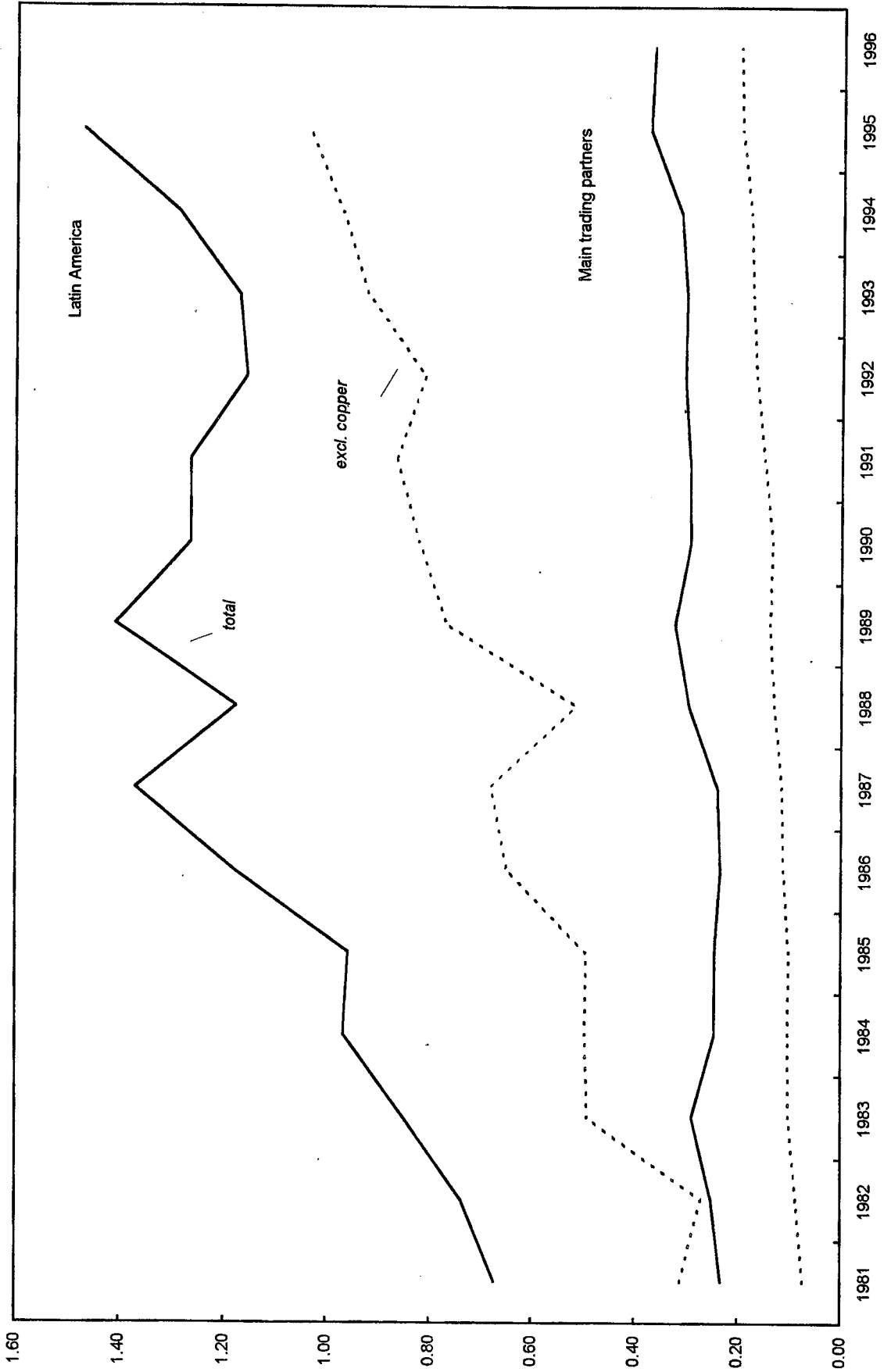
Source: Staff calculations from the United Nations trade database.

Figure 4: Export Shares and Export Shares at Constant Exchange Rate
(in logs)
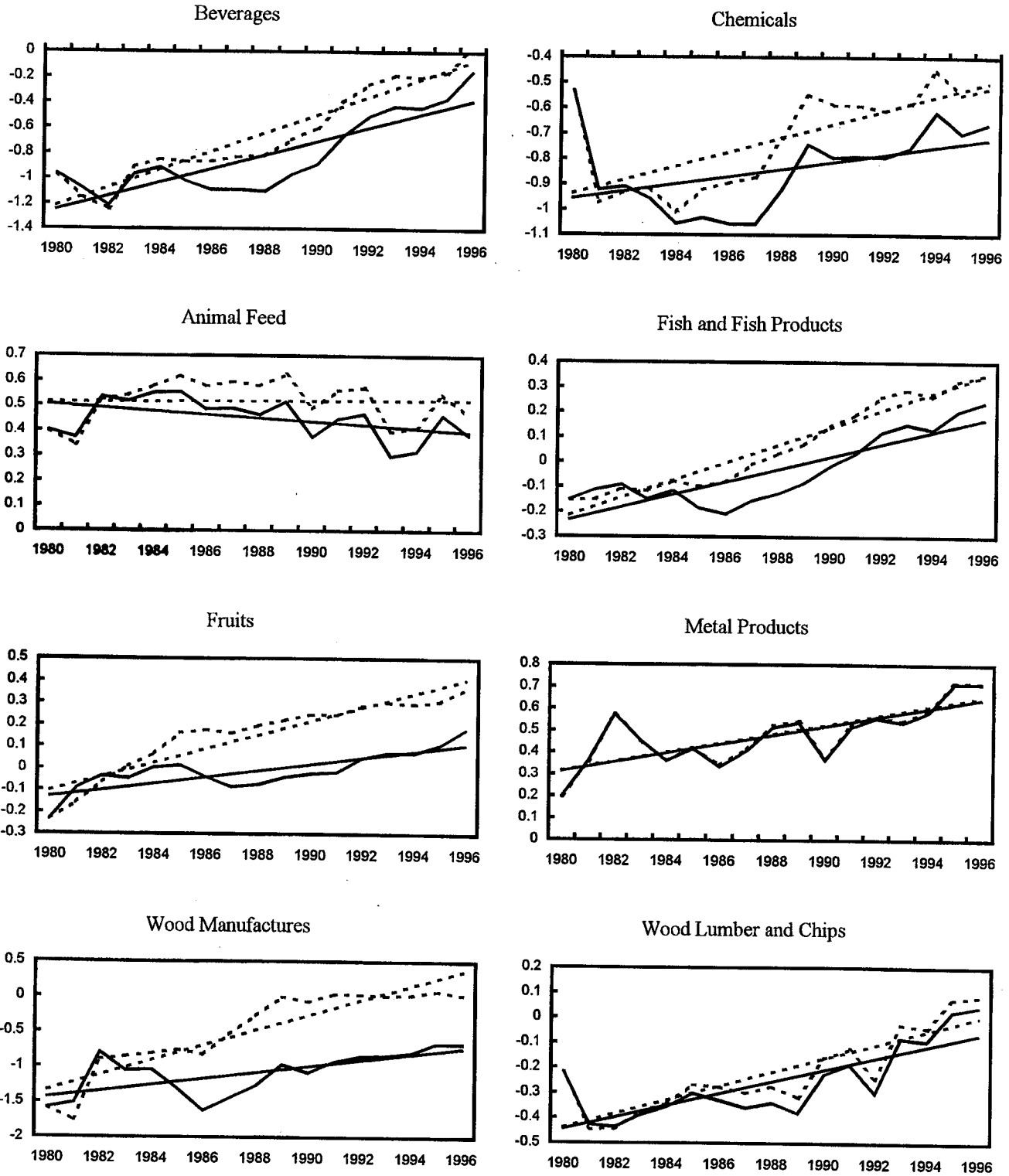
Beverages

Chemicals

Animal Feed

Fish and Fish Products

Fruits

Metal Products

Wood Manufactures

Wood Lumber and Chips

Solid line: actual market shares and corresponding trend
Broken line: market shares at constant exchange rate and corresponding trend

Figure 4: Export Shares and Export Shares at Constant Exchange Rate (in logs)
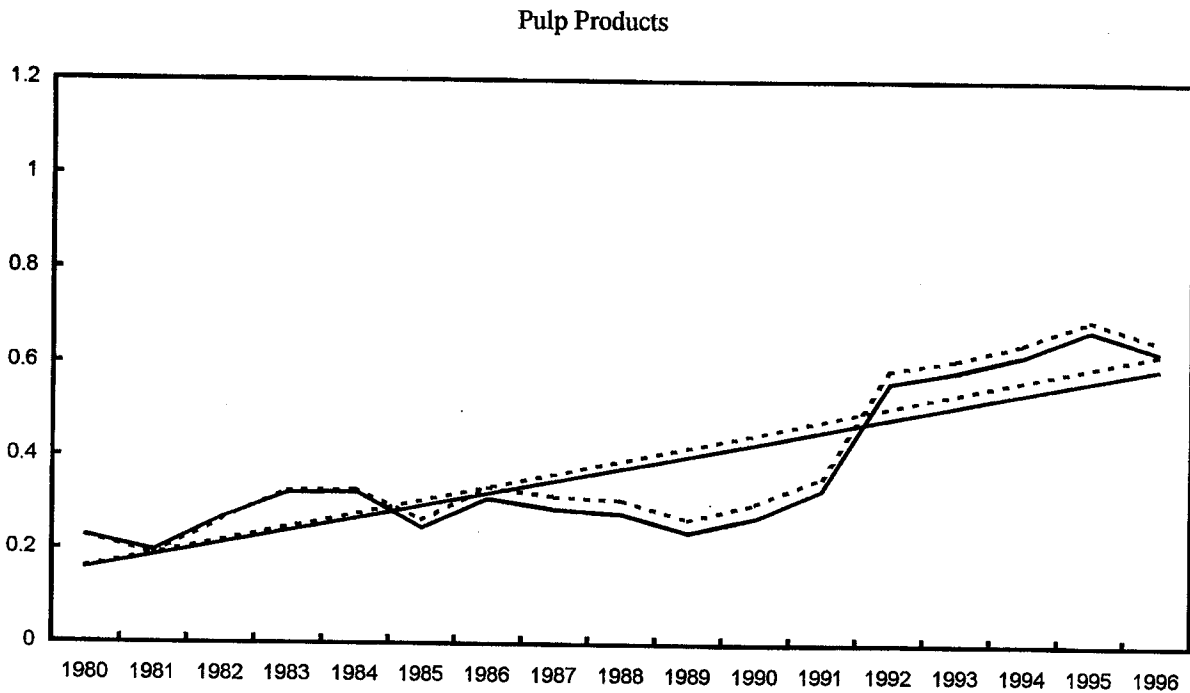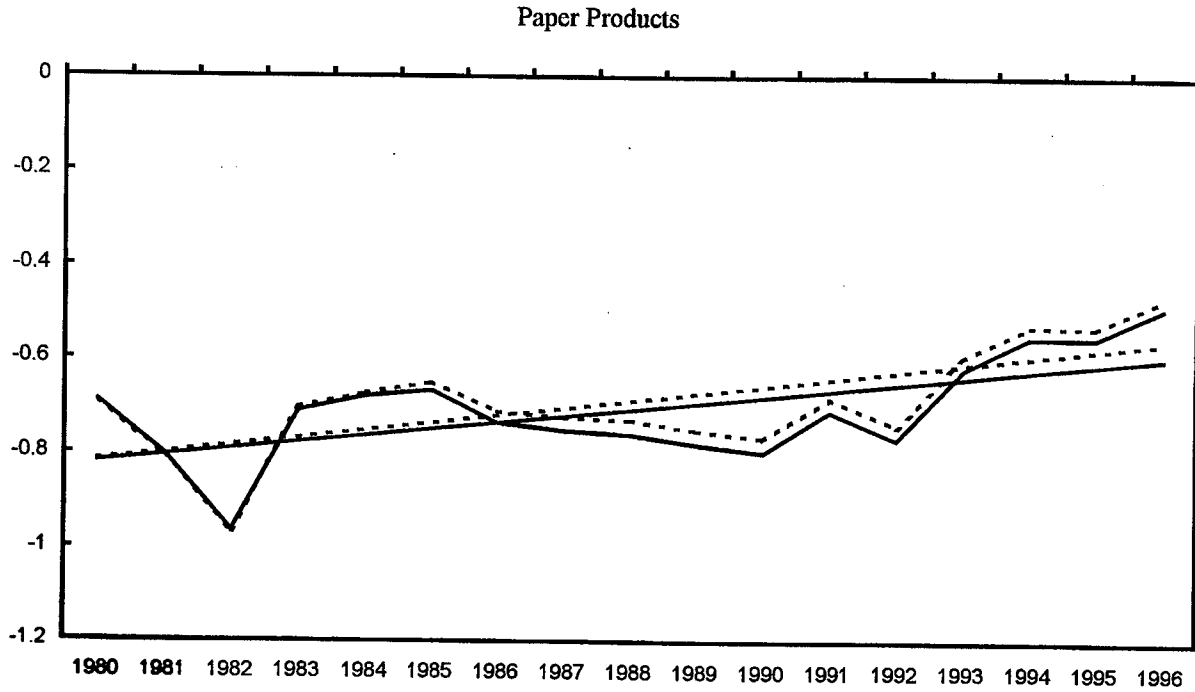
Paper Products

Pulp Products

Solid line: actual market shares and corresponding trend
Broken line: market shares at constant exchange rate and corresponding trend

Source: Fund staff calculations.

Figure 5. Chile: Relative Labor Costs in the Manufacturing Industry 1/
(Value-added adjusted; in U.S. dollars)
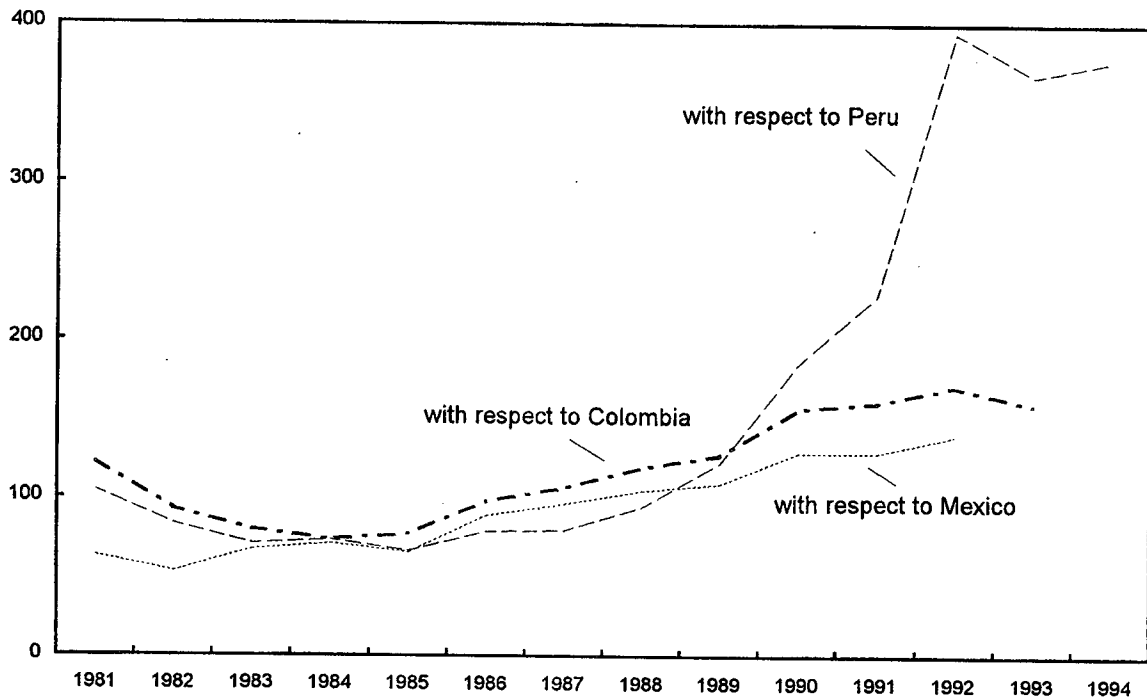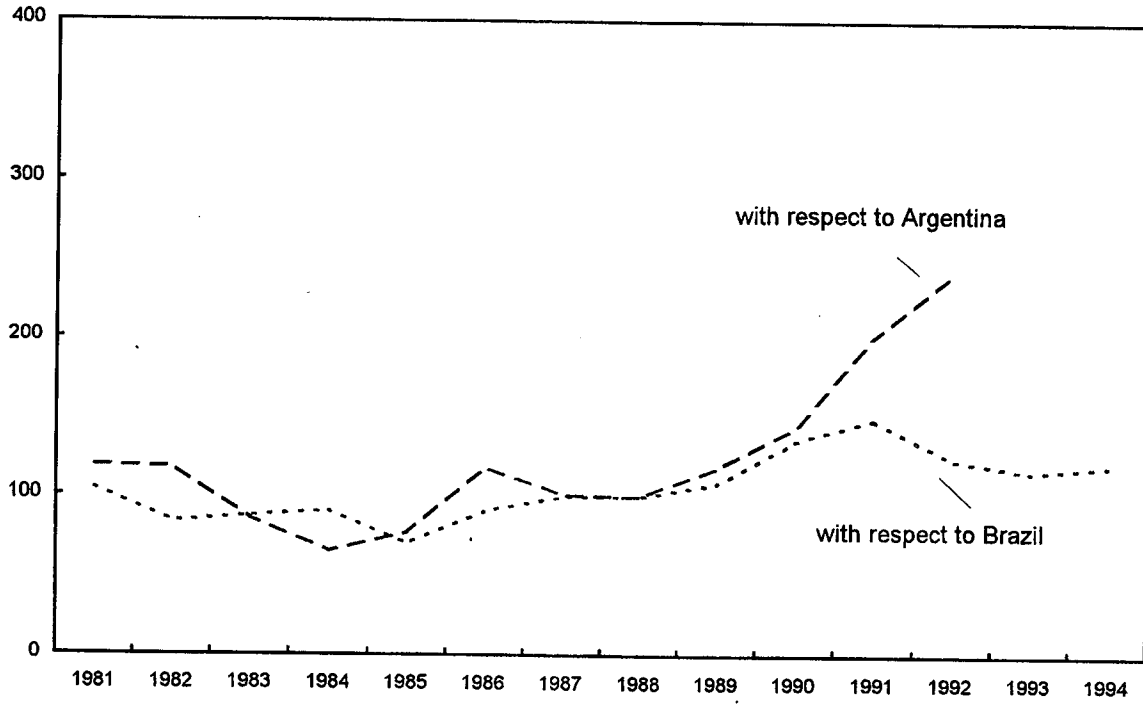
Source: Staff calculations, from ECLAC's database of industrial surveys.

1/ Ratio of Chile's unit labor costs to a trading partner's unit labor costs.

III. EXTERNAL SUSTAINABILITY: A STUDY OF CHILE[1]

ABSTRACT

This paper discusses the concepts of intertemporal solvency and sustainability with particular reference to the Chilean economy. It presents different approaches to the practical implementation of these concepts that have been put forward in the literature. It examines the evolution of Chile's external balance, and the factors leading to the substantial reduction in external indebtedness over the last decade. It highlights in particular the role of non-debt-creating flows, and presents measures of the stock of foreign-owned capital in Chile and of the country's net external liabilities. It then discusses potential indicators of external sustainability, comparing Chile's experience to a number of other middle-income developing countries in East Asia and Latin America that have experienced large current account deficits. Finally, it presents a simple forecasting exercise that tracks the effect of current account dynamics on the evolution of external liabilities, and draws the implications of the change in the composition of net external liabilities from debt to equity capital for Chile's external position.

A. Introduction

52.   Chile is an important case study for international economists interested in external viability. A strong expansion in the late seventies and early eighties was followed by a dramatic recession in 1982–83 in the wake of the debt crisis. After a period of adjustment, the Chilean economy has performed remarkably; growth has averaged 7 percent annually over the past ten years and the ratio of external liabilities to GDP has been substantially reduced. The continuing high growth has been accompanied by large capital inflows (mostly in the form of foreign direct investment), and by a widening of the current account deficit in 1996–1997 that is projected to persist over the next few years. Should a larger current account deficit be a source of concern, especially in the light of the persistent real appreciation of the peso? Is Chile vulnerable to sudden swings in market sentiment that could cause a reversal in capital flows? How does it compare to countries at similar levels of development that are running persistently large current account deficits or that have suffered external crises?

53.   This paper provides a framework to address these questions. It discusses the concepts of intertemporal solvency and sustainability and the proposed approaches to make them operational that have been put forward in the literature. It describes the evolution of Chile's

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external position and presents estimates of the existing stock of foreign-owned capital, which constitutes an increasingly important fraction of the country's external liabilities. It then discusses potential indicators of external sustainability, comparing Chile's experience to a number of other middle-income developing countries in East Asia and Latin America that have experienced large current account deficits. Finally, it presents a simple forecasting exercise that tracks the effect of current account dynamics on the evolution of external liabilities.

54.   In general, one can identify two approaches to the issue of current account sustainability. A first approach relies on long-run conditions for intertemporal solvency, and focuses on the path of current account balances that is consistent with the stabilization of some sustainability indicator, such as the ratio of external debt to GDP. A second approach, linked to the extensive literature on balance-of-payments crises, relies on "leading indicators" (see, for example, Dornbusch, Goldfajn and Valdés (1995), Sachs, Tornell and Velasco (1996b), Milesi-Ferretti and Razin (1996a, b), and Kaminsky et al. (1997)).[2] Some authors (see, for example, Calvo (1995, 1996)) are strongly critical of sustainability analyses that focus exclusively on solvency conditions and flow variables, such as the current account, and argue that external crises can occur because of stock imbalances and capital market factors, regardless of the current account position. This implies the need to monitor capital account and financial indicators. This paper incorporates elements of both approaches. It provides a general accounting framework that can be used to undertake the first type of sustainability exercise, and discusses a number of indicators of external vulnerability that have been put forward in the literature, while highlighting their link with standard intertemporal finance and macroeconomic analysis.

B. Intertemporal Solvency and Sustainability:
Definitions and Conceptual Issues

55.   In evaluating the macroeconomic and external implications of persistent current account deficits, three questions are often posed: Is the debtor country **solvent**? Are current account imbalances **sustainable**? Is the current account deficit **excessive**? This section develops a notion of current account sustainability and discusses its relation with the concept of solvency. Annex I contains a brief discussion of methodologies to infer whether current account deficits are "excessive".

56.   The solvency condition simply says that the present discounted value of future trade balances must be equal to the present level of net external liabilities. If a country has run persistent trade and current account deficits, thereby accumulating external liabilities, and if its

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[2]The literature on external crises has blossomed in recent years. On the theoretical side, Obstfeld (1994) and others, building on Obstfeld (1986), have constructed models with multiple equilibria in which external crises can have self-fulfilling features. On the empirical side, Eichengreen et al. (1995), Krugman (1996) and others have debated whether the stylized facts associated with external crises support the first- or second-generation models of crises.

growth rate is below the cost of servicing external liabilities, the solvency condition requires a "turning point" from trade deficits to surpluses, but is silent about the timing and nature of this shift. This reflects the fact that the solvency condition does not impose any structure on future events/policy decisions since it does not incorporate any behavioral assumption. It is possible to impose some more "structure" on the condition for solvency by considering the fact that, for an economy to remain solvent, the ratio of external liabilities to output cannot grow without bound. Assume that the domestic economy grows at a given long-run rate γ which is below the real rate of return on external liabilities r^*. Note that if long-run growth is higher than r^*, the country can continue to run trade deficits forever while still maintaining the ratio of external liabilities constant. This is equivalent to playing a "Ponzi game"—using new borrowing to service outstanding liabilities.[3] If the economy is in steady state, with consumption (c), investment (i), and public expenditure (g) constant as a fraction of GDP, the long-run net resource transfer (trade surplus) that an indebted country must undertake in order to keep the ratio of external liabilities to GDP constant is given by:

$$tb = 1 - i - c - g = b(r^* - \gamma) \tag{1}$$

where b is the level of external liabilities. The size of the net resource transfer implied by condition (1) has often been used as a simple measure of solvency. It has, however, clear shortcomings. First, it provides a long-run condition for the stability of the ratio of external liabilities to GDP, but there is no presumption on whether that ratio is "optimal" or "appropriate". Second, for developing countries protracted current account imbalances are likely to characterize their transition towards higher levels of output, implying that steady-state conditions may not be the appropriate benchmark to evaluate the sustainability of current account imbalances. In other words, there is no presumption that in the short and medium run a fast-growing country with low external liabilities should aim at stabilizing their ratio to GDP or to exports at its current level.

57.   The notion of solvency defined above is based on an accounting relation, and has therefore no behavioral content—for example, it does not specify the factors determining long-run growth or the long-run ratios of public and private consumption and investment to GDP. Therefore, the literature has attempted to define a baseline for private agents' behavior and for future policy actions. With regard to private agents' behavior, it is typically assumed that they aim at smoothing their consumption stream, consistently with maximization of a concave utility function. With regard to future policy actions, in the case of public sector solvency the baseline has typically been established by postulating a continuation into the indefinite future of the current policy stance **and** no change in the relevant features of the macroeconomic environment. This gives rise to the notion of *sustainability*—the current policy stance is sustainable if its continuation in the indefinite future does not violate solvency (budget) constraints. The definition of sustainability based on solvency considerations is

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[3] The next section discusses the dynamics of external liabilities in more detail.

simpler for fiscal imbalances, given that these can be associated (at least to some degree) with direct policy decisions on taxation and government expenditure (see, for example, Corsetti and Roubini (1991)). Defining sustainability is more complex in the case of current account imbalances, given that these reflect the interaction between savings and investment decisions of the government and domestic private agents, as well as the lending decisions of foreign investors. While government decisions can, to a first approximation, be taken as given, private sector decisions are going to depend on their perceptions regarding future government actions, and foreign lenders' decisions will in turn depend on their perception of private and public sector behavior. All this implies that mechanically projecting into the future the current level of the current account deficit may not provide an appropriate benchmark for evaluating the viability of a country's external position or its vulnerability to external shocks.

58.   The question of whether current account imbalances are sustainable can be reformulated as follows. If the current policy stance is maintained, is the "turning point" from trade deficits to trade surpluses likely to occur smoothly (i.e., without drastic changes in consumption and economic activity)? If the answer is yes, then the current policy stance is sustainable. By contrast, if an unchanged policy stance is eventually going to entail a "drastic" policy shift to reverse the trade balance position (such as a sudden policy tightening causing a large recession), or lead to a financial crisis (such as an exchange rate collapse that raises the probability of default on external obligations), we have a case of unsustainability. This drastic change in policy or crisis situation can be triggered by a domestic or an external shock that causes a shift in domestic and foreign investors' confidence and a reversal of international capital flows. A crisis episode can be characterized by a sharp contraction in consumption and economic activity, in conjunction with the reversal of the trade balance, and an inability to fully service outstanding external obligations at their original terms. Note that the shift in foreign investors' confidence may relate to their *perception* of a country's inability or unwillingness to meet its external obligations.

59.   This paper examines external sustainability in two complementary ways. It provides a detailed examination of Chile's accumulation of external liabilities (Section 3) and its likely future evolution (Section 5). It also discusses several indicators (Section 4) that can act as "warning signals" of impending sustainability problems.

C. Chile's External Balance: Historical Experience

60.   In order to understand the dynamics of external liabilities in Chile, it is useful to start from a simple accounting framework that relates the accumulation of external liabilities as a fraction of GDP to the behavior of the trade balance, the path of world interest rates, the rate of real appreciation/depreciation and the growth rate of the economy. The "textbook" difference equation is given by:

$$b_t = \frac{1 + r_t^*}{(1 + \epsilon_t)(1 + \gamma_t)} b_{t-1} - tb_t \tag{2}$$

where b is the ratio of external liabilities to GDP, r^* is the real rate of interest on external liabilities (nominal rate minus the rate of change of the U.S. GDP deflator) and ϵ is the rate of real exchange rate appreciation (measured relative to the U.S. with GDP deflators). For the purpose of this accounting exercise the relevant real exchange rate is the one relative to the United States, because external debt is measured in U.S. dollars.[4] Similarly, it is possible to express the evolution of the ratio of external liabilities to exports b^x as a function of trade volumes, the terms of trade and the foreign interest rate deflated by domestic export prices:

$$b_t^x = \frac{1 + i_t^*}{(1 + \pi_t^x)(1 + \gamma_t^x)} b_{t-1}^x - (1 - \frac{M_t}{X_t} \frac{1}{tt_t}) \qquad (3)$$

where i^* is the nominal interest rate on external liabilities, π^x is the rate of increase in export prices in foreign currency, γ^x is the rate of growth of export volumes, X (M) is the volume of exports (imports) and tt are the terms of trade.

61. In order to address the issues raised by large capital inflows in developing countries during the 1990s, it is necessary to extend this framework by breaking down external liabilities into their components. In level terms, the dynamics of foreign debt and foreign equity are (approximately) described by the equations:

$$\begin{aligned} D_t &= D_{t-1} - CA_t - FDI_t + \Delta FX_t \\ EQ_t &= EQ_{t-1}(1 + \pi_t^k) + FDI_t \end{aligned} \qquad (4)$$

where D is the level of external debt, CA the current account balance, FDI the net flow of foreign direct investment and portfolio equity, ΔFX the change in foreign exchange reserves, EQ is the stock of net foreign-owned capital (net equity) and π^k is the rate of change of the value of foreign capital measured in dollars.[5]

62. Using the system of equations (4) and taking ratios of variables to GDP, we can express the dynamics of net external liabilities as follows:

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[4] More generally, the appropriate real exchange rate for this exercise would reflect the currency composition of external debt.

[5] Since we assume that returns on foreign-owned capital are calculated net of depreciation, we do not include a term for the depreciation of existing capital. See Annexes II and III for details.

$$d_t + eq_t = \frac{1 + r_t}{(1 + \epsilon_t)(1 + \gamma_t)} d_{t-1} + \frac{1 + p_t}{(1 + \epsilon_t^k)(1 + \gamma_t)} eq_{t-1} + fx_t - \frac{1 + r_t^f}{(1 + \epsilon_t)(1 + \gamma_t)} fx_{t-1} - tb_t \quad (5)$$

where eq is the share of foreign equity holdings in GDP, fx the share of foreign exchange reserves in GDP, r^f the real rate of return on reserves, p the real rate of return on foreign capital in dollars calculated on an accrual basis (net of depreciation, deflated by the dollar price of capital), and ϵ^k is the rate of change in the price of domestic output relative to the price of foreign capital (see Annex II for details). It has implicitly been assumed that equity holdings are dollar-denominated, and that capital gains/losses on net foreign asset holdings are incorporated in their rate of return.

63.   Following the system (4) and equation (5), our examination of Chile's external liabilities focuses on four aggregates: gross external debt (including short-term debt and trade credits), foreign exchange reserves, the stock of portfolio equity, and the stock of foreign capital, given by the cumulative value of foreign direct investment flows (FDI). The first two and the latter two can be combined so as to yield a measure of net debt and net equity position (see Figure 1 and, for analytical derivations, Annexes II and III).

64.   While the data on net debt are reasonably straightforward, estimating the net equity position is more complex and inevitably entails elements of arbitrariness. Table 1 presents various estimates of Chile's net external position. The stock value of inward FDI is obtained by cumulating the dollar amount of yearly flows, adjusted so as to reflect variations in the price of capital, under the assumption that profits are calculated net of depreciation. A similar methodology is used for the cumulative value of outward FDI flows, using as price of capital an index of world export prices.[6] The table also reports cumulative FDI flows without any price adjustment for existing stocks. These calculations are on a cash basis, and therefore do not count retained earnings as new FDI; this implies an underestimation of the stock of foreign capital to the degree to which nonrepatriated profits are re-invested in foreign-owned firms (see Annex II). The third measure of the stock of foreign capital is based on an estimate of the stock of foreign capital outstanding in 1996 and explicitly accounts for reinvested profits.

65.   The stock of foreign-owned equity in Chile is calculated by cumulating yearly flows and adjusting the pre-existing stock for variations in the Chilean stock market index IPSA measured in dollars (see Annex II). Chilean holdings of foreign equities are calculated in a similar fashion, adjusting past stocks for variations of the MSCI index of stock market returns. The methodology used for the adjustment of "historical" flows to market prices is somewhat simplistic; nevertheless, failure to adjust for changes in the dollar level of stock prices leads to

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[6] Results are analogous when using the same index of the price of capital as for inward FDI flows.

a substantial underestimation of the stock of equity assets and liabilities outstanding because of the rapid increase in the Chilean and world stock markets during the 1990s, the period during which equity flows have become significant (see Table 1).

66.　It should be noted that in the event of a drastic reversal in equity flows, the market value of the stock of equity liabilities overstates the amount of capital that can leave the country, since these holdings need to be liquidated (which would cause stock prices to fall). More generally, a distinguishing feature of *equity* with respect to debt is that the value of the stock of foreign-owned capital in Chile is not invariant to the overall performance of the Chilean economy: it may therefore go down following bad shocks and rise following good shocks, implying better risk sharing than foreign debt. The calculations undertaken in the paper do not account for such possible fluctuations, although they allow for a pro-cyclical pattern in the profitability of foreign capital.

67.　The sum of the net equity and net debt positions (the latter defined as gross debt minus reserves) provides a rough measure of total external liabilities. An alternative measure of total net external liabilities is the cumulative value of current account deficits (see Annex II). The two measures can differ because of valuation effects due to fluctuations in exchange rates, the impact of debt reduction plans, unrecorded transactions (errors and omissions) and changes in the price of capital and in equity values.[7] Table 2 provides values for the various elements of the debt accumulation equation identified in equation (5).

68.　The evolution of the external balance in Chile has been strongly shaped by external events: the price of copper, world interest rates and the overall pattern of international capital flows. In 1975 the ratio of net external debt to GDP reached 64 percent, as a result of the deep recession, a large current account deficit (due to the fall in the price of copper) and a sharp real depreciation. The ratio then declined to around 30 percent in 1980, notwithstanding current account deficits averaging 4 percent of GDP, because of high output growth, a real exchange rate appreciation and low world real interest rates (Table 2). At the end of 1981, the net debt to GDP ratio had risen to 38 percent, as a result of the increase in world interest rates and a current account deficit of over 14 percent of GDP.[8]

69.　The crisis of 1982 implied a sharp rise in external indebtedness, because of the drastic fall in GDP (14 percent), a real depreciation and a large current account deficit. In the following three years, the net debt-to-GDP ratio continued to rise, peaking at over 100 percent in 1985, because of the burden of interest payments and the real depreciation of

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[7]The data for FDI flows are available only from the mid-1970s. The data on current account deficits also start in 1975; therefore the starting point for the series on cumulative current account deficits is taken to be net debt outstanding at the end of 1974.

[8]Although the debt-to-output ratio looked manageable, the debt-to-export ratio had increased to over 300 percent.

the peso vis-à-vis the U.S. dollar, notwithstanding a switch to large surpluses of the trade balance (see Table 2 and Figure 1).

70.   In the following years a combination of high growth, debt buybacks and restructuring agreements, and a real appreciation of the peso implied a rapid reduction in the amount of external debt, accompanied by an increase in "equity" liabilities as a result of debt-equity swaps. By 1989 the net debt to GDP ratio was halved. In more recent years current account deficits have been modest, the real exchange has appreciated and growth and foreign direct investment flows have been strong. As a result, the overall net external position of Chile has improved, with net debt falling and equity liabilities increasing. At the end of 1996, the stock of net foreign capital in Chile is estimated at around 19 percent of GDP; the stock of portfolio equity at "market" prices amounts to 7 percent of GDP (it is below 4 percent at "historical" prices). With external debt at around 35 percent and reserves at over 20 percent of GDP, the net external position is slightly above 40 percent of GDP.

71.   It is interesting to highlight the intrinsic dynamics of Chilean external liabilities with the help of equation (5). Over the past few years, the real interest rate on external debt has been below the rate of growth of the economy and the real exchange rate has appreciated, implying that the dynamics of debt point towards a reduction in net external liabilities, abstracting from new flows (the coefficient on d_{t-1} is below unity). However, the real rate of return on equity has been considerably higher than the growth rate, implying that intrinsic dynamics of foreign capital push towards an increase in external liabilities (the coefficient on eq_{t-1} is above unity). As the stock of equity capital becomes more important than the stock of debt, external liabilities tend—ceteris paribus—to decline more slowly (or grow faster). In other words, foreign-owned capital has more desirable risk-sharing properties than foreign debt, but it also implies, ceteris paribus, higher investment income outflows and therefore a more rapid accumulation of external liabilities. It is important to note that the rate of growth of the economy may itself depend on the composition of external liabilities. If FDI has complementarities with domestic investment and if it generates positive technological spillovers, a higher stock of foreign capital may be associated with faster growth, and not only with better risk-sharing. Indeed, a cross-country study by Borensztein, De Gregorio and Lee (1994) finds that direct investment flows raise output growth (see also Coe, Helpman and Hoffmaister (1996) for evidence on technological spillovers from industrial to developing countries).

72.   In summary, Chile's external position has improved considerably over the past decade, and foreign-owned capital represents an increasing fraction of net external liabilities. While various "safety" thresholds for the ratio of debt to GDP or debt to exports have been put forward in the literature, no clear indications are provided as to a country's "appropriate" net equity position or to the optimal composition of external liabilities. It is therefore interesting to compare Chile's net external position and its composition with those of a number of other middle-income countries in East Asia and Latin America. This is done in the next section. More generally, however, experience has shown that the vulnerability of a country's external position cannot be summarized by relying on a single indicator, such as net external liabilities.

Therefore, the next section also presents a cross-country comparison of a number of other indicators of external sustainability suggested by economic theory and empirical evidence.

D. Cross-Country Evidence on Sustainability Indicators

73.   As noted in Section 2, an approach to current-account sustainability that is exclusively based on debt-accumulation equations is likely to be incomplete, among other things because it ignores factors related to the willingness to lend of international investors that may not be directly related to the outstanding stock of external liabilities. This section provides a comparison of Chile's experience with selected countries in Latin America (Argentina, Brazil, Colombia, Mexico and Peru) and East Asia (Indonesia, Korea, Malaysia, Philippines and Thailand) that have run large and persistent current account deficits for a number of years. We discuss in particular potential crisis indicators, "early warning signals" and factors likely to trigger reversals in current account imbalances. The analysis proceeds by first examining what indicators economic theory and existing empirical evidence suggest should have a bearing on the sustainability of external imbalances (see Milesi-Ferretti and Razin (1996a, b); and Kaminsky, Lizondo and Reinhart (1997)).

External sector indicators

74.   **Current account deficit**: The size of the current account deficit is an obvious *flow* indicator, even though several authors (Calvo (1995); Sachs et al. (1996b)) have pointed out that it is not a good predictor of external crises. Chile's average current account deficit during the past few years is one of the smallest among the countries in our sample (see Table 3). This result holds even when one considers that Chile's profit remittances are accounted for on a cash basis, implying that official numbers may underestimate the size of the current account deficit and, symmetrically, the flow of FDI.

75.   **Trade openness**: Countries that are very open to trade can service external debts more easily, because debt service will absorb a lower fraction of their total export proceeds. In order to generate the foreign exchange necessary to service external debt in case of a disruption in capital flows, a country needs to engineer a resource shift towards the exports sector. Since this shift cannot occur instantly, sharp import compression may become necessary, with adverse consequences on the domestic industries relying on imported inputs (Sachs (1985) and Sachs and Warner (1995)). This import compression may be more costly in a relatively closed economy, because it is more likely to entail cuts of "essential" imported inputs (Williamson (1985)). However, a more open economy is more vulnerable to external shocks such as fluctuations in the terms of trade or swings in foreign demand. In this regard, vulnerability is reduced by a well diversified commodity composition of trade. Fluctuations in commodity prices have a larger impact on the terms of trade for countries with a narrow export base and those particularly dependent on imports of raw materials, thus weakening their ability to sustain current account deficits (see the discussion of terms of trade below).

76.   The size of the export sector can also be related to willingness-to-lend and willingness-to-pay considerations. Insofar as debt default is associated with trade disruptions (such as difficulties in obtaining export credits), it may be more costly for an open economy. Furthermore, the constituency against actions that would entail trade disruptions is also likely to be stronger, the larger the size of the export sector. According to the theory of sovereign international borrowing (see, for example, Eaton and Fernández (1995)), higher costs of default would reduce the likelihood of sudden reversals of capital inflows, because foreign investors will perceive the country—ceteris paribus—as less risky.

77.   Although the theoretical arguments can go either way, the empirical evidence suggests that countries that are more open to trade tend to grow faster and are less likely to experience external crises (see, for example, Sachs (1985), Sachs and Warner (1995) and Milesi-Ferretti and Razin (1997)). Table 4 presents data on trade openness, defined as the average ratio of exports and imports to GDP. Openness in Chile is below most East Asian countries, but high by Latin American standards. It is notably higher than in the early 1980s, although it has fallen in recent years because of relative price developments (i.e., the real exchange rate appreciation). Clearly the degree of openness depends also on "exogenous" factors, such as the size of the country, its population and its geographical location. A recent study by Loayza and Palacios (1997) finds that, after controlling for these factors, Chile's degree of "endogenous" openness has increased over the past decade and is now higher than what these exogenous factors would predict. All the countries in the sample have increased the diversification of their exports over the past two decades. Chile relies more heavily on commodity exports than most other countries in our sample, and is therefore more vulnerable to swings in the terms of trade.

78.   **Real exchange rate.** In developing countries that have undertaken structural reforms, large capital inflows and a real exchange rate appreciation may reflect an increase in productivity and in the return to capital; if current account deficits also emerge because of the underlying increase in permanent income, they would not constitute an indicator of unsustainability. The difficulty lies clearly in evaluating to what degree a real appreciation reflects improved fundamentals, rather than being the outcome of, say, short-term capital inflows intermediated by the domestic financial system. In this context, weaknesses in domestic financial intermediation and supervision can contribute to excessive credit expansion, resulting in higher-than-optimal expenditure (in the form of excessive consumption and/or inefficient investment) and thus contributing to the overvaluation.

79.   Figure 2 depicts the path of the CPI-based real effective exchange rate for the period 1990–96. It should be noted that while a sizable real exchange rate appreciation preceded the 1982 crises in Chile and Mexico (not shown in the chart) and the Mexican crisis of 1994, the recent financial crises in Indonesia and Korea were not preceded by a real effective appreciation, and the Thai baht had not appreciated substantially prior to its collapse. As noted in the previous section, the real exchange rate in Chile has appreciated by close to 40 percent over the past seven years. The size of the real appreciation is smaller than in

Argentina, Colombia, and Peru but larger than in most East Asian countries. Clearly, an evaluation of the appropriateness of a given level of the real exchange rate has to rely on an analysis of the underlying fundamentals, such as productivity growth, the terms of trade, fiscal policy, etc.[9] Empirical studies suggest that Chile's equilibrium real exchange rate has appreciated during the 1990s, spurred by productivity gains, but do not come to firm conclusions regarding the degree of overvaluation, if any, of the currency (see, for example, the studies in Morandé and Vergara, 1996, Broner et al. (1997), Soto and Valdés (1997), and Soto (1997)).

80.   **Size of net external liabilities**. This is the most natural indicator of the viability of a country's external position. However, the drastic change in the composition of capital flows between the late 1970s–early 1980s and the early 1990s has made the task of calculating a country's external liabilities more complex. During the earlier period all the countries in our sample relied heavily on commercial bank borrowing in the form of syndicated loans, as well as on borrowing from official creditors. Therefore, the dominant component of external liabilities was (mostly official) external debt, and measurement of flight capital was the thorniest issue. In contrast, the experience of the 1990s is characterized by large private capital inflows, a sizable fraction of which has taken the form of FDI and portfolio investment. As discussed in the previous sections, historical values of foreign capital and foreign equity holdings based on cumulative flows are likely to differ significantly from market values, making measurement of stocks less straightforward. Economic theory suggests that the degree of risk-sharing, as well as the intensity of asymmetric information and enforcement problems are related to the composition of external liabilities, and that FDI has more desirable properties than external debt in this respect.

81.   Figuer 3 summarizes the evolution of net external liabilities as a fraction of GDP for the countries in our sample.[10] Historically, Chile is one of the countries that exhibits sharper fluctuations in its net external position, a result of the large domestic and external shocks the economy was subject to during the 1970s and 1980s (see Figure 1). Currently Chile, along with Malaysia, stands out as one of the countries for which net foreign capital (cumulative FDI) is the most important component of external liabilities. Its overall size of net external liabilities at the end of 1996 is comparable to, say, Argentina and Colombia (that are, however, less open to international trade) and to Malaysia, and considerably below Indonesia and Thailand.

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[9]Notwithstanding the differences in methodology for evaluating equilibrium real exchange rates, Goldfajn and Valdés (1996) find that sizable real exchange rate appreciations tend to be "unwound" through a large nominal devaluation.

[10]The data presented in Figure 3 evaluates the stocks of foreign capital and equity at historical prices.

82.   **Composition of capital inflows**: It is commonly argued that a large current account deficit financed with short-term portfolio flows is riskier than one financed with FDI and other long-term capital because short-term flows are inherently more volatile.[11] The Mexican crisis of 1994 and recent crises in East Asia highlight the vulnerability to changes in investors' sentiment when short-term debt is high or when a large share of debt comes to maturity. Chile has received substantial portfolio equity flows in recent years, together with most of the countries in our sample. Nevertheless, net flows of FDI are considerably larger and have so far "overfinanced" the current account, and short-term external debt is low. The reserve requirement that Chile imposes on short-term capital inflows may have played a role in affecting the composition of its capital account (see Labán and Larraín (1997) and Larraín, Labán and Chumacero (1997) for studies of determinants of capital flows to Chile).

83.   **Foreign exchange reserves**: Conventional wisdom suggests that a high level of foreign exchange reserves makes a country less vulnerable to swings in market sentiment.[12] The issue is what is the best yardstick against which to measure the appropriateness of the level of reserves. Table 5a presents the **ratio of reserves to imports**, a natural liquidity indicator in a world of limited capital mobility. A second indicator, presented in Table 5b, is the **ratio of reserves to short-term debt**, which provides a measure of vulnerability to swings in short-term capital flows (an alternative measure, M2 over reserves, is considered further below).[13] Authors such as Calvo (1995) and Cole and Kehoe (1996) have emphasized the effects of short-term debt liabilities on the likelihood of balance-of-payments crises. Both ratios for Chile are among the highest in the group of countries we are considering, reflecting the rapid reserve accumulation in Chile over the past five years, and do not point to vulnerability on this front.

Macroeconomic indicators

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[11]Claessens et al. (1995) question the validity of this "conventional wisdom". Their empirical methodology, which includes changes in reserves in the definition of long-term capital flows, may explain why they find high volatility of long-term flows at a quarterly frequency. Frankel and Rose (1996) find weak correlation between debt composition variables and the probability of exchange rate crashes, but they find a significant negative correlation between the proportion of external liabilities accounted for by FDI and crash incidence. Sachs et al. (1996b) find weak evidence of an impact of the composition of inflows on the probability of a financial crisis.

[12] However, during period of large capital inflows, the "insurance" provided by the accumulation of reserves can imply hefty quasi-fiscal costs.

[13]A better measure of the more liquid stock of debt would involve maturing long-term debt as well.

84.   **Investment**: For a given current account balance, the levels of saving and investment can have implications for the sustainability of the external position. High levels of investment imply—ceteris paribus—higher future growth through the build-up of a larger productive capacity, and therefore enhance intertemporal solvency. High saving and investment ratios can also provide a signal of creditworthiness to international investors, because they act as a form of commitment to higher future output and raise the perceived ability to service and reduce external debt.[14] Table 6a reports investment ratios for the countries in our sample. Chile's ratio of investment to GDP is the highest among Latin American countries, having increased substantially between the 1980s and the 1990s (for a study of saving and investment in Chile see, for example, Marfán and Bosworth (1994)).

85.   **Growth**: rapidly growing countries can sustain persistent current-account deficits without increasing their external indebtedness relative to GDP (equations 2-3). The role of investment in physical capital has been emphasized previously; the same role is played by other engines of growth such as the accumulation of human capital. The rate of growth in Chile over the last few years is only slightly below the growth rates in the fastest growing East Asian countries (see Table 6b). Furthermore, a study of potential output growth (Roldós, 1997) finds that Chile's growth rates of the past decade may well be sustained in the future.

86.   The sectoral composition of growth can be an additional indicator of external sector difficulties (equation (3)); for example, low export growth may reflect an exchange-rate misalignment. All the countries in our sample experienced a decline in the growth of export values in 1996, as shown in Table 7. Chilean exports declined in value in 1996, mainly because of negative terms-of-trade developments, but export volumes have continued to grow, albeit more slowly than in previous years.

87.   **Fiscal position**: In a pure debt neutrality case (Barro (1974)) the current account is independent of the time profile of taxation, and therefore, for a given path of expenditure, of the public sector deficit. Among other things, the debt neutrality result relies on the fact that consumption depends only on lifetime income and that taxes are not distortionary. With distortionary taxes and liquidity constraints, public and private savings become imperfect substitutes, implying a positive correlation between budget deficits and current account deficits. The strength of this correlation may depend on the degree of development of domestic financial markets: In countries with under-developed or highly regulated financial markets, we would expect to find stronger links between the fiscal stance and the current

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[14]The discussion above assumes that investment is necessarily growth-enhancing and that it increases the ability to repay external debt. Investment projects, however, may be chosen inefficiently, because of financial market distortions, speculative bubbles or because they are driven by political priorities. For example, relative price distortions may skew investment towards the nontraded goods sector, therefore failing to enhance a country's ability to generate future trade surpluses. Under these circumstances, high levels of investment may not enhance sustainability.

account balance, and therefore between government budget solvency and current account sustainability. Also, during sharp adjustment periods, the issue of Ricardian equivalence may become less important, since typically in crisis situations liquidity constraints become binding, and therefore fiscal consolidation may facilitate the shift from external deficits to surpluses. Pre-existing fiscal imbalances can also complicate the transfer of resources abroad through the government budget, because of the government's difficulties in collecting resources from the private sector—the *dual transfer problem*.[15]

88.   In most of the countries in our sample, the current account imbalances of the late seventies and early eighties were associated with large fiscal imbalances (Chile being the exception—see Larraín (1991)). In contrast, the current account deficits of the nineties are mostly a reflection of imbalances between private saving and private investment, while the fiscal position has been sound (see Tables 3 and 8). How should economic policy react to large current account deficits that reflect private savings and investment decisions? The *Lawson doctrine* claims that current account imbalances arising from private-sector behavior should not be a cause for concern (see, for example, Corden (1991) and Reisen (1997) for a discussion). The case of Australia is often cited. However, both economic theory and practical experience suggest that even "private" current account deficits can give rise to external crises, particularly in less developed countries. Even with rational, forward-looking agents, external problems can arise in the presence of asymmetric information, implicit government guarantees, weak bank supervision, etc. Although these factors may not necessarily lead to an external crisis, they make the economy more vulnerable to shifts in market sentiment causing reversals in capital flows. The recent crises in Mexico and especially in East Asia testify to the importance of these elements. A number of financial indicators that have been used to gauge the likelihood that private consumption and investment decisions heighten the risk of an external crisis are discussed next.

Financial indicators[16]

89.   **Claims on private sector to GDP**. Tables 9a and 9b present two measures of the degree of private sector indebtedness with the banking system: the first includes claims on the private sector by monetary authorities and deposit money banks and the second includes claims by other banking institutions as well. The level of these ratios is often used as an indicator of financial depth. However, a rapid increase in these ratios, reflecting a boom in bank lending, may signal increased vulnerability of banks' portfolios (see, for example, Sachs et al. (1996b)). Chile's ratios are in the middle group, considerably below Malaysia and Thailand but above all other Latin American countries. They have increased in recent years, albeit less than in countries that have experienced external crises, such as Mexico, Korea and

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[15]See Bevilaqua (1995) for an empirical analysis of this issue.

[16] See Johnston et al. (1997) for a detailed discussion of the experiences of Chile, Indonesia, Korea and Thailand with capital account liberalization and financial sector reform.

Thailand. Eyzaguirre and Lefort (1998) point out that the increase in the ratio of claims to the private sector to GDP in Chile during the 1990s reflects a partial reversal of a downward trend in place during the second half of the 1980s; data presented in Johnston et al. (1997) shows instead that in Indonesia, Korea and Thailand this ratio increased also between 1985 and 1990.

90.   **Stock market**. An excessively rapid expansion of private sector activity can manifest itself in inflated asset prices. When these prices finally begin to decline, the fall in the value of collateral and the decline in the value of financial intermediaries' portfolio can lead to bankruptcies and a substantial weakening of the financial system. The data presented in Table 10 documents the behavior of two indices of stock prices, measured in U.S. dollars.[17] Stock prices declined substantially a year before the external crises in both Korea and Thailand, but did not in Mexico and in Indonesia. In Chile a sustained increase in stock prices reached its peak just before the Mexican crisis. Since then Chilean stocks have underperformed most other Latin American markets, including in 1997. Data on real estate prices, whose boom-and-bust cycle had a severe impact on financial sector difficulties in East Asian countries, including Japan, are not available on a comparable basis for the countries under examination.

91.   **Health of the banking system and quality of financial supervision**: The crisis episodes of the 1980s, in particular in Chile,[18] highlighted the importance of financial sector weaknesses in exacerbating the impact of external shocks. The health of the financial system plays an even more important role during the 1990s, because a larger fraction of external funds are intermediated by the domestic financial system compared with the previous decade, when most external borrowing was undertaken by the public sector.[19] There is also a substantial difference in the composition of capital inflows, with a decline of syndicated lending by banks and an increase in direct and portfolio investment by international investors. International comparisons of the stability of the financial system are notoriously difficult.[20]

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[17] Alternative, and possibly more appropriate, stock market indicators include (changes in) the ratio of stock value to GDP and the price/earnings ratio. See also Loayza and Palacios (1997).

[18] For a discussion of banking difficulties in Chile in this period see Velasco (1991) and De la Cuadra and Valdés-Prieto (1992). Díaz-Alejandro (1984, 1985) and Rojas-Suárez and Weisbrod (1995) also discuss other Latin American experiences.

[19] In Chile, unlike other Latin American countries, the fraction of external funds intermediated by the domestic financial system was high at the time of the 1982 crisis. In Chile the banking system also accounts for a lower share of the overall financial system than in other Latin American countries.

[20] Goldstein (1996) provides a discussion of indicators of financial fragility; Kaminsky and

Quantitative indicators, such as the share of nonperforming loans, are measured differently across countries, and the quality of bank supervision is difficult to summarize in an index. These issues notwithstanding, a recent cross-country study by Loayza and Palacios (1997) found that Chile's financial system is more advanced than the one of other Latin American countries, bank supervision is considered to be of good quality, and indicators such as the share of nonperforming loans in banks' portfolio are extremely low. Indeed, health and stability of the banking system and the quality of prudential supervision are often indicated as key factors in explaining Chile's resilience to volatility in international capital markets (see, for example, Eyzaguirre and Lefort (1998)). In contrast, weaknesses in financial systems, exacerbated by lack of transparency, have played a crucial role in the East Asian crises of 1997.

92.   **Ratio of M2 to reserves**: In first-generation speculative attack models (such as Krugman (1979)) a speculative attack on a pegged exchange rate is not possible when the level of foreign exchange reserves exceeds base money. Calvo (1995), Sachs, Tornell and Velasco (1996b) and others have argued that when capital inflows are reversed, domestic agents will try to convert all liquid monetary assets into foreign currency. Therefore, the ratio of M2 to reserves may be a more appropriate indicator of the potential vulnerability of a pegged exchange rate to a sudden change in market sentiment. Evidence on the contagion effect of the 1995 Mexican crisis presented in Sachs et al. (1996b) supports this view.[21] In a cross-country comparison of this indicator (Table 9b) Chile stands out as one of the countries with the lowest ratios of M2 to reserves, and therefore, according to this indicator, with a less vulnerable exchange rate.

International market indicators

93.   **Terms of trade**. The economic costs induced by volatility in the terms of trade are widely documented. Mendoza (1998) presents evidence that the volatility of terms of trade is associated with lower economic growth in a wide sample of countries. Ghosh and Ostry (1994) found support for the view that large current account deficits are more likely to be unsustainable in countries with a less diversified export base.[22] During the 1990s, the overall

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[20](...continued)
Reinhart (1996) examine the link between balance of payments and banking crises; and Demirgüç-Kunt and Detragiache (1997) study determinants of banking crises.

[21]Although Chile' exchange rate has traded close to the most appreciated end of the exchange-rate band in recent years, it has a substantial margin for nominal devaluation within the existing system, contrary to a formal peg.

[22]Economic theory suggests that the optimal response of the current account to a terms-of-trade shock depends, inter alia, on the perceived persistence of the shock, with an improvement following positive temporary shocks and a possible deterioration if the positive

variability of terms of trade has been lower than during the previous two decades (see Table 11). This reflects in part the increased export diversification towards manufactured goods of the countries in our sample, which reduces the impact of changes in the prices of primary commodities on the terms of trade. Chile's terms of trade have been more volatile than those of most of the countries in our sample over the period 1970 to 1996 (Table 10). This reflects mainly the large volatility during the 1970s; during the 1980s and 1990s volatility has declined substantially. In recent years, the Copper Stabilization Fund has contributed to smoothing the effects of terms-of-trade volatility on the fiscal accounts, although its role has tended to diminish in light of the increased private sector participation in the copper sector.

94.   **World interest rates**: the sensitivity of a country to changes in world interest rates clearly depends on the composition of its external liabilities. Countries with short-term and variable-rate debt are, ceteris paribus, more vulnerable to a sudden increase in the cost of borrowing. Chile's external debt is mostly long term and at fixed rates, making the country less vulnerable to interest rate increases.

95.   The analysis of sustainability indicators presented in this section has obvious shortcomings; there is no explicit quantitative framework that translates indicators into an overall vulnerability index, and some of the key indicators, such as the health of the financial system, are difficult to quantify. Furthermore, few of these indicators issued "warning signals" of impending external crises in countries such as Indonesia and Korea. With these caveats in mind, Chile's sustainability indicators compare favorably with those of other countries that have experienced protracted current account imbalances and, in some cases, external crises. Reserves are large, the banking system appears sound, flows of FDI are large and projected to persist in the future, the ratio of investment to GDP is high, and the current size of external liabilities is not very large. There are, however, potential sources of concern, namely, the country's continued vulnerability to terms-of-trade shocks—a reflection of its high dependence on commodity exports—and the persistent real appreciation of the Chilean peso until the recent onset of the crisis in world financial markets. The next section discusses medium-term scenarios that highlight, among other factors, the role played by the real exchange rate and changes of the terms of trade in shaping the evolution of Chile's external liabilities.

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[22](...continued)
trade shock depends, inter alia, on the perceived persistence of the shock, with an improvement following positive temporary shocks and a possible deterioration if the positive shock is permanent and stimulates investment significantly (see, for example, Obstfeld and Rogoff (1996) and Razin (1995)). Tornell and Lane (1996), however, argue that in countries where strong interest groups compete for fiscal resources, even a temporary terms-of-trade improvement can induce an increase in redistributive activity by relaxing constraints on public spending. This can cause a deterioration in the current account.

E. Current Account Projections

96.   Projections of the path of the current account should be derived from estimates and/or calibration of a stochastic general equilibrium model (see, for example, Schmidt-Hebbel and Servén (1996)). For given assumptions about external and policy variables, the model, incorporating most of the sustainability indicators discussed in Section 4, would provide the base for forecasting private sector behavior and its implications for the path of external liabilities. A more "parsimonious" way of projecting future current account imbalances would rely on the estimation of savings and investment equations (see, for example, Corbo (1997)). This section follows a more modest, partial equilibrium approach, that relies on forecasts for the path of exports and imports based on standard trade equations.[23] The projection exercise is mostly meant to highlight the role played by different domestic and external factors in shaping the evolution of external liabilities, given the ample margins of uncertainty. Annex IV contains a more detailed discussion of the underlying assumptions of the simulation exercise.

97.   It is important to point out some of the less realistic features of this type of exercise. In the absence of a well developed model of the Chilean business cycle, projections assume a stable behavior of key macroeconomic aggregates, such as investment and economic growth. This implies that the evolution of external sector variables is considerably "smoother" than past historical experience would predict. This obvious shortcoming of the baseline projection is only partly addressed by the presentation of two alternative scenarios: these highlight the consequences of assuming different *trend* behavior in some external and domestic variables, rather than depicting the likely consequences of more realistic volatility. Furthermore, projections are "mechanical" and do not incorporate policy reaction functions—for example, an increase in public savings in response to a widening in the current account deficit.

Baseline scenario

98.   Table 12 presents the results of the simulation exercise, and reports alternative measures of the stock of foreign-owned capital and portfolio equity, at market prices (adjusting cumulative flows for changes in the price of capital or in stock market values) and at historical prices (with no such adjustment). It also presents an accrual-based measure of the stock of foreign capital in Chile that explicitly takes into account reinvested profits. Under the assumptions described in Annex IV, the current account deficit measured on a *cash basis* hovers above 4 percent of GDP for most of the period, while the deficit on an *accrual basis* is around one percentage point of GDP higher. This implies a gradual increase in net external

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[23]The econometric work on which the export and import projections are based is available from the author upon request.

liabilities from 40 percent of GDP in 1996 to over 50 percent in 2003, with a slight decline in ratio of external debt to GDP and a rapid increase in the stock of foreign capital in Chile.[24]

Weakening of capital flows and real exchange rate depreciation

99.   The main features of the second scenario are less favorable external conditions with respect to the baseline—weaker capital inflows, lower copper prices, lower profitability of foreign-owned capital and a real effective depreciation of the peso (see Annex IV). As shown in Table 13a, the current account deficit averages 4.4 percent of GDP on a cash basis. The ratio of external liabilities to GDP, measured using the accrual-based stock of foreign-owned capital, is over 50 percent in 2003, similarly to the baseline scenario. In this context, it is important to underline that the value in dollars of the stock of foreign-owned capital in Chile is assumed to be invariant to the shocks affecting the Chilean economy. If the value of the stock of foreign-owned capital is negatively affected by the fall in copper prices, the overall stock of external liabilities would be lower.

Strong capital flows and continued real appreciation

100.   This scenario assumes stronger capital inflows to Chile than the baseline, higher copper prices, higher profitability of foreign-owned capital and a gradual real effective appreciation of the peso (see Annex IV). Under these assumptions, the current account deficit is higher as a percentage of GDP (5 percent on a cash basis). Nevertheless, the accumulation of net external liabilities as a fraction of GDP is somewhat slower than in the baseline, because of the effect of the real appreciation. This clearly would not be the case if we were to measure external liabilities as a fraction of exports. It is also important to note that the scenario does not incorporate a policy response to the real appreciation and the widening current account deficit. Tighter fiscal policy may contribute to an increase in overall savings and to a reduction in the rate of appreciation, implying a smaller current account deficit.

101.   Overall, this exercise highlights the degree to which the evolution of Chile's external liabilities depends on international markets—the flow of capital to Chile, the price of copper products, the rate of return on foreign capital in Chile, and the rate of growth of world GDP.[25]

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[24] Even taking the capital flow projections at face value, estimates of the net asset position will differ depending on the assumed path for the value of equity claims. Clearly, if these are valued at "market" prices and the rates of return are comparable to those on FDI they rise much more rapidly than if they are valued at historical prices with an adjustment for price inflation. In the projections the stock of outstanding equity claims in U.S. dollars in 1997 (valued at market prices) is only adjusted by world inflation in all scenarios.

[25] Calvo, Leiderman and Reinhart (1993), Chuhan, Claessens and Mamingi (1993) and Fernández-Arias (1996) stress the importance of "push" factors in capital flows to emerging

Even though the increasing importance of foreign-owned capital should on average imply higher income outflows than external debt, FDI flows are likely to have more desirable risk-sharing properties, because profitability, and hence the value of foreign equity and capital holdings, are positively correlated with the price of copper and with the performance of the domestic economy. Two factors should, however, be pointed out. First, because of the existence of restrictions on foreign financial investment in Chile, some of the direct investment flows may constitute disguised "financial," as opposed to "real," investment. In particular, as highlighted in Annex II, a fraction of retained profits is likely to be invested in Chilean financial markets, rather than directly in the foreign-owned firm. This implies the existence of a stock of foreign capital that may display less "irreversibility" and give rise to a stock outflow in the case of a shift in foreign investors' sentiment (although foreign investors would still bear the currency risk). Second, the share of profits that is remitted is likely to be negatively correlated with the terms of trade and Chilean economic performance. While this would not affect the behavior of the current account measured on an accrual basis, it may moderate or reverse the pro-cyclical character of investment income cash flows. A quantitative exploration of the importance of these factors would require time-series data on accrual investment income flows and on the allocation of retained profits, which, unfortunately, is not available.

E. Concluding Remarks

102.   This paper has examined various approaches to external sustainability. Overall, Chile emerges favorably from an international comparison of sustainability indicators. In particular, the level of external liabilities is not high, flows of FDI are an important source of current account financing, and the financial system appears robust. The vulnerability to terms-of-trade shocks and the appreciated level of the real exchange rate—especially before the onset of the crisis in East Asia—are the most problematic of the indicators.

103.   The composition of the stock of external liabilities has changed substantially over the last few years, with direct investment playing an increasingly important role. Indeed, the debt-to-GDP ratio is projected to fall, but this decline is more than compensated by the increase in the stock of foreign capital. The profitability of foreign investment in Chile implies that the income flows generated by FDI are likely to be higher than those that a correspondingly large stock of debt would have entailed. However, direct investment should imply better risk-sharing than debt financing, because the profitability of FDI and the overall value of the stock of foreign-owned equity and capital are likely to be positively correlated with Chile's economic performance and its terms of trade. Furthermore, the stock of "greenfield" foreign capital has an element of irreversibility, which implies that this capital cannot suddenly leave the country. Finally, FDI may have positive technological spillovers, contributing to faster growth (see Borensztein et al. (1994)).

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[25](...continued)
markets.

104.   A simple forecasting exercise based on current trends in the behavior of exports and imports shows that the stock of external liabilities is likely to rise gradually over the next few years, a reflection of current account imbalances above 4 percent of GDP. Clearly, the projections are very sensitive to the underlying assumptions regarding the behavior of the price of copper, world demand, the real exchange rate and, more generally, the volume and composition of international capital flows. The paper has sketched two alternative medium-term scenarios: one with strong capital inflows, a further real appreciation of the peso, and strong copper prices as a result of rapid world growth. The second scenario is characterized by a decline in capital inflows, lower copper prices and lower growth of the world economy, implying a weakening in Chile's real exchange rate. Both scenarios do not incorporate policy responses to output and current account developments, and are therefore purely indicative of underlying trends. Although the current account deficit is larger in the strong capital inflows scenario, the stock of external liabilities at the end of the period as a fraction of GDP is lower because of the effect of the real appreciation. All of the scenarios feature a gradual increase in the stock of Chilean foreign liabilities over the next few years, with the stock of foreign capital taking an increasingly important role. This bodes well for the overall stability of capital flows; furthermore, direct investment may help sustain rapid growth in productivity and living standards through investment complementarities and technological spillovers. However, it also implies an increasing investment income outflow that widens the current account deficit. This is, in a sense, the cost of reduced vulnerability to reversals; Chile would need to run larger trade surpluses beyond the horizon considered in the simulation exercise to stabilize the ratio of external liabilities to exports or GDP.

"Excessive" Current Account Deficits

105.   In order to answer the question whether a given sequence of current account deficits is "excessive," it is necessary to rely on a benchmark that gives information on the "appropriate" level of current account imbalances. This benchmark can be based on a model that specifies the behavior of consumption, investment and output. Actual imbalances can then be compared to the theoretically predicted ones in order to judge whether they have been excessive or not. Two main approaches to the empirical implementation of intertemporal models of the current account have been used. The first approach emphasizes the consumption-smoothing role of the current account (see Sheffrin and Woo (1992); Ghosh and Ostry (1995) and Ostry (1996) provide an application to developing countries). The basic idea is an application of Campbell's (1987) methodology for testing the permanent income theory of consumption; the current account should be a vehicle for smoothing the effects on consumption of temporary shocks. A simple VAR model is estimated, linking the (de-trended) current account and changes in net output to past values of the same variables, and tests are conducted to infer whether the actual behavior of the current account is consistent with the predictions of the simple consumption-smoothing model. The theoretically predicted path of "optimal" current account balances can then be compared to the actual path to see whether deficits have been "excessive" in a given period.

106.   An alternative method, used by Glick and Rogoff (1995) and Leiderman and Razin (1991), consists of the estimation of an intertemporal model with investment adjustment costs and perfect capital mobility. A comparison of actual and predicted responses of investment and the current account to various types of productivity shocks (global and country-specific, temporary and permanent), as well as to other shocks, can provide information on the "appropriateness" of the current account position. While the presence of investment adjustment costs and stochastic productivity lends more realism to the model, the data requirements for this type of estimation have so far limited its application to a sample of industrial countries.

107.   What is the relation between external solvency, current account sustainability and "excessive" current account deficits? The concepts of solvency and sustainability are binary—a country is either solvent or insolvent, and a path of current account deficits either sustainable or unsustainable—and imply an increasing order of restrictiveness. The first concept, based on the intertemporal budget constraint, can accommodate a variety of future behavior patterns. The second is based on a continuation of the current policy stance, and therefore imposes more structure on future behavior. The notion of excessive current account deficits provides instead a quantitative metric based on deviations from an optimal benchmark. One problem in using this metric as a basis for evaluating how sustainable is a given path of current account imbalances in developing countries is that the benchmark models that have been used rely on the absence of capital market imperfections; consequently, deviations from the benchmark can reflect not only excessively high (or low) current account deficits, but also, for example, the effects of liquidity constraints and other financial market imperfections.

Calculation of the Stock of Foreign Capital

108.   Assume that profits on foreign-owned capital P are calculated net of taxation and depreciation, and that they are measured in U.S. dollars. Let FDI be the inflow of foreign direct investment measured on a cash basis and FDI* the inflows of foreign direct investment measured on an accrual basis (including reinvested net profits). Let α be the fraction of profits that are remitted and β the fraction of retained earnings that are re-invested in the firm. In this case the evolution of the stock of foreign equity is given by:

$$EQ_t^* = EQ_{t-1}^*(1 + \pi_t^k) + FDI_t^*$$
$$= [1 + \beta_t p_t (1 - \alpha_t)] EQ_{t-1}^*(1 + \pi_t^k) + FDI_t \qquad (6)$$

where π^k is the rate of change of the price of capital, measured in U.S. dollars, and $p(1+\pi^k)=P$. The stock of foreign capital is given by the cumulative value of FDI flows on an accrual basis, evaluated at today's prices:

$$EQ_t^* = FDI_t^* + \sum_{i=1}^t [FDI_{i-1}^* \prod_{j=1}^{t-i+1}(1 + \pi_{i-j+i}^k)] + \prod_{i=0}^t (1 + \pi_i^k) EQ_{-1} \qquad (7)$$

The first term is today's flow of direct investment, the second term is the sum of past direct investment flows evaluated at today's capital prices and the third term is the value of the initial stock of foreign capital evaluated at today's prices. Note that the fraction of profits that is invested in financial assets (given by $P(1-\beta)(1-\alpha)$ EQ^*) would contribute to forming a foreign debt liability measured in domestic currency.

109.   Because of the lack of data on actual profits or, alternatively, of the fraction α that is reinvested in the host country, the stock of foreign capital is calculated in the following alternative way:

$$EQ_t = EQ_{t-1}(1 + \pi_t^k) + FDI_t \qquad (8)$$

which implies a calculation of the stock analogous to (7), but with FDI instead of FDI*. This methodology is correct only if all **net** profits are repatriated (that is, $\alpha = 1$). Otherwise, it leads to an underestimation of the stock of foreign capital, which is larger the larger is β (the fraction of retained profit is directly re-invested in foreign-owned firms). At time t, the amount of the underestimation is given by the value of the cumulative flow of reinvested profits evaluated at today's prices:

$$EQ_t^* - EQ_t = P_t \beta_t (1 - \alpha_t) EQ_t^* + \sum_{i=1}^t [P_{i-1} \beta_{i-1}(1 - \alpha_{i-1}) EQ_{i-1}^* \prod_{j=1}^{t-i+1}(1 + \pi_{i-j+1}^k)] \qquad (9)$$

110.   The calculations in the text refer to the cash definition of FDI. Data on the flows of FDI are taken from the Fund's *International Financial Statistics* (various issues). The dollar price of foreign capital is taken to be a geometric average of the domestic investment deflator (measured in U.S. dollars) and of Chilean import prices, with weights equal to one half. It is also assumed that the stock of foreign-owned capital in 1975 (the first year for which data is used) was zero.

111.   In order to calculate a stock of foreign capital using FDI measured on an accrual basis, it is necessary to rely on estimates of the profit rate p and of the share α of profits that are repatriated. As for the fraction β of profits that is actually re-invested in the firm, one can assume that $\beta = 1$, disregarding the fact that the value of profits invested in financial assets would have different dynamics than the stock of capital.

112.   A similar methodology is used to construct the stock of Chilean capital abroad. For this case, the price of capital that is used is the same as in the case of foreign capital in Chile. The stock of foreign equity in Chile is calculated by cumulating equity flows, adjusted for variations in stock market prices (using the IPSA index), measured in U.S. dollars.

Derivation of Equation (5)

113.   The debt accumulation equation in the system (4) (Section 3) is:

$$D_t = D_{t-1} - CA_t - FDI_t + \Delta FX_t \qquad (10)$$

where for simplicity we have abstracted from errors and omissions, valuation effects and the effect of debt reduction agreements. If we assume that the price of foreign capital is constant, we can use (8) and (10) iteratively to write:

$$D_t + EQ_t - FX_t = - \sum_{i=s}^{t} CA_i + (D_{s-1} + EQ_{s-1} - FX_{s-1}) \qquad \forall s < t \qquad (11)$$

That is, under the above assumptions the current stock of net external liabilities equals its initial stock plus the cumulative value of current account deficits.

114.   The current account balance CA can be expressed as :

$$CA_t = TB_t + i_t^R FX_t - i_t D_t - P_t EQ_t + TR_t \qquad (12)$$

where TB is the balance of goods and services, $i^R FX$ is interest income on foreign exchange reserves, $P\ EQ$ are profit remittances, iD are interest payments on external debt and TR are transfers. Equation (5) in the text is obtained by substituting (8) and (12) into (10) (disregarding transfers) and dividing by domestic GDP expressed in dollar terms.

Medium-Term Scenarios

A. Assumptions for the Baseline Scenario of Section 5

115.   *Import volumes:* elasticity of 1.2 with respect to real domestic output (in line with evidence from time-series analysis), and of ½ with respect to the real effective exchange rate. Price assumptions reflect WEO projections. No short-run dynamics is incorporated in the analysis because estimates suggest that convergence to the long-run equilibrium is fast.

116.   *Export volumes:* Exports are divided in three categories: copper, "manufactures" (also including agricultural products such as wine and salmon), and other primary products (including metal, woodpulp, fruits and vegetables, fishmeal). For the first and the third categories, volume growth reflects supply developments (coming on stream of new mines, opening of plants, etc.). For the "manufactures" category, the elasticity with respect to world growth is 2.8 (point estimate of a regression based on data for the past 20 years). This corresponds to an elasticity with respect to world import demand of around 1.4, implying that Chile would still be gaining some market share in these categories (see the previous chapter of this report for a discussion of the evolution of trade shares). The elasticity of manufactured exports with respect to the real effective exchange rate is 1/2, at the upper end of elasticity estimates.

117.   *Export prices:* Estimates of copper prices assume a fall in 1998 to US$0.90 per pound and a gradual recovery in subsequent years to US$0.95 in 2003. Estimates of prices for other primary products are taken from national sources.

118.   *Output growth:* 6 percent in 1998, 6.7 percent in 1999 and 6.9 percent in 1999–2003, in line with the estimates for potential output growth in Roldós (1997).

119.   *Output growth in partner countries* (taken from WEO estimates): 3.7 percent on average during the period, with a slowdown in 1998 and a recovery thereafter.

120.   *Real effective exchange rate:* stable at the end-1997 level throughout the period 1998–2003.

121.   *Flows of FDI and long-term debt:* continuation of the trend of the past 5 years.

122.   *Portfolio equity flows:* similar to those of 1996 in relation to GDP.

9.   *Profitability of foreign-owned capital:* gradually declining from 15 percent to 12 percent (net of taxation and depreciation).

B. Assumptions for the Weaker Capital Inflows Scenario of Section 5

123.   *Capital flows to Chile*: slowdown during 1998 and 1999, as a reflection of an overall slowdown in capital flows to emerging markets. Decline in FDI and portfolio capital inflows and virtual halt in the accumulation of foreign exchange reserves.

124.   *Copper prices*: 5 percent lower with respect to the baseline scenario.

125.   *Real effective exchange rate*: 5 percent depreciation in 1999, stable thereafter.

126.   *Growth in Chile*: 5 percent in 1999 and 6.5 percent thereafter.

127.   *World growth*: 0.2 percent per year lower than in the baseline.

128.   *Profitability of foreign capital*: 10 percent lower than in the baseline.

C. Assumptions for the Strong Capital Flows Scenario of Section 5

129.   *Capital flows to Chile*: stronger than in the baseline (both for debt and equity flows).

130.   *Copper prices*: 5 percent above the baseline for the period 1998-2003.

131.   *Real effective exchange rate*: appreciation at 2 percent per year from 1998 onwards.

132.   *World growth*: 0.2 percentage point above the baseline.

133.   *Profitability of foreign capital*: 10 percent higher than in the baseline scenario.

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Table 1. Chile: Debt and Equity Position

(In percent of GDP)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Current account balance (cash basis)	-2.5	-1.8	0.3	-1.6	-4.5	-1.2	0.2	-4.1	-3.7
External debt	62.6	62.7	52.6	47.4	46.8	46.2	35.0	34.4	33.2
Foreign exchange reserves	12.9	20.0	20.5	21.4	21.1	25.1	21.0	20.6	21.9
Stock of foreign capital in Chile									
Cumulative flows, with price adjustment	19.3	20.6	19.9	18.2	18.9	20.5	19.9	24.5	26.8
Cumulative flows, no price adjustment	18.8	19.4	18.7	16.7	17.4	18.6	16.9	21.5	23.6
Accrual basis 1/					15.2	18.4	19.0	24.0	27.3
Stock of Chilean capital abroad									
Cumulative flows, with price adjustment	0.3	0.3	0.6	1.4	2.3	3.8	4.3	5.5	6.4
Cumulative flows, no price adjustment	0.2	0.2	0.6	1.3	2.2	3.7	3.9	5.2	5.9
Stock of portfolio equity in Chile									
Market prices	0.3	1.6	3.3	3.9	7.3	11.2	9.0	8.1	10.8
Historical values	0.3	1.5	1.4	1.9	3.5	5.5	3.9	4.6	6.7
Stock of Chilean foreign equity holdings									
Market prices	1.4	1.1	1.2	0.9	1.2	1.8	1.7	2.0	2.3
Historical values	0.0	0.3	0.2	0.2	0.2	0.8	0.7	0.8	1.2

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Based on stock estimate for 1996. Values for previous years calculated by backward induction on the basis of FDI flows and estimates of unremitted profits.

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Table 2. Chile: Indicators of External Position 1/

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Equity 2/	2.3	3.1	5.7	7.7	8.3	10.5	11.5	14.2	16.1	18.6	20.4	19.2	17.0	18.3	19.4	16.1	20.0
Equity (price adjusted) 3/	3.1	4.0	6.3	7.6	7.5	9.4	9.9	12.8	14.9	17.9	20.8	21.4	19.8	22.7	26.1	22.9	25.0
Gross debt	40.6	47.6	69.6	86.6	95.7	116.0	110.0	96.6	78.3	62.6	62.7	52.6	47.4	46.8	46.2	35.0	34.4
Reserves	11.6	10.1	7.7	10.6	12.3	15.2	13.7	12.5	13.4	12.9	20.0	20.5	21.4	21.1	25.1	21.0	20.6
Cumulative current account 4/	34.5	43.6	68.0	89.3	102.8	128.5	126.3	111.7	96.6	85.3	80.9	71.1	58.9	59.7	53.5	41.2	42.7
Cumulative current account (adjusted) 5/	41.7	48.2	74.5	94.3	104.1	128.2	128.5	113.4	90.9	76.8	69.7	57.5	47.8	48.3	43.6	32.1	35.6
Balance on goods and services	-3.9	-10.1	-1.7	2.8	-0.9	3.0	3.5	4.1	6.3	3.6	3.5	4.6	1.7	-2.1	1.4	2.0	-1.9
Real interest rate (percent) 6/	4.1	7.2	8.3	6.0	7.7	6.4	6.7	5.6	5.5	4.4	5.6	4.6	5.0	3.1	3.3	2.9	3.2
Output growth	7.8	5.5	-14.1	-0.7	6.4	2.5	5.6	6.6	7.3	9.9	3.3	7.3	10.7	6.6	4.2	8.5	7.2
Real exchange rate (rate of change) 7/	12.7	2.0	-18.4	-21.6	-12.6	-19.4	-1.0	6.4	5.0	1.2	-0.4	1.5	9.3	-2.4	7.2	15.8	-2.6
Dividends (perc. of equity) 8/	3.5	4.5	2.9	2.0	2.2	1.7	1.6	1.7	2.0	2.2	1.7	3.2	4.9	4.2	5.6	5.0	7.9

Sources: IMF, International Financial Statistics and World Economic Outlook; and Fund staff estimates.

1/ Variables are ratios to GDP unless otherwise indicated.
2/ Cumulative value of net FDI and equity flows (at historical prices).
3/ Cumulative value of net FDI and equity flows at market prices.
4/ Cumulative value of current account deficits.
5/ Cumulative value of current account deficit adjusted for debt reduction operations, exchange rate fluctuations, and statistical discrepancies.
6/ Ratio of net interest payments to net external debt, deflated by the U.S. GDP deflator.
7/ Rate of appreciation of the real exchange rate vis-à-vis the U.S. (relative GDP deflators).
8/ Dividend income (in nominal U.S. dollars) as a ratio of equity.

Table 3. Chile: Current Account Balance

(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996	1990-96
Argentina	3.3	-0.2	-2.8	-3.1	-3.7	-1.5	-1.9	-1.4
Brazil	-0.9	-0.4	1.6	-0.1	-0.3	-2.5	-3.2	-0.8
Chile	-1.8	0.3	-1.6	-4.5	-1.2	0.2	-4.1	-1.8
Colombia	1.6	5.3	1.8	-4.0	-4.7	-5.4	-5.3	-1.5
Indonesia	-2.8	-3.4	-2.2	-1.5	-1.7	-3.3	-3.3	-2.6
Korea	-0.9	-3.0	-1.5	0.1	-1.2	-2.0	-4.9	-1.9
Malaysia	-2.1	-8.8	-3.8	-4.8	-7.8	-10.0	-4.9	-6.0
Mexico	-2.8	-4.7	-6.7	-5.8	-7.0	-0.6	-0.6	-4.0
Peru	-3.3	-3.0	-4.8	-5.2	-5.3	-7.3	-5.8	-5.0
Philippines	-6.1	-2.3	-1.6	-5.5	-4.6	-4.4	-4.7	-4.2
Thailand	-8.3	-7.7	-5.6	-5.0	-5.6	-8.0	-7.9	-6.9

Source: IMF, World Economic Outlook.

Table 4. Chile: Openness of Trade 1/

(In percent of GDP)

	1975-81	1982-89	1990-96
Argentina	6.0	6.4	6.4
Brazil	8.4	8.4	7.6
Chile	19.3	21.3	23.8
Colombia	14.9	15.3	16.4
Indonesia	18.3	18.9	22.2
Korea	28.5	29.1	25.6
Malaysia	41.6	47.5	71.6
Mexico	6.6	10.9	13.1
Peru	14.1	12.1	9.8
Philippines	19.3	18.4	26.2
Thailand	20.9	22.3	34.5

Source: IMF, World Economic Outlook.

1/ Average ratio of imports and exports to GDP.

Table 5. Chile: Reserve Indicators 1/

	1990	1991	1992	1993	1994	1995	1996
A. Ratio of Foreign Exchange Reserves to Imports							
Argentina	0.7	0.5	0.5	0.7	0.6	0.6	0.7
Brazil	0.3	0.3	0.9	1.0	0.9	0.8	0.9
Chile	0.7	0.7	0.8	0.8	1.0	0.8	0.7
Colombia	0.6	0.9	0.9	0.7	0.6	0.5	0.6
Indonesia	0.2	0.3	0.3	0.3	0.3	0.2	0.3
Korea	0.2	0.2	0.2	0.2	0.3	0.2	0.3
Malaysia	0.3	0.3	0.4	0.5	0.4	0.3	0.3
Mexico	0.2	0.4	0.3	0.4	0.1	0.3	0.3
Peru	0.2	0.4	0.4	0.5	0.8	0.7	0.9
Philippines	0.1	0.2	0.3	0.2	0.2	0.2	0.2
Thailand	0.3	0.4	0.4	0.5	0.5	0.4	0.5
B. Ratio of Foreign Exchange Reserves to Short-Term Debt							
Argentina	0.5	0.5	0.6	1.1	1.0	3.2	8.9
Brazil	0.3	0.3	0.9	1.2	1.5	1.4	1.5
Chile	1.2	1.8	1.7	1.7	2.0	2.7	2.4
Colombia	1.8	3.2	2.9	2.1	1.7	1.5	1.7
Indonesia	0.7	0.7	0.6	0.6	0.7	0.6	0.7
Korea	1.4	1.2	1.4	1.7	1.9	...	...
Malaysia	6.4	4.2	3.4	4.3	4.6	3.7	2.8
Mexico	0.6	0.8	0.8	0.7	0.2	0.5	0.5
Peru	0.2	0.5	0.5	0.9	1.7	1.5	1.9
Philippines	0.2	0.7	0.9	1.0	1.2	1.2	1.7
Thailand	1.3	1.1	1.1	1.1	1.0	0.9	1.0

Source: IMF, World Economic Outlook.

1/ End-of-year reserves calculated at end-of-year exchange rates.

Table 6. Chile: Macroeconomic Indicators

(In percent of GDP)

	1980-89	1990	1991	1992	1993	1994	1995	1996	1990-96
A. Investment Rates									
Argentina	20.1	12.9	13.2	16.7	18.6	20.0	18.0	17.7	16.7
Brazil	20.9	21.6	18.8	18.9	19.2	19.6	19.2	19.3	19.5
Chile	18.5	26.3	24.5	26.8	28.8	26.8	27.4	27.7	26.9
Colombia	17.6	16.6	14.6	15.5	18.8	20.5	20.9	20.7	18.2
Indonesia	23.5	28.3	27.0	25.8	26.3	27.6	28.4	28.1	27.3
Korea	29.4	37.1	38.4	36.6	36.0	35.7	36.6	36.8	36.7
Malaysia	30.3	32.4	36.4	36.0	38.3	40.1	43.0	42.2	38.4
Mexico	20.3	17.9	18.7	19.6	18.6	19.4	16.1	17.2	18.2
Peru	22.8	14.7	14.5	15.2	16.8	21.0	23.4	22.7	18.3
Philippines	22.7	24.0	20.0	20.9	23.8	23.6	22.2	23.2	22.5
Thailand	26.6	40.2	41.6	39.2	39.4	39.9	41.8	40.8	40.4
B. Economic Growth									
Argentina	-0.7	-1.3	10.5	10.3	6.3	8.5	-4.6	4.3	4.8
Brazil	3.1	-4.3	0.0	-0.9	4.6	6.1	4.1	2.9	1.8
Chile	3.7	3.3	7.3	10.7	6.6	4.2	8.5	7.2	6.8
Colombia	3.4	4.3	2.0	4.0	5.4	5.8	5.4	2.1	4.1
Indonesia	5.8	7.2	7.0	6.5	6.5	7.5	8.2	8.0	7.3
Korea	8.1	9.5	9.1	5.1	5.8	8.6	9.0	7.1	7.7
Malaysia	5.8	9.7	8.4	7.8	8.3	9.2	9.5	8.2	8.7
Mexico	2.3	5.1	4.2	3.6	2.0	4.5	-6.2	5.1	2.6
Peru	7.1	-3.8	2.9	-1.8	6.4	13.1	7.2	2.6	3.8
Philippines	2.0	3.0	-0.5	0.3	2.1	4.4	4.8	5.7	2.8
Thailand	7.3	11.6	8.4	7.8	8.3	8.9	8.7	6.4	8.6

Source: IMF, International Financial Statistics and World Economic Outlook.

Table 7. Chile: Exports and Imports

(Growth Rates)

	1990	1991	1992	1993	1994	1995	1996
A. Export Values							
Argentina	29.1	-3.0	2.1	7.2	20.8	32.4	13.6
Brazil	-8.6	0.7	13.2	7.7	12.9	6.8	2.7
Chile	3.6	6.8	11.9	-8.1	26.1	39.1	-4.9
Colombia	17.4	6.0	-3.3	2.4	17.7	16.8	4.0
Indonesia	18.6	8.3	15.6	6.8	12.4	13.9	10.2
Korea	2.8	10.2	8.1	7.6	15.7	31.5	4.1
Malaysia	16.2	17.1	18.1	16.1	23.0	26.7	6.8
Mexico	16.2	17.1	18.1	16.1	23.0	26.7	6.8
Peru	-8.1	2.0	4.2	-0.8	29.5	22.2	5.7
Philippines	4.7	8.0	11.1	15.8	18.5	29.5	17.7
Thailand	15.4	23.8	13.8	13.4	22.1	24.8	-1.9
B. Export Volumes							
Argentina	43.4	-0.3	5.2	8.0	15.0	25.3	6.5
Brazil	-7.8	3.5	14.3	12.5	4.6	-2.0	3.3
Chile	13.2	10.0	17.1	4.8	12.1	10.4	6.0
Colombia	18.6	10.7	7.9	11.8	9.6	2.7	5.2
Indonesia	1.4	14.7	12.5	4.6	11.4	8.1	5.0
Korea	4.7	9.6	9.8	8.6	12.5	25.0	18.5
Malaysia	15.0	14.6	6.6	15.8	19.8	18.4	5.1
Mexico	12.2	29.3	23.0	22.8	24.8	31.6	5.4
Peru	-5.5	4.1	4.3	13.1	13.4	6.0	5.0
Philippines	6.2	5.6	6.0	18.0	5.3	16.2	8.6
Thailand	12.6	17.2	10.9	11.5	18.0	14.3	-1.0
C. Import Values							
Argentina	-2.9	102.9	79.7	4.5	38.9	-6.8	18.1
Brazil	13.1	1.8	-2.2	22.7	31.0	50.7	6.9
Chile	8.2	4.5	25.6	10.2	6.9	34.7	12.6
Colombia	11.3	-7.5	29.5	51.6	21.5	17.0	-1.3
Indonesia	31.4	12.8	9.6	7.4	14.7	20.7	12.8
Korea	14.7	17.5	0.9	2.4	22.4	32.2	12.2
Malaysia	28.5	26.9	9.8	18.1	28.2	30.5	2.2
Mexico	22.9	22.1	26.2	1.5	20.3	-21.4	27.4
Peru	31.5	20.5	15.9	-0.8	37.4	38.4	1.9
Philippines	17.2	-1.3	20.5	21.2	21.2	23.7	20.4
Thailand	43.8	15.7	6.0	12.3	18.4	31.9	0.6
D. Import Volumes							
Argentina	-5.2	104.5	76.7	3.3	37.0	-11.6	19.0
Brazil	8.4	9.5	-2.1	29.4	29.1	45.2	5.7
Chile	6.5	7.4	25.4	11.0	3.9	23.9	9.1
Colombia	10.6	-5.0	24.7	44.6	18.4	7.5	0.5
Indonesia	27.6	14.9	6.1	4.7	16.0	17.0	11.3
Korea	13.0	17.5	2.6	6.4	21.8	21.4	12.6
Malaysia	24.4	25.8	0.7	17.4	28.0	23.0	3.5
Mexico	15.9	20.4	26.0	6.7	20.4	-9.3	30.8
Peru	20.7	27.8	12.9	5.2	34.5	25.4	-1.2
Philippines	12.4	-5.5	19.6	20.4	6.7	15.9	14.5
Thailand	22.0	9.5	5.2	10.0	13.4	19.1	1.6

Source: IMF, World Economic Outlook.

Table 8. Chile: Fiscal Balance

(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996
Argentina	-2.7	-2.5	-0.2	0.9	-0.5	-1.4	-2.0
Brazil	1.6	1.5	-2.2	0.2	0.5	-4.8	-3.9
Chile	3.4	2.1	2.9	1.8	2.2	3.5	2.0
Colombia	-0.7	-0.3	-0.6	-0.8	-0.5	-1.1	-2.7
Indonesia	1.3	0.0	-1.2	-0.7	0.0	0.8	1.4
Korea	-0.6	-1.6	-2.6	-1.0	1.0	0.0	0.0
Malaysia	-2.2	-0.1	-3.5	-2.6	2.5	3.8	4.2
Mexico	-2.6	-0.5	1.5	0.7	-0.1	-0.1	-0.3
Peru	-2.2	-2.4	-2.8	-2.6	-2.3	-2.8	-1.1
Philippines	-3.5	-2.1	-1.2	-1.6	-1.6	-1.4	-0.4
Thailand	4.5	4.7	2.8	2.1	1.9	2.9	2.2

Source: IMF.

1/ For Latin American countries, except Brazil, overall public sector balance. For Brazil, public sector operational balance. For Asian countries, general government balance.

Table 9. Chile: Financial Indicators

(In percent of GDP)

	1990	1991	1992	1993	1994	1995	1996
A. Claims on Private Sector 1/							
Argentina	15.5	12.5	15.2	16.5	18.2	18.1	18.1
Brazil	32.7	34.8	56.2	82.1	42.6	29.2	26.5
Chile	45.9	44.0	45.4	49.3	48.5	51.0	55.0
Colombia	15.6	13.3	14.6	17.6	17.8	18.9	19.0
Indonesia	50.6	50.7	49.5	48.9	51.9	53.5	55.4
Korea	56.8	56.8	56.8	57.9	60.4	60.8	65.7
Malaysia	71.4	77.0	75.5	76.4	76.8	87.1	...
Mexico	20.4	26.1	32.7	33.5	41.4	30.5	18.2
Peru	6.9	5.7	7.9	9.4	11.9	14.4	19.1
Philippines	19.3	17.8	20.6	26.4	29.1	37.5	48.4
Thailand	64.3	67.3	72.3	80.2	91.8	98.0	...
B. Claims on Private Sector 2/							
Argentina	15.6	12.6	15.4	16.8	18.5	18.3	18.4
Brazil	40.8	44.8	69.6	96.1	49.8	33.4	30.8
Chile	47.0	45.1	47.0	51.4	50.8	52.7	57.0
Colombia	30.8	27.9	29.9	34.9	37.1	39.5	40.9
Indonesia	...	...	...	...	...	...	...
Korea	102.5	103.1	110.7	121.3	128.8	133.7	143.5
Malaysia	...	...	111.4	113.3	115.0	129.6	...
Mexico	22.7	28.5	36.0	37.5	46.7	35.7	21.6
Peru	10.1	7.5	9.4	10.3	12.5	14.9	19.6
Philippines	22.3	21.5	25.2	32.0	35.9	45.0	54.2
Thailand	83.1	88.6	98.6	111.2	128.3	139.5	...
C. Ratio of M2 to Reserves 3/							
Argentina	3.8	3.4	3.3	3.4	3.9	3.8	3.5
Brazil	15.8	18.0	9.9	11.3	5.8	4.2	3.5
Chile	2.0	1.9	1.8	1.8	1.5	1.8	2.0
Colombia	1.9	1.3	1.2	1.5	2.0	2.2	2.0
Indonesia	6.2	5.6	5.8	6.2	6.7	7.3	6.7
Korea	6.7	8.6	7.4	7.1	6.6	6.3	6.7
Malaysia	3.3	3.5	2.6	1.8	2.2	3.2	...
Mexico	5.3	4.4	5.9	5.4	28.6	5.7	3.2
Peru	6.7	2.3	2.3	2.1	1.3	1.3	1.3
Philippines	17.4	4.9	4.5	5.0	5.0	6.0	4.6
Thailand	4.5	4.2	4.2	4.1	3.9	3.7	4.0

Source: IMF, International Financial Statistics.

1/ Sum of claims on private sector of monetary authorities and deposit money banks.
2/ Sum of claims on private sector of monetary authorities, deposit money banks and other banking institutions.
3/ End-of-year reserves calculated at end-of-year exchange rates.

Table 10. Chile: Stock Market

(In U.S. dollars)

	1991	1992	1993	1994	1995	1996	1997 1/
A. Investable Price Index							
Argentina	137	100	171	127	138	164	184
Brazil	101	100	186	307	244	317	361
Chile	88	100	132	187	179	148	157
Colombia	73	100	152	191	141	149	189
Indonesia	98	100	212	170	187	217	89
Korea	...	...	...	...	...	...	...
Malaysia	83	100	207	164	166	206	61
Mexico	86	100	149	90	67	78	108
Peru	...	...	...	...	...	...	...
Philippines	84	100	252	223	194	220	93
Thailand	74	100	207	166	163	96	26
B. Stock Market: Global Price Index							
Argentina	138	100	167	125	136	162	181
Brazil	102	100	191	321	250	325	364
Chile	89	100	129	183	177	147	155
Colombia	73	100	132	167	124	130	157
Indonesia	99	100	209	166	182	215	87
Korea	97	100	121	140	131	79	37
Malaysia	80	100	199	154	157	193	58
Mexico	83	100	147	86	63	73	99
Peru	...	100	135	205	224	226	257
Philippines	85	100	233	231	197	235	98
Thailand	74	100	197	171	165	102	27

Source: IFC, Emerging Markets Database.

1/ November.

Table 11. Chile: Terms of Trade

	Levels 1/			Variability 2/			
	1970-79	1980-89	1990-96	1970-96	1970-79	1980-89	1990-96
Argentina	130.9	94.7	71.9	31.0	12.3	20.5	3.9
Brazil	123.9	85.6	91.1	20.9	9.3	12.6	3.2
Chile	131.0	74.8	96.6	41.7	41.8	17.1	6.0
Colombia	107.4	104.7	85.9	20.5	25.7	8.4	11.8
Indonesia	54.1	120.3	126.3	38.9	23.5	15.8	2.8
Korea	102.4	95.5	102.9	9.7	12.2	8.3	4.9
Malaysia	107.4	96.7	95.8	10.4	11.2	8.3	3.0
Mexico	79.0	127.8	88.9	28.5	17.5	20.9	6.9
Peru	115.7	96.2	87.0	19.4	16.0	15.3	5.1
Philippines	117.9	88.7	94.1	20.3	19.1	12.1	2.8
Thailand	118.6	95.4	84.8	17.6	9.5	7.1	1.0

Source: IMF, World Economic Outlook.

1/ Average 1970-1996=100.
2/ Standard deviation divided by period average, times 100.

Table 12. Chile: Baseline Scenario

(In percent of GDP)

	1996	1997	1998	1999	2000	2001	2002	2003
Current account balance (cash basis)	-4.1	-3.7	-4.6	-4.4	-4.1	-4.1	-4.1	-4.2
Current account balance (accrual basis)		-4.8	-5.4	-5.2	-4.9	-5.0	-5.1	-5.3
External Debt	34.4	34.1	36.2	35.4	34.6	33.5	32.5	31.8
Foreign Exchange Reserves	20.6	22.9	23.3	22.2	21.4	20.3	19.3	18.3
Stock of foreign capital in Chile								
Cumulative flows, with price adjustment	24.5	26.8	29.8	31.4	33.0	34.5	35.8	37.0
Cumulative flows, no price adjustment	21.5	23.6	26.2	27.5	28.7	29.8	30.8	31.6
Accrual basis 1/	24.0	27.3	30.9	33.0	35.1	37.0	38.8	40.4
Stock of Chilean capital abroad								
Cumulative flows, with price adjustment	5.5	6.4	7.5	8.3	9.1	9.8	10.3	10.8
Cumulative flows, no price adjustment	5.2	5.9	7.0	7.7	8.3	8.9	9.3	9.6
Stock of portfolio equity in Chile								
Market prices	8.1	10.8	11.4	11.6	11.7	11.8	11.9	12.0
Historical values	4.6	6.7	7.3	7.6	7.8	8.0	8.1	8.3
Stock of Chilean foreign equity holdings								
Market prices	2.0	2.3	2.8	3.2	3.5	3.9	4.2	4.5
Historical values	0.8	1.2	1.7	2.1	2.5	2.8	3.1	3.4

Sources: IMF; national sources; and Fund staff estimates.

1/ Based on stock estimate for 1996. Values for following years, price adjusted, obtained by cumulating accrual-based flows.

Table 13. Chile: Alternative Scenarios

	1996	1997	1998	1999	2000	2001	2002	2003
A. Weak capital inflows 1/								
Current account balance (cash basis)	-4.1	-3.7	-4.6	-4.6	-4.3	-4.3	-4.4	-4.5
Net debt 2/	13.7	11.3	13.1	14.6	15.1	15.7	16.4	17.0
Net equity 3/	24.5	29.5	31.8	34.6	35.2	35.7	36.1	36.7
B. Strong capital inflows 4/								
Current account balance (cash basis)	-4.1	-3.7	-4.4	-5.2	-4.8	-5.0	-5.3	-5.6
Net debt 2/	13.7	11.3	11.5	11.3	11.2	11.5	12.1	13.2
Net equity 3/	24.5	29.4	32.2	32.1	32.3	32.5	32.8	32.9

Source: Fund staff estimates.

1/ With respect to baseline, the scenario assumes lower capital inflows to Chile, lower FDI profitability, lower world GDP growth (0.2 percent per year), real depreciation of 5 percent in 1999, copper prices 5 percent below the baseline, and lower domestic growth (5 percent in 1999, 6.5 percent between 2000 and 2003).

2/ External debt minus foreign exchange reserves, as a fraction of GDP.

3/ Stock of foreign-owned capital (accrual basis) minus stock of Chilean capital abroad (price-adjusted) plus net portfolio equity position (at market prices), as a fraction of GDP.

4/ With respect to baseline, the scenario assumes stronger capital inflows to Chile, higher FDI profitability, higher world GDP growth (0.2 percent per year), a trend real appreciation of 2 percent per year between 1999 and 2003, and copper prices 5 percent above the baseline.

Figure 1. Chile: Cumulative Current Account, Net Debt and Net Equity
(In percent of GDP)
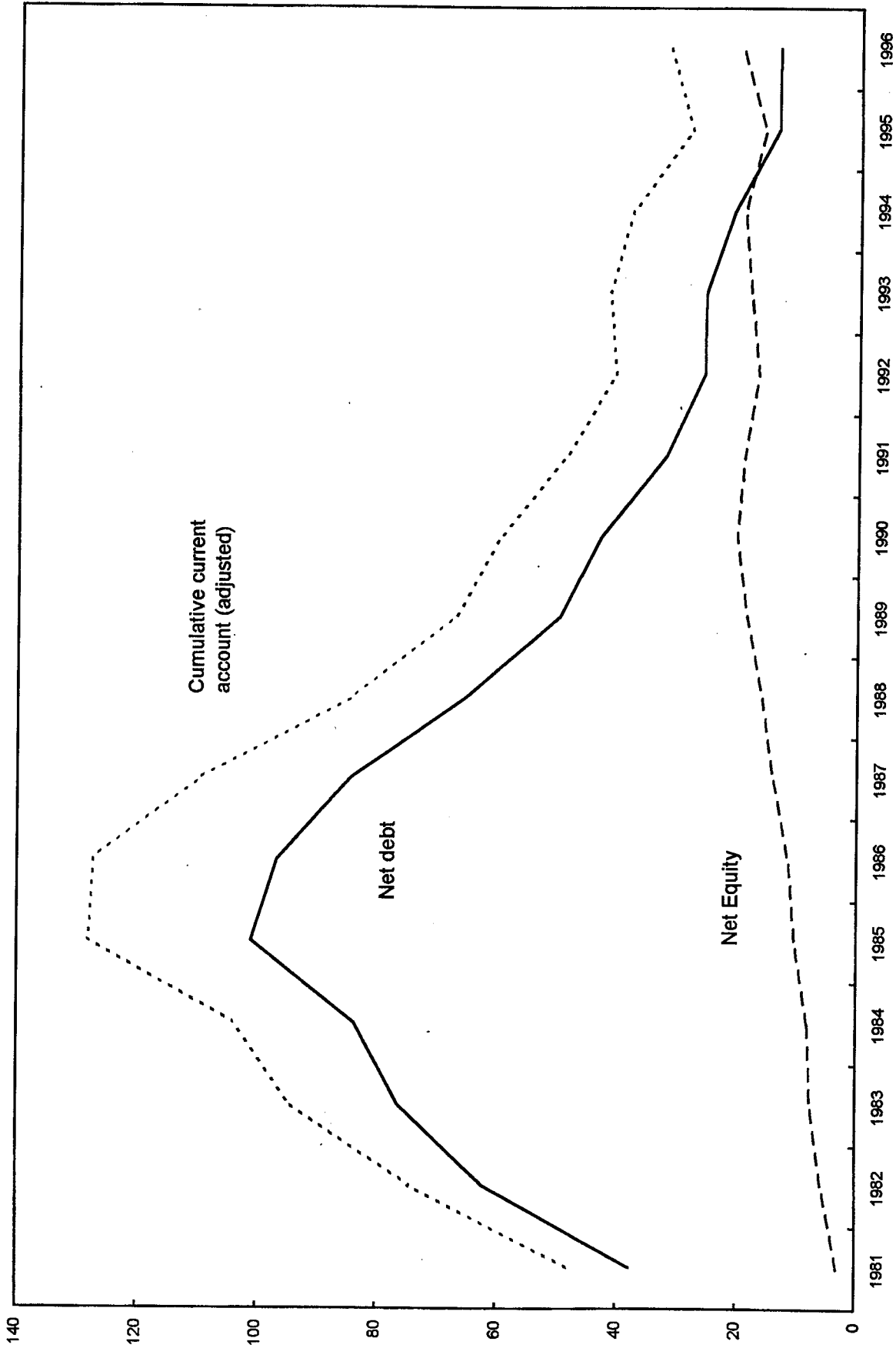
Sources: IMF, *World Economic Outlook*, and Fund staff calculations.

Figure 2. Real Effective Exchange Rates
(1990=100)
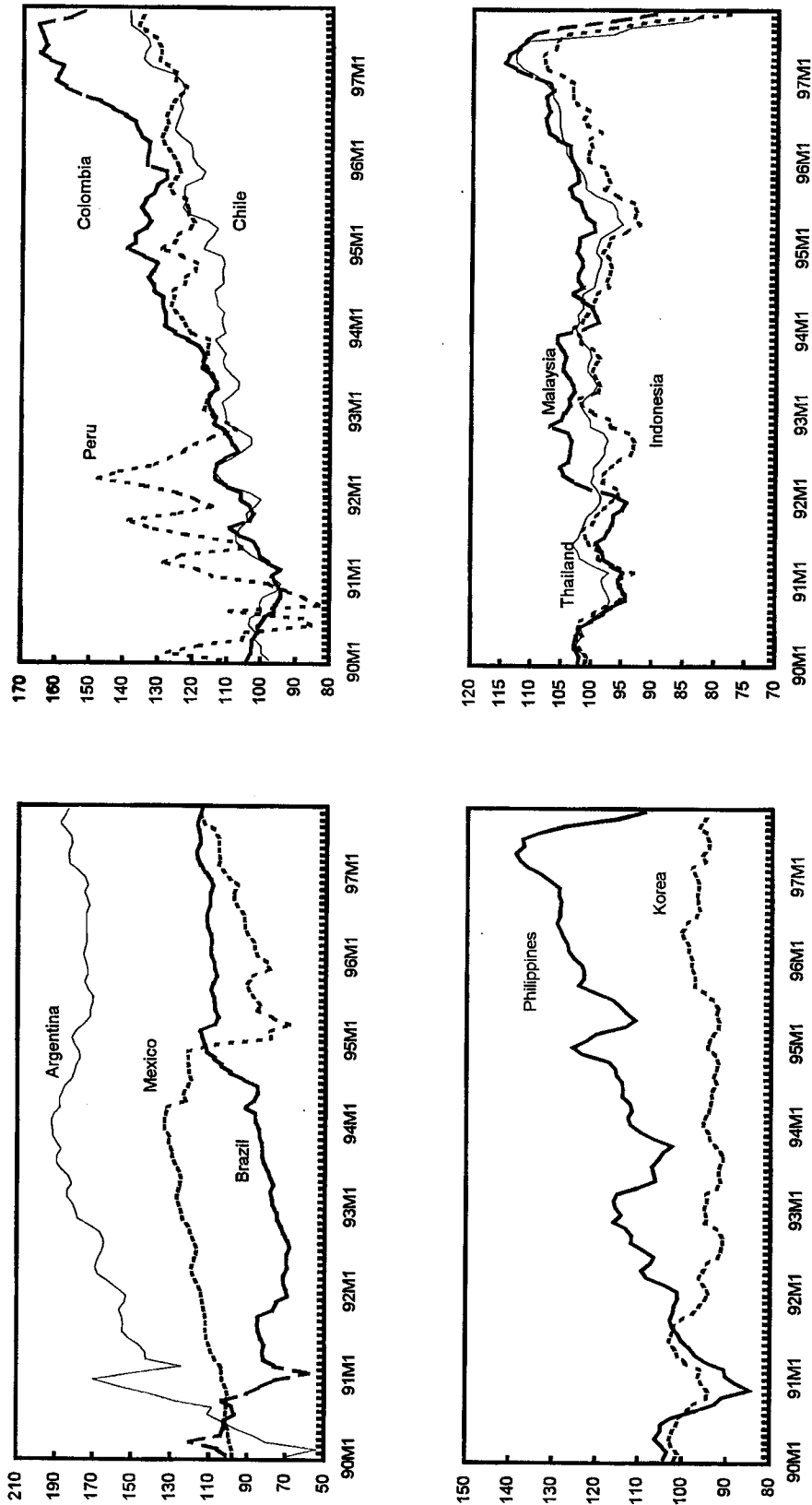
Source: Information Notice System of the IMF.

Figure 3.   Cumulative Current Accounts, Net Debts and FDI Stocks
(In percent of GDP)

Figure 3. Cumulative Current Account, Net Debt and Net Equity
(In percent of GDP)

Malaysia

Korea

Philippines

Thailand

Sources: IMF, *World Economic Outlook*, and Fund staff calculations.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
I. Central Government			
1. Taxes on net income and profits			
1.1 Tax on corporations			
1.1.1 Corporate income tax	A tax on earned income by corporations called First Category Tax.	Companies that declare this tax on the basis of detailed accounts can take credit of 4 percent on investment in fixed capital, up to a total of 500 UTM. 1/	15 percent.
	Paid on income from manufacturing, commerce, mining and other extractive activities, real estate, services and activity of agricultural enterprises.	**Exempt:** General government, municipalities, savings, social security and mutual-assistance associations, central bank, charitable institutions. Companies in Region 12—Magellan and Antartic, and companies in Duty Free Zones.	
	In agriculture, income of farmers whose annual sales do not exceed 8,000 UTM and who own the land they work, is presumed to be 10 percent of the value of fixed capital. For those farming land that they do not own, income is presumed to be 4 percent of the fixed capital. Income from nonagricultural real estate is presumed to be 7 percent of its value.		
1.1.2 Tax on indirect distributions (Article 21 DL 824)	Companies whose average monthly income over the latest three years was less than 250 UTM can opt for a simplified system according to which they pay the tax on the sum of distributed profits and the differences in company's own capital between the beginning and the end of the year. A tax on cash payments by corporations and payers of the tax referred to in (1.5) for expenses not considered necessary. Also taxable are loans made by partnerships to their individual partners.	None.	35 percent.
1.2 Tax on financial income (Article 20, No. 2, DL 824)	A tax on resident individuals, applicable to income generated by the ownership of shares of foreign corporations.	None.	15 percent.
1.3 Special taxes on small business			
1.3.1 Tax on small artisan miners	A tax on miners who have at most five employees, and on partnerships or cooperatives of at most six miners. The base is the net sales of minerals.	None.	A variable rate between 1 percent and 4 percent which depends on the world price of minerals.
1.3.2 Tax on street vendors	A fixed tax on street vendors	None.	Market vendors, half UTM per year. Stationed vendors, half UTM per year.
1.3.3 Tax on newsstands	A tax on vendors of newspapers, magazines, and related printed material.	None.	0.5 percent of the value of the sales. If also selling cigarettes, lotteries, etc., add 1/4 UTM per year.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
1.3.4 Tax on small workshops	A tax on sole proprietors of small workshops.	None.	3 percent of gross revenue (1.5 percent if predominant source of income is production of goods), due monthly. Annual make-up payment required if sum of inflation-adjusted payments fall short of two December UTMs.
1.3.5 Tax on small fishing enterprises	A tax on small fishing enterprises operating one or two boats.	None.	0.5 UTM if gross tare is under 4 tons; 1 UTM if gross tare is between 4 and 8 tons; 2 UTM if gross tare is between 8 and 15 tons.
1.4 Taxes on income of mining and transportation companies			
1.4.1 Tax on income of miners	When not determined according to (1.1.1) or (1.3.1), for miners with annual sales not exceeding 36,000 tons of nonferrous minerals and/or 6,000 UTA the income is imputed by applying a factor on net sales. For copper, gold and silver the factor varies between 4 percent and 20 percent, depending on the world price of these metals. For other minerals the factor is 6 percent. The scheme includes the sales of processed minerals, provided they are mostly of own extraction.	None.	15 percent of net income.
1.4.2 Tax on income of transportation companies	Net income of city or road transportation companies (either passengers or cargo) whose annual sales do not exceed 3,000 UTM is imputed as 10 percent of the value of the vehicle.	None.	15 percent of net income.
1.5 Additional tax on foreign residents	A tax on the income from Chilean sources made available to nonresidents. Tax base includes royalties, technical assistance, interest paid by nonfinancial entities, insurance premia, earnings of Chileans living abroad, and remittances of foreign investors under the Foreign Investment Statute (DL 600).	Exempt: new equity originated from taxed profits; return of capital; interest on debt of government, central bank, CODELCO, and on Latin American Banking Acceptances; payments abroad for freight insurance services (not premia), telecommunications, and processing of Chilean products.	35 percent general. 30 percent on amounts paid to nonresidents for the use of trademarks, patents, formulas and advisory services. 20 percent on personal work in scientific, cultural and sport activities; on engineering services performed abroad; and on movie and television rights. 5 percent on gross value of foreign participation on ship freights, to and from Chile, granted exemption on the basis of reciprocity. 4 percent on interest earned on deposits in authorized financial institutions, loans granted by foreign banks, bonds and debentures denominated in foreign currency, and bonds, debentures and other paper denominated in foreign currency issued by the Government of Chile or the Central Bank of Chile. Foreign investors under the Foreign Investment Statute (DL 600) may opt, when signing the initial investment contract, for a 42 percent tax rate that is guaranteed for a period of 10 years. Tax credit of 0, 10 or 15 percent of the amount remitted, according to the rate at which it was taxed.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
1.6 Tax on state-owned enterprises (Decree-law 2,398)	A surtax applies to state enterprises	**Exempt:** the central bank, enterprises organized as stock corporations, and enterprises belonging in part to the private sector.	40 percent on the share of the state in profits.
1.7 Taxes on individuals			
1.7.1 Personal income tax (Decree-law 824)	The personal income tax, called Second Category Tax, paid on income from wages, salaries, bonuses, and all other revenue ratios for personal services, pensions, and income obtained through representation expenditures. For farm workers, income base is the same as that used for Social Security Contributions.	**Exemptions:** Income up to 10 UTM.	**Income Classes 2/ Percent Rate**
			10 - 30 UTM 5
		Deductibles: 20 percent of investment in shares if by December 31, the investment took place more than 360 days ago; up to 50 UTA, 50 percent, and then 20 percent, of dividends from corporations and capital gains or losses from sale of equity, for taxpayers covered by Art. 57 bis b), average effective rate applied to the year's net savings; if net savings is less than zero, tax must be paid.	30 - 50 UTM 10
			50 - 70 UTM 15
			70 - 90 UTM 25
	All income earned by individuals is subject to a Global Complementary Tax at the same rates as the Second Category Tax. All taxes paid before on the same income (First Category, fees, etc.) and a tax credit of 10 percent of one UTA are netted out to determine the Net Complementary Tax due.		90 -120 UTM 35
			Over 120 UTM 45
			Income of farm workers in excess of 10 UTM 3.5
1.7.2 Tax on taxi-drivers	Instead of the tax referred in (1.7.1) taxidrivers who do not own the car pay a fixed monthly tax.	None.	3.5 percent on the value of two UTMs.
2. Social security contributions	Private social security system is funded by a levy on all civilian wages and salaries. Additional levy required to purchase invalidity and survival insurance. There are various differentiated rates for persons still in the public security system. There is no tax on employers.	**Exempt:** military personnel; remuneration in excess of 60 UF. 3/	10 percent for pensions and 3.5 percent for insurance.
	Health insurance	**Exempt:** remuneration in excess of 60 UF.	7 percent.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
3. Property taxes			
3.1 Net wealth tax	None.		
3.2 Additional real estate tax	A surtax to the municipal real estate tax (II.1) is imposed by the General Government. The surtax applies to nonfarm real estate. It is collected together with the municipal tax.		
	(i) For municipalities that have agreed to the reappraisal of real estate:	Exempt: houses valued at less than Ch$30.7 million (1997 prices).	0.025 percent of municipal real estate tax.
	(ii) For other municipalities, until December 31, 1999 or the date municipal authorities agree to the reappraisal of real estate, whichever is earlier:	Exempt: houses valued at less than Ch$17.2 million (1997 prices).	30 percent of municipal real estate tax.
3.3 Tax on gifts and inheritance (Law 16,271)	A progressive tax on net wealth obtained through gift or rights of inheritance. The tax is to be paid within two years from the date the transfer was effective.	Excluded from the base: low-valued houses and forests. Exemptions: spouses, parents, children up to 50 UTA for inheritance, up to 5 UTA for gifts; relatives up to fourth degree up to 5 UTA for gift and inheritance.	

Value of Inheritance of Gift	Percent Rate
Up to 80 UTA	1
From 80 to 160 UTA	2.5
From 160 to 320 UTA	5
From 320 to 480 UTA	7.5
From 480 to 640 UTA	10
From 640 to 800 UTA	15
From 800 to 1,200 UTA	20
More than 1,200 UTA	25

Surcharge: spouses, parents, children exempt; relative up to fourth degree, 20 percent; other relatives, 40 percent.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
4. Taxes on goods and services			
4.1 Value-added tax (Tit. II of DL 825)			
4.1.1 General value-added tax	A comprehensive and uniform tax on sales of goods and services. Includes construction industry (Law 18,630), sales to government, and importation.	**Exempt sales:** in-kind payments to employees, food provided on premises to employees and students, nonadvertisement income of television and radio stations, news services, mass transportation, schooling, charges by state hospitals and health institutions, sales by Casa de Moneda, state lottery, used cars (see 4.1.3). **Exempt imports:** defense and police weaponry and supplies, effects belonging to diplomats and employees of international organizations, donations to qualified institutions, tourists effects, in-transit items, inputs to be used in production for exportation, capital goods for qualified projects, artistic, cultural and sport performances and awards, international freight and travel, some international insurance premia, receipts subject to the income tax (such as interest, rents, personal services). Deductions from the base: rebates granted to buyers after sale, and refunds, net of canceled purchases. Tax credit granted for the tax paid on purchases of goods and services. Exports not taxed; reimbursement still granted for tax paid on purchases of inputs for exports. Advance tax credits can be granted on purchases related to qualified export-oriented projects, deductible from VAT credits on actual exports when the project comes on stream.	From July 1990 to December 1997 18 percent of the (net of the VAT) transaction price.
4.1.2 Additional value-added tax on luxuries	Besides being subject to the VAT tax, some goods are subject to an additional tax with a structure similar to the VAT.	Tax credit granted for the additional tax paid on purchases of goods subject to the additional tax.	50 percent for jewelry, precious stones, fine furs, and tapestry, leisure yachts, trailers, caviar, fireworks, airguns. 30 percent on sail yachts and competition boats. 70 percent on whiskey, 30 percent on liquors, 25 percent on pisco. 15 percent on wine, and 13 percent on nonalcoholic beverages.
4.1.3 Tax on sales of used automobiles	A tax on the sales of used motor vehicles, which excludes the VAT (but VAT is due if vehicle is bought abroad).	**Exempt:** mass transportation vehicles, trucks, vans, and pickups (provided driver and cargo compartments are not the same).	0.5 percent of the transaction price.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
4.1.4 Tax on imported cars (I)	The importation of motor vehicles, assembled or not, is subject to this addition to VAT. The base of the tax is the import value.	**Exempt:** passenger vehicles with 15 or more seats, tractors, trailers, other classified in position 87.03 of tariff, automobiles of less than 1,500 cc. Tax rate is lower for small pickup trucks.	Rate = (cc x 0.03 - 45), where cc stands for number of cubic cm of piston displacement. The rate is then lowered by a percentage (equivalent to 80 percent in 1997) that has been increased by 10 percent yearly since 1990. Small trucks and buses with 500-2,000 kg payload capacity are subject to a 75 percent rebate on the tax rate with a maximum effective rate of 15 percent. Maximum tax in 1997: US$7,748.02 per vehicle.
4.1.5 Tax on imported cars (II)	In addition to the tax (4.1.4), the importation of motor vehicles, assembled or not, for passengers or cargo, which can carry up to 2,000 kg is subject to this addition to VAT. The base is the import value in excess of US$10,330.68.	The exemption list is the same as for (4.1.4).	85 percent
4.2 Selective excises			
4.2.1 Tax on tobacco	A tax on sales of cigarettes, cigars and processed tobacco. The tax base is the consumer price (with the inclusion of the tax itself).	**Exempt:** small amounts brought by passengers for self-consumption; exports.	45.4 percent on cigarettes, 42.9 percent on tobacco products, 46 percent on cigars.
4.2.2 Surcharge on tobacco	A surcharge on sales of tobacco.	**Exempt:** small amounts brought by passengers for self-consumption; exports.	10 percent.
4.2.3 Tax on gasoline and diesel	A tax on the first sale or importation of gasoline and diesel oil.	In the case of diesel oil, a tax credit is given against the VAT if the vehicle is not used for transportation.	4,408.4 UTM per cubic meter of gasoline. 1.5 UTM per m3 of diesel oil.

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
5. Taxes on international transactions			
5.1 Import duties			
5.1.1 General tariff	A general and uniform tariff. The base is the customs value; if unknown, the c.i.f. value. The tax is assessed in U.S. dollars.	**Exempt:** boat engines and worktools for small fishery and imports for use in Region XII (for South) enjoying preferential treatment. **Reduced rate:** special vehicles for the handicapped pay half the normal rate.	11 percent normal, 5.6 percent on imports to free zone (rate valid from April 1, 1997 to March 31, 1998). Surtaxes ranging from 5 percent to 24 percent and countervailing duties can be imposed on import prices intended to seriously harm domestic industry. If imported goods are used as input of export goods, the exporter can claim return of the tax paid. The tax on the import of capital goods can be deferred up to seven years.
5.1.2 Fee on exempt imports (Article 221 Law 16,840)	A charge ("tasa de despacho") imposed on all goods exempt of custom duties.	None.	5 percent on c.i.f. value.
5.1.3 Equalization duties (Article 12 Law 18,525)	A duty on the importation of com-modities, set as to smooth out the domestic cycle of prices for wheat, oilseeds, cooking oil and sugar. Duties are fixed annually by the president.	None.	Specific to commodity and year.
5.2 Export duties	None.		
5.3 Other customs duties	Chile also has the following customs revenues, not detailed here: extension of provisional admissions of foreigners (DEC.Hac.175/74), charge for storage in private warehouses prior to payment of duties (Article 140 ss. Ord), consular rights on ships and airplanes, balance of insurance policies, outturn of customs actions.		

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
6. Other taxes			
6.1 Stamp duties (see also 5.1.2)			
6.1.1 Tax on credit instruments	A tax on financial papers. The specific amounts, expressed in Chilean pesos, are revised twice a year according to inflation.	None.	Per check drawn on domestic banks Ch$109. Per check issued without enough provision, or per unpaid draft of promissory note: 1 percent of value, or per unpaid Ch$1,837. For checks only, a maximum of one UTM. Credit instruments: 0.1 percent of value, per month, maximum 1.2 percent. Contracts at call: 0.5 percent.
6.2 Fee on mining licenses (Law 18,248)	A tax on rights of exploration and mining concessions.	None.	Rights of exploration: one-time payment of 2 percent of one UTM depending on extension of land. Mining concessions: 10 percent of one UTM per hectare per year.
6.3 Taxes on gambling	Three taxes are imposed on games of chance: (i) a tax on the selling price of the sport lottery (Sistema de Pronosticos Deportivos), not including the tax itself, and on the tickets of the national lottery system (Polla Chilena de Beneficiencia and the Concepcion lottery). (ii) a specific tax on each individual admission at casinos; (iii) an ad-valorem tax on horse racing bets.		15 percent on lotteries. 0.07 x 1 UTM per casino admissions. 3 percent on horse racing bets.
6.4 Taxes on civil registration	A tax on the issuance of certificates of birth, marriage, residence of aliens, criminal records, police ID, family data, passports— details not available.		

I. Summary of Tax System as of November 30, 1997

(All amounts in Chilean pesos)

Tax	Nature of Tax	Exemptions and Deductions	Rates
II. Municipalities			
1. Real estate tax	Annual tax on value of real estate land. 40 percent of the proceeds is distributed to the municipality of origin and 60 percent goes to a common fund, which in turn is distributed according to social criteria.	Exempt: houses valued at less than Ch$8.6 million (1997 prices).	2 percent of land value before reappraisal. Once reappraised, 1.4 percent if value exceeds Ch$30.7 million; and 1.2 percent if value is below Ch$30.7 million.
2. Motor vehicle duties	Two fees are imposed on motor vehicles: (i) a fee on motor vehicle permits, paid annually. (50 percent of proceeds goes to the municipalities' common fund.)	None.	On a progressive scale according to the vehicle's value.
	(ii) a fee on motor vehicles transactions (50 percent of proceeds goes to the municipalities' common fund.)		1 percent of the vehicle's value.
3. Business duties	A fee charged for vehicle permits, paid annually. (100 percent of proceeds goes to the municipalities' common funds).	None.	

Sources: Ministry of Finance, Dirección de Presupuestos, Cálculo de Ingresos Generales de la Nación Correspondiente al Año 1998, Santiago: November 1997 and information provided by the Chilean authorities.

1/ UTA stands for Unidad Tributaria Anual (annual tax unit), and corresponds to 12 times the value of a December's UTM (Unidad Tributaria Mensual) or monthly tax unit. The UTM is adjusted each month according to the change in average price level in the second-past month. In December 1996 one UTM was worth Ch$23,228 and reflected changes in the price level as per October 31, 1996.
2/ The monthly withheld tax on labor income is computed using the same progressive schedule, but using UTM instead of UTA.
3/ UF stands for Unidad de Fomento, a price reference unit widely used in financial contracts which is adjusted daily. A schedule from the 10th of each month to the 9th of the subsequent month reflects changes in the price level in the previous month. On December 31, 1996, one UF was worth Ch$13,280.43 and reflected changes in the price level as per November 30, 1996.

Chile: Selected Monetary Measures Adopted in 1997

February 6. The central bank reduced the real overnight interest rate from an annual rate of 7.5 percent to 7.25 percent.

April 10. Chilean banks were authorized to finance foreign trade operations between third countries (previous to that date, they could only extend credits for trade operations to or from Chile).

April 11. The central bank reduced the real overnight interest rate by 25 basis points to an annual rate of 7 percent.

May 30. The central bank announced the issue of 90-day nominal promissory notes (PDBCs) beginning July 9, 1997. These promissory notes will be auctioned along with 90-day indexed promissory notes (PRBCs) on Tuesday and Thursday of each week, and the amount offered will represent approximately 10 percent of the total amount of short-term promissory notes scheduled for the corresponding monthly reserve period. The sale of 30-day nominal promissory notes (PDBCs) was eliminated and replaced by auctions of 42-day nominal promissory notes to be realized every Tuesday according to a preannounced monthly schedule.

June 6. The central bank reduced the real overnight interest rate by 25 basis points to an annual rate of 6.75 percent.

July 26. The central bank announced that effective November 3, 1997, the minimum clearing period for checks drawn on current accounts will be two business days, and the maximum clearing period five business days.

September 2. The central bank reduced the real overnight interest rate by 25 basis points to an annual rate of 6.5 percent.

Chile: Changes in the Exchange and Trade System in 1997

January 6. To promote the decentralization and simplification of foreign exchange and trade operations and reduce their cost, commercial banks were allowed to engage in such operations from any of their offices (previously, such operations could only be undertaken by bank with offices in Santiago and its metropolitan area).

January 9. The central bank announced that: (i) payments of all insurance premiums, purchased either in Chile or abroad, are to be channeled through the official exchange market. The requirement of prior authorization by the central bank to purchase foreign exchange on this market for payments of such premiums was eliminated, and related administrative procedures simplified; and (ii) the surrender requirement on returns on investment abroad or proceeds from the sale of foreign stock or derivatives was eliminated.

January 24. The central bank (i) modified the composition of the currency basket used to calculate the midpoint rate of the exchange band; the share of the U.S. dollar was increased from 45 to 80 percent, that of the German mark lowered from 35 to 15 percent, and that of the Japanese yen lowered from 20 to 5 percent; (ii) revalued the midpoint rate by 4 percent; and (iii) widened the band from 10 percent to 12½ percent on each side of the midpoint rate.

March 27. The maximum amount to qualify for exemption from the 30 percent reserve requirement on foreign financial investment was lowered from US$200,000 to US$100,000 per transaction and per year.

April 10. Chilean banks were authorized to finance foreign trade operations between third countries (previous to that date, they could only extend credits for trade operations to or from Chile). Foreign trade loans must be denominated in U.S. dollars, and may not exceed 20 percent of the bank's capital and reserves.

April 15. The central bank (i) granted Chilean residents access to the official exchange market for investment operations abroad, including the purchase of financial and real assets, bank deposits, bank loans, and contracts for the prospection and exploration of natural resources. Repatriated funds also are to be channeled through the official market. The prior authorization and periodic reporting requirements were eliminated, although these operations are to be reported to the central bank for information purposes; (ii) exempted from the reserve requirement on capital inflows all proceeds from investment of Chilean residents abroad, provided the proper documentation is presented; (iii) eliminated the cap of US$15,000 per month for payments of current transactions by individuals through the official exchange market.

April 17. The limit on holdings of foreign instruments by pension funds was increased from 9 to 12 percent of their assets.

April 19. The central bank renewed for one year all existing restrictions on foreign exchange operations.

September 17. The rules governing operations with financial derivatives were simplified; the prior authorization requirement was eliminated, as well as the requirement that each of these transactions is baked up by a foreign trade or investment operation; operations with derivatives offering floating rates were allowed; and unrestricted access to the official exchange market granted for forward contracts in U.S. dollars.

Table 1. Chile: Aggregate Supply and Demand

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1/ 1996	Jan.-Sep. 1/ 1997
I. Annual Percentage Change (At current prices)							
Aggregate Supply	28.4	19.6	16.8	22.4	11.9	12.1	14.1
Gross domestic product	29.0	19.1	18.8	21.8	11.0	11.2	12.5
Imports 2/	26.6	21.5	10.0	24.5	15.2	15.4	19.9
Domestic expenditure	32.3	23.6	14.5	21.2	15.6	15.3	14.4
Private sector	32.2	25.1	15.1	20.1	15.7	...	...
Consumption	29.7	21.9	16.3	20.9	16.8	...	...
Investment	41.6	36.3	11.7	17.8	11.9	...	...
Public sector	29.2	23.3	15.5	13.5	24.8	...	...
Consumption 3/	27.1	22.7	14.1	14.5	17.7	...	...
Investment	34.0	24.7	18.4	11.3	39.8	...	...
Change in inventories 4/	1.7	-0.3	-0.2	2.5	-0.6	-0.6	0.0
Exports 2/	17.1	6.5	25.7	26.4	-0.5	0.8	16.0
Memorandum items:							
GNP at market prices	30.2	20.4	18.7	23.5	10.2	...	...
GDP deflator	16.2	12.0	13.9	12.2	3.5	3.8	6.1
(At constant 1986 prices)							
Aggregate Supply	14.3	7.7	4.5	12.5	8.6	8.5	8.3
Gross domestic product	11.0	6.3	4.2	8.5	7.2	7.1	6.0
Imports 2/	23.5	11.2	5.1	22.2	11.7	11.7	13.0
Domestic expenditure	14.5	8.9	3.2	12.9	7.9	7.4	7.9
Private sector	14.8	10.8	3.9	12.1	8.3	...	...
Consumption	11.6	8.1	4.4	11.7	8.8	...	...
Investment	27.4	19.7	2.4	13.3	6.9	...	...
Public sector	9.8	5.3	4.5	4.0	13.7	...	...
Consumption 3/	5.3	3.3	2.3	2.3	2.5	...	...
Investment	20.5	9.5	8.5	7.0	33.5	...	...
Change in inventories 4/	1.0	-0.7	-0.6	2.2	-0.7	-0.8	-0.2
Exports 2/	13.5	4.2	8.2	11.4	10.9	11.8	9.3
Memorandum items:							
GNP at market prices	11.5	7.9	3.5	10.1	6.3	...	...
GNP adjusted for terms of trade effects	12.4	5.1	7.5	15.8	0.5	...	...
II. Percent of Nominal GDP							
Aggregate Supply	128.3	128.9	126.8	127.4	128.4	128.2	130.1
Domestic expenditure	98.5	102.3	98.6	98.1	102.2	101.1	102.8
Consumption	71.8	73.5	71.8	70.7	74.5	74.3	75.3
Private sector	62.4	63.8	62.5	62.0	65.2	...	...
General government	9.4	9.7	9.3	8.8	9.3	...	...
Fixed capital formation	22.7	25.6	24.3	23.2	24.5	23.5	24.6
Private sector	18.4	21.0	19.8	19.1	19.3	...	...
Public sector	4.3	4.5	4.5	4.1	5.2	...	...
Change in inventories	4.1	3.2	2.5	4.1	3.2	3.2	2.8
Exports 2/	29.8	26.6	28.2	29.3	26.2	26.9	27.7
Imports 2/	28.3	28.9	26.8	27.4	28.4	28.2	30.1
External resource gap (-)	1.5	-2.3	1.4	1.9	-2.2	-1.3	-2.4

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Nominal quarterly figures are Fund staff estimates.
2/ Goods and nonfactor services.
3/ General government.
4/ Weighted by the contribution to domestic expenditure in the previous year.

Table 2. Chile: Savings and Investment

(As percent of nominal GDP)

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1/ 1996	Jan.-Sep. 1/ 1997
Gross domestic investment	26.8	28.8	26.8	27.4	27.7	26.7	27.5
External savings	1.6	4.5	1.2	-0.2	4.1	2.4	2.7
Gross national savings	25.2	24.2	25.6	27.6	23.6	24.4	24.8
Private investment 2/	22.5	24.2	22.3	23.2	22.4	...	...
Private savings	19.3	19.1	20.7	20.7	17.4	...	...
Net external borrowing	7.2	7.2	8.0	1.4	4.1	...	...
Net resource transfer from public sector 3/	-4.1	-2.0	-6.4	1.1	1.0	...	...
Public investment	4.3	4.5	4.5	4.1	5.2	...	...
Public savings 4/	5.8	5.1	4.9	6.9	6.2	...	...
Net external borrowing 5/	-5.5	-2.6	-6.7	-1.6	0.0	...	...
Of which: accumulation of reserves	-5.6	-1.6	-7.0	-2.0	-0.9	...	...
Net resource transfer from private sector	4.1	2.0	6.4	-1.1	-1.0	...	...
Memorandum items:							
Gross domestic savings	28.2	26.5	28.2	29.3	25.5	25.7	24.7
Net transfers from abroad	1.0	0.8	0.7	0.5	0.7	0.5	0.7

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Nominal quarterly figures are Fund staff estimates.
2/ Includes changes in stocks.
3/ Defined as the excess of public sector savings and net external borrowing over public sector fixed capital formation.
4/ Includes the nonfinancial public sector and the central bank quasi-fiscal deficit.
5/ Net of changes in the net foreign assets of the central bank.

Table 3. Chile: National Accounts at Current Prices

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1/ 1996	Jan.-Sep. 1/ 1997
Consumption expenditure	11,121.6	13,565.9	15,733.8	18,888.9	22,083.9	16,246.3	18,519.1
General government	1,457.4	1,788.1	2,041.0	2,338.0	2,752.1	...	...
Private sector	9,664.2	11,777.8	13,692.8	16,550.9	19,331.9	...	...
Gross domestic investment	4,153.1	5,306.2	5,870.7	7,305.4	8,198.7	5,839.9	6,758.0
Fixed capital formation	3,517.0	4,715.3	5,321.9	6,206.5	7,255.3	5,138.0	6,058.6
Public sector	672.3	838.4	992.7	1,104.6	1,544.3	...	...
Private sector	2,844.7	3,876.9	4,329.2	5,101.9	5,711.0	...	...
Change in stocks	636.1	590.8	548.9	1,098.9	943.4	701.9	699.5
Domestic expenditure	15,274.6	18,872.0	21,604.6	26,194.3	30,282.7	22,086.2	25,277.1
External Sector 2/	225.2	-418.5	313.3	507.8	-638.1	-293.2	-581.5
Exports	4,615.5	4,916.2	6,180.0	7,812.2	7,776.5	5,873.6	6,813.0
Imports	-4,390.3	-5,334.7	-5,866.7	-7,304.4	-8,414.6	-6,166.7	-7,394.5
GDP at market prices	15,499.8	18,453.5	21,917.9	26,702.1	29,644.5	21,851.9	24,586.8
Less: Net factor payments abroad	-692.2	-629.4	-768.7	-589.2	-855.7	...	...
GNP at market prices	14,807.6	17,824.2	21,149.2	26,112.9	28,788.9	...	...
Less: Indirect taxes net of subsidies	-2,124.8	-2,702.6	-2,986.0	-3,604.8	...	...	...
GNP at factor cost	12,682.8	15,121.5	18,163.2	22,508.2	...	...	...
Less: Provision for consumption of fixed capital	-1,313.9	-1,565.8	-1,832.2	-2,269.7	...	...	...
NNP at factor cost = national income	11,368.9	13,555.7	16,331.0	20,238.5	...	...	...

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Nominal quarterly figures are Fund staff estimates.
2/ Goods and nonfactor services.

Table 4. Chile: National Accounts at Constant Prices

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1/ 1996	Jan.-Sep. 1/ 1997
Consumption expenditure	3,959.4	4,257.5	4,432.8	4,902.5	5,297.9	3,929.3	4,218.7
General government	499.3	515.8	527.9	540.2	553.7	...	...
Private sector	3,460.1	3,741.7	3,904.9	4,362.3	4,744.2	...	...
Gross domestic investment	1,490.0	1,675.9	1,693.3	2,014.5	2,163.6	1,552.3	1,694.8
Fixed capital formation	1,265.5	1,489.7	1,541.4	1,728.7	1,929.3	1,376.6	1,529.8
Public sector	241.9	264.9	287.5	307.7	410.7	...	...
Private sector	1,023.6	1,224.8	1,253.9	1,421.0	1,518.7	...	...
Changes in inventories	224.6	186.2	151.9	285.8	234.2	175.7	165.0
Domestic expenditure	5,449.5	5,933.4	6,126.2	6,917.0	7,461.5	5,481.6	5,913.5
External sector 2/	-164.6	-317.0	-271.2	-561.7	-647.1	-416.0	-543.6
Exports	1,895.5	1,974.8	2,137.6	2,382.2	2,641.6	2,013.1	2,200.7
Imports	-2,060.1	-2,291.8	-2,408.7	-2,943.9	-3,288.6	-2,429.1	-2,744.3
GDP at market prices	5,284.9	5,616.4	5,855.0	6,355.3	6,814.4	5,065.5	5,369.9
Less: Net factor payments abroad	-334.2	-276.0	-328.3	-269.6	-346.0	...	...
GNP at market prices	4,950.7	5,340.4	5,526.8	6,085.7	6,468.4	...	...
Less: Indirect taxes net of subsidies	-724.5	-822.6	-797.7	-858.0	...	...	...
GNP at factor cost	4,226.2	4,517.9	4,729.1	5,227.8	...	...	...
Less: Provision for consumption of fixed capital	-472.7	-494.7	-530.7	-572.0	...	...	...
Plus: Terms of trade effect	257.1	137.3	378.7	766.4	517.3	...	...
NNP at factor cost = national income	4,010.5	4,160.5	4,577.1	5,422.1	...	...	...

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Nominal quarterly figures are Fund staff estimates.
2/ Goods and nonfactor services.

Table 5. Chile: Indicators of the Agriculture, Forestry, and Fisheries Sectors

	1992	1993	1994	1995	Prel. 1996
(In billions of 1986 Chilean pesos, unless otherwise indicated)					
Agriculture and forestry	383	390	416	436	...
Forestry	142	145	158	162	...
Fruit	28	31	32	35	...
Other	214	214	226	240	...
Fish catch 1/	6,628	6,191	8,021	7,890	7,233
(Annual percentage changes)					
Agriculture and forestry	7.0	1.6	6.9	4.8	...
Forestry	7.6	2.5	8.4	2.7	...
Fruit	0.3	8.6	6.0	8.0	...
Other	7.5	0.0	6.0	5.8	...
Fish catch	7.5	-6.6	29.6	-1.6	-8.3

Source: Central Bank of Chile.

1/ Thousands of tons.

Table 6. Chile: Indicators of the Mining Sector

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1996	Jan.-Sep. 1997
	(Index, 1990 = 100)						
Total	118.5	123.2	131.4	146.2	177.6	173.1	190.5
Metallic minerals	121.6	127.3	137.3	153.9	189.8	184.9	201.2
Copper	122.3	130.9	135.5	155.5	194.3	189.4	208.2
Molybdenum	107.2	107.7	115.3	120.7	125.9	114.8	149.4
Lead	26.6	30.6	41.5	46.8	97.2	100.2	73.4
Zinc	118.1	117.8	120.0	137.0	141.7	140.4	138.5
Gold	122.8	122.0	134.2	160.8	188.5	184.9	174.1
Silver	157.1	150.5	146.5	158.5	172.6	164.8	167.0
Iron	87.6	89.8	104.8	102.2	110.1	110.3	105.3
Manganese	125.6	159.7	158.6	177.5	157.3	163.2	168.2
Nonmetallic minerals 1/	90.8	90.3	84.0	83.7	78.9	77.4	80.6
Limestone	141.0	154.7	174.5	167.7	171.6	172.1	156.6
Coal	69.7	57.6	55.5	48.5	50.2	46.4	58.1
Petroleum	75.8	72.5	62.8	53.2	46.8	38.0	43.9
Copper 2/	1,932.7	2,055.4	2,219.9	2,488.6	3,115.8	2,012.1	2,217.2
CODELCO	1,156.3	1,139.4	1,139.9	1,164.7	1,246.7	792.8	868.1
Private sector	776.4	916.0	108.0	1,323.4	1,869.5	1,219.3	1,349.1
By product							
Refined copper	1,242.3	1,268.2	1,277.4	1,491.5	1,748.2	1,105.9	1,386.1
Blister	84.2	120.9	183.0	174.7	243.1	155.9	107.1
Other	606.2	666.3	759.5	822.4	1,124.5	750.3	724.0
	(Annual percentage changes)						
Total	6.1	4.0	6.7	11.3	21.5	24.2	10.1
Metallic minerals	7.6	4.7	7.9	12.1	23.3	25.9	8.8
Copper	6.5	7.0	3.5	14.8	25.0	27.5	9.9
Molybdenum	2.7	0.5	7.1	4.7	4.3	-4.7	30.1
Lead	-71.6	15.0	35.6	12.8	107.7	187.8	-26.7
Zinc	-4.2	-0.3	1.9	14.2	3.4	4.4	-1.4
Gold	17.0	-0.7	10.0	19.8	17.2	26.4	-5.8
Silver	52.1	-4.2	-2.7	6.2	8.9	4.4	1.3
Iron	-14.1	2.5	16.7	-2.5	7.7	9.6	-4.5
Manganese	13.9	27.1	-0.7	11.9	-11.4	-7.5	3.1
Nonmetallic minerals 1/	-7.7	-0.6	-7.0	-0.4	-5.7	-1.2	4.1
Limestone	28.9	9.7	12.8	-3.9	2.3	0.7	-9.0
Coal	-30.2	-17.4	-3.6	-12.6	3.5	-3.7	25.2
Petroleum	-16.5	-4.4	-13.4	-15.3	-12.0	-31.2	15.5

Source: National Bureau of Statistics, as reported in the Monthly Bulletin of the Central Bank of Chile.

1/ Includes iodine and nitrate.
2/ Thousands of metric tons.

Table 7. Chile: Indicators of the Manufacturing Sector

(Annual percentage changes)

	1993	1994	1995	1996	Prel. Jan.-Sep. 1996	Prel. Jan.-Sep. 1997
Production						
Consumer goods						
Nondurables	7.4	6.6	6.3	5.6	...	-0.9
Durables	14.8	7.3	7.4	-1.7	...	-0.1
Transport equipment	10.0	1.8	-2.2	-0.6	...	15.1
Capital goods	27.5	12.0	8.1	7.0	...	21.2
Intermediate goods						
For industry	2.1	1.2	4.5	3.1	...	7.3
For construction	18.4	-0.1	5.9	8.3	...	6.3
For mining	-1.0	9.6	15.7	10.4	...	7.9
For agriculture	5.1	14.5	-4.7	-18.8	...	-3.0
Packaging and accessories	0.6	0.3	15.3	12.8	...	1.0
Energy, fuels, and lubricants	2.9	8.5	7.4	1.0	...	5.4
Office furniture	-2.6	5.7	9.6	2.5	...	9.1
Sales						
Consumer goods						
Nondurables	12.0	5.7	6.7	3.9	...	1.9
Durables	15.3	4.8	4.8	0.5	...	-4.4
Transport equipment	8.2	-2.5	-2.3	-2.7	...	27.1
Capital goods	30.6	6.8	14.5	4.1	...	35.0
Intermediate goods						
For industry	2.5	-3.2	2.9	4.9	...	10.1
For construction	13.7	-0.1	6.8	9.9	...	4.6
For mining	-5.1	6.4	17.4	8.8	...	6.0
For agriculture	7.9	12.1	8.0	-22.6	...	2.0
Packaging and accessories	-5.8	4.4	18.3	6.7	...	-0.3
Energy, fuels, and lubricants	4.3	9.7	8.8	4.9	...	0.7
Office furniture	-1.5	7.4	8.4	5.6	...	0.7

Source: Chilean Association of Manufacturers (SOFOFA).

Table 8. Chile: Population, Labor Force, and Employment

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1996	Jan.-Sep. 1997
	(In thousands of persons)						
Total population	13,482.1	13,697.8	13,917.0	14,153.6	14,392.8	14,375.6	14,580.1
Population 15 years and older	9,493.1	9,668.7	9,842.2	10,012.1	10,181.3	10,166.6	10,341.9
Labor force	5,040.4	5,322.3	5,458.8	5,497.4	5,521.90	5,515.5	5,602.9
Employed	4,703.5	4,976.5	5,033.7	5,092.3	5,164.0	5,146.0	5,256.3
Unemployed	336.9	345.8	425.1	405.2	357.7	369.2	346.7
	(In percent)						
Unemployed (as percentage of the labor force)							
Total	6.7	6.5	7.8	7.4	6.5	6.7	6.2
Metropolitan Santiago Region	7.0	6.2	8.3	7.5	7.1	7.2	7.2
Participation rates							
Labor force as percentage of total population	37.4	38.9	39.2	38.8	38.4	38.4	38.4
Labor force as percentage of population over 15 years of age	53.1	55.0	55.5	54.9	54.2	54.3	54.2
	(Annual percentage change)						
Total population	1.6	1.6	1.6	1.7	1.7	1.7	1.4
Labor force	2.7	5.6	2.6	0.7	0.4	0.4	1.6
Employment	4.4	5.8	1.1	1.2	1.4	1.3	2.1
Unemployment	-16.4	2.6	22.9	-5.5	-11.7	-10.8	-6.1

Sources: National Bureau of Statistics (INE).

Table 9. Chile: Index of Nominal Wages 1/

	April-December		Yearly Averages		January-September	
	1993	1994	1995	1996	1996	1997
(Annual averages)						
Overall	106.3	125.1	140.4	156.3	154.6	168.5
Mining	101.9	115.2	121.9	135.7	134.2	145.2
Manufacturing	108.6	126.6	140.9	156.6	154.6	168.9
Electricity, gas, and water	103.4	116.2	128.4	145.7	144.3	154.8
Construction	107.3	122.8	138.2	148.0	147.9	149.1
Trade, restaurants, and hotels	107.6	127.7	143.0	157.9	156.2	169.4
Transportation and communications	102.6	127.5	145.9	157.6	156.0	170.1
Financial services and insurance	102.5	118.8	129.4	142.1	141.2	151.4
Social services	106.4	126.9	146.4	166.9	165.0	183.1
(Annual percentage changes)						
Overall	...	17.7	13.6	11.3	11.7	9.0
Mining	...	13.1	7.3	11.3	11.1	8.2
Manufacturing	...	16.6	12.6	11.1	11.2	9.2
Electricity, gas, and water	...	12.3	12.0	13.5	13.7	7.3
Construction	...	14.5	14.6	7.1	8.8	0.9
Trade, restaurants, and hotels	...	18.7	13.6	10.4	10.8	8.4
Transportation and communications	...	24.3	16.4	8.0	8.1	9.0
Financial services and insurance	...	15.8	10.0	9.8	10.8	7.3
Social services	...	19.2	16.5	14.0	14.4	11.0
Memorandum items:						
Consumer price inflation (annual average)	12.7	11.4	8.2	7.4	7.8	6.2
Minimum wage	14.9	14.5	13.1	11.9	12.2	10.2
Real wages	...	6.2	5.0	3.7	3.7	2.7

Source: National Bureau of Statistics (INE).

1/ The methodology to calculate the wage index was changed in April 1993. Comparable data for previous periods is not available.

Table 10. Chile: Consumer Price Index

(Base: April 1989 = 100)

	All items	Food	Housing	Clothing	Transportation and Communication	Miscellaneous	Core Inflation Index 1/
(Period averages, annual percentage change)							
1992	15.5	18.0	14.4	15.4	8.9	18.5	15.0
1993	12.7	10.9	13.8	10.5	10.3	18.5	13.4
1994	11.4	9.8	12.2	3.0	11.4	17.2	11.7
1995	8.2	8.3	7.6	-1.2	10.2	10.6	7.5
1996	7.4	6.1	7.7	-7.1	10.7	11.0	8.1
1997	6.1	7.1	5.9	-4.7	4.9	8.5	5.5
(End of period, annual percentage change)							
1992 March	18.0	24.4	15.3	19.9	8.3	19.3	18.9
June	14.5	15.2	14.7	13.0	9.1	18.8	14.0
September	15.1	15.8	14.8	14.5	10.8	18.5	14.5
December	12.7	12.2	12.8	11.5	8.4	18.5	12.5
1993 March	12.7	11.1	12.6	12.7	10.2	18.3	12.2
June	13.0	11.6	14.0	11.8	9.8	17.8	13.8
September	12.3	10.2	14.3	10.0	8.8	18.4	13.5
December	12.2	8.5	14.7	4.8	12.7	19.7	13.4
1994 March	13.7	13.1	14.6	4.8	11.2	19.7	13.5
June	12.7	12.5	12.8	1.9	12.2	18.1	12.6
September	10.4	8.3	10.4	1.4	13.1	16.0	10.5
December	8.9	7.0	8.9	3.7	9.6	14.1	9.5
1995 March	8.2	7.4	8.2	1.2	10.5	10.0	7.7
June	7.6	7.4	7.3	-0.5	9.2	10.0	6.8
September	8.6	9.6	7.4	-3.4	11.2	10.2	7.2
December	8.2	9.0	7.1	-5.5	11.4	10.0	7.5
1996 March	7.9	7.6	7.1	-6.5	12.0	11.0	8.0
June	8.3	8.7	7.6	-9.2	11.3	11.4	8.8
September	6.3	3.9	8.0	-7.0	7.2	11.7	7.7
December	6.6	4.1	8.1	-4.7	9.2	10.5	7.4
1997 March	6.8	6.9	7.2	-4.0	7.1	8.7	6.3
June	5.3	4.2	6.3	-2.7	4.8	8.2	4.9
September	6.0	7.8	4.8	-5.2	5.3	8.0	5.2
December	6.0	9.2	4.7	-8.4	2.4	9.0	5.4

Source: National Bureau of Statistics (INE).

1/ Excluding the eleven most volatile food items.

Table 11. Chile: Social Indicators

	1987	1990	1992	1994	Prel. 1996
Incidence of poverty 1/					
Indigent					
Total	17.4	12.9	8.8	7.6	5.8
Urban	...	12.9	8.6	7.6	5.0
Rural	...	17.8	10.0	10.3	9.4
Poor, but not indigent					
Total	27.7	25.7	23.8	19.9	17.4
Urban	...	26.6	23.9	20.3	16.8
Rural	...	25.0	23.8	21.5	21.2
Total poor					
Total	45.1	38.6	32.6	27.5	23.2
Urban	...	39.5	32.5	27.9	21.8
Rural	...	42.8	33.8	31.8	30.6
Income distribution 2/					
First quintile	4.3	4.4	4.6	4.3	4.1
Fifth quintile	57.2	56.9	56.3	56.9	56.7
Ratio of income of fifth quintile to					
income of first quintile	13.3	12.9	12.2	13.1	13.8
Other indicators of social welfare					
Illiteracy 3/	6.1	5.4	5.2	4.8	...
School enrollment 4/					
Elementary school (6-13 years of age)	96.4	96.8	97.4	97.6	98.2
Secondary school (14-17 years of age)	80.9	80.3	82.4	84.9	83.8
Post secondary (18-24 years of age)	...	24.7	26.5	29.6	33.8
Life expectancy at birth 5/	71.7	72.0	74.3	74.6	...
Infant mortality rate 6/	18.5	16.0	14.3	12.0	...

Source: Ministry of Cooperation and Planning (MIDEPLAN).

1/ Percent of population.
2/ Distribution of national income by quintiles of households.
3/ Percent of population over 15 years of age.
4/ Percent of the age group enrolled.
5/ Years.
6/ Per 1,000 live births.

Table 12. Chile: Summary Operations of the Combined Public Sector

	1992	1993	1994	1995	Prel. 1996	January-June 1996	January-June 1997
			(In billions of Chilean pesos)				
Nonfinancial Public Sector							
Total revenue	3,930.3	4,543.8	5,334.6	6,523.7	7,229.2	3,552.8	3,790.6
Current revenue	3,880.3	4,497.7	5,172.8	6,462.8	7,131.1	3,475.0	3,786.4
General government 1/	3,613.9	4,218.2	4,965.7	6,183.2	6,811.8	3,368.6	3,655.6
Net surplus of public enterprises	266.4	279.6	207.1	279.6	319.3	106.4	130.8
Operating surplus of public enterprises	967.2	923.0	1,052.6	1,633.7	1,514.1	780.8	776.2
Net transfers from public enterprises	-700.8	-643.4	-845.5	-1,354.1	-1,194.8	-674.4	-645.4
Capital revenue, net 2/	50.0	46.1	191.6	60.9	98.1	77.8	4.2
Total expenditure	3,487.5	4,205.3	4,859.3	5,577.6	6,632.6	3,029.2	3,480.8
General government current outlays 3/	2,815.2	3,366.9	3,866.6	4,473.0	5,088.3	2,417.9	2,710.5
Fixed investment	672.3	838.4	992.7	1,104.6	1,544.3	611.3	770.4
General government 4/	414.4	551.0	678.2	749.6	946.7	399.3	434.2
Public enterprises	257.9	287.5	314.4	355.0	597.6	211.9	336.2
Overall surplus or deficit	442.9	338.5	475.3	946.1	596.6	523.6	309.7
Deposited to the Copper Stab. Fund	-43.5	36.5	-33.7	-279.4	-77.7	-73.1	-36.1
Central bank cash result	-164.2	-182.3	-207.1	-157.6	-204.0	...	...
Combined public sector overall balance	278.7	156.2	268.2	788.5	392.6	...	...
Financing	-278.7	-156.2	-268.2	-788.5	-392.6	...	...
Foreign (net)	92.5	-263.1	-107.7	-822.8	-694.1	...	...
Foreign, total	60.0	-270.8	-118.2	-836.8	-696.6	...	...
Net on-lent to private sector	32.5	7.7	10.6	14.0	2.5	8.9	4.3
Domestic	-371.2	106.9	-160.5	34.3	301.5	...	...
			(In percent of GDP)				
Nonfinancial Public Sector							
Total revenue	25.4	24.6	24.3	24.4	24.4	24.5	23.2
Current revenue	25.0	24.4	23.6	24.2	24.1	24.0	23.2
General government 1/	23.3	22.9	22.7	23.2	23.0	23.2	22.4
Net surplus of public enterprises	1.7	1.5	0.9	1.0	1.1	0.7	0.8
Operating surplus of public enterprises	6.2	5.0	4.8	6.1	5.1	5.4	4.8
Net transfers from public enterprises	-4.5	-3.5	-3.9	-5.1	-4.0	-4.7	-4.0
Capital revenue, net 2/	0.3	0.2	0.9	0.2	0.3	0.5	0.0
Total expenditure	22.5	22.8	22.2	20.9	22.4	20.9	21.3
General government current outlays 3/	18.2	18.2	17.6	16.8	17.2	16.7	16.6
Fixed investment	4.3	4.5	4.5	4.1	5.2	4.2	4.7
General government 4/	2.7	3.0	3.1	2.8	3.2	2.8	2.7
Public enterprises	1.7	1.6	1.4	1.3	2.0	1.5	2.1

Table 12. Chile: Summary Operations of the Combined Public Sector

					Prel.	January-June	
	1992	1993	1994	1995	1996	1996	1997
Overall surplus or deficit	2.9	1.8	2.2	3.5	2.0	3.6	1.9
Deposited to the Copper Stab. Fund	-0.3	0.2	-0.2	-1.0	-0.3	-0.5	-0.2
Central bank cash result	-1.1	-1.0	-0.9	-0.6	-0.7	...	...
Combined public sector overall balance	1.8	0.8	1.2	3.0	1.3	...	...
Financing	-1.8	-0.8	-1.2	-3.0	-1.3	...	...
Foreign (net)	0.6	-1.4	-0.5	-3.1	-2.3	...	...
Foreign, total	0.4	-1.5	-0.5	-3.1	-2.3	...	...
Net on-lent to private sector	0.2	0.0	0.0	0.1	0.0	0.1	0.0
Domestic	-2.4	0.6	-0.7	0.1	1.0	...	...
Memorandum items:							
Nonfinancial public sector							
Current account balance	6.9	6.1	5.8	7.5	6.9	12.6	12.6
Military expenditure	3.3	3.2	3.3	3.1	3.0	...	...
Nominal GDP (in billions of Chilean pesos)	15,500	18,454	21,918	26,702	29,645	14,493	16,318

Sources: Ministry of Finance; Central Bank of Chile; and Fund staff estimates.

1/ Excludes taxes paid and transfers made by the public enterprises.
2/ Net of financial investment and expenditure related to sale of assets.
3/ Includes amount transferred directly by CODELCO for military purchases.
4/ Includes capital transfers to the private sector; net of capital transfers to other public entitites.

Table 13. Chile: Summary Operations of the General Government

	1992	1993	1994	1995	1996	Prel. January-June 1996	1997
	(In billions of Chilean pesos)						
Total revenue	3,782.1	4,397.0	5,102.8	6,377.5	6,982.9	3,450.7	3,748.5
Current revenue	3,613.9	4,218.2	4,965.7	6,183.2	6,811.8	3,368.6	3,655.6
Tax	3,217.9	3,667.5	4,405.9	5,456.0	6,010.2	2,990.4	3,220.9
Nontax	396.0	550.6	530.1	727.3	801.6	378.2	434.7
Capital revenue	168.2	178.8	166.8	194.2	171.1	82.0	92.9
Total expenditure	3,317.9	3,997.2	4,615.1	5,317.9	6,143.8	2,874.1	3,208.6
Current expenditure	2,815.2	3,366.9	3,866.6	4,473.0	5,088.3	2,417.9	2,710.5
Wages	570.7	713.4	854.1	1,000.3	1,159.4	563.9	637.8
Pensions	908.9	1,105.9	1,282.5	1,465.0	1,698.3	804.1	916.0
Interest	229.1	242.5	217.4	199.1	172.1	89.9	74.1
Other	1,106.5	1,305.0	1,150.6	1,808.6	2,058.5	960.1	1,082.5
Capital expenditure	502.6	630.3	748.5	845.0	1,055.5	456.2	498.1
Overall surplus or deficit(-)	464.2	399.8	487.7	1,059.5	839.1	576.6	539.9
Current account	798.7	851.3	1,069.3	1,710.3	1,723.5	950.7	945.1
Capital account	-334.5	-451.5	-581.6	-650.7	-884.4	-374.1	-405.2
Financing	-464.2	-399.8	-487.7	-1,059.5	-839.1	-576.6	-539.9
Foreign, net	13.3	-165.8	-99.7	...	...	...	...
Foreign, net total	-19.2	-173.4	-110.2	...	...	...	...
Net on-lent to private sector	32.5	7.7	10.6	14.0	2.5	8.9	4.3
Domestic	-477.5	-234.0	-388.0	...	...	...	...
Of which: deposited in the Copper Stabilization Fund (deposit -)	-43.5	36.5	-33.7	-279.4	-77.7	-73.1	-36.1
	(In percent of GDP)						
Total revenue	24.4	23.8	23.3	23.9	23.6	23.8	23.0
Current revenue	23.3	22.9	22.7	23.2	23.0	23.2	22.4
Tax	20.8	19.9	20.1	20.4	20.3	20.6	19.7
Nontax	2.6	3.0	2.4	2.7	2.7	2.6	2.7
Capital revenue	1.1	1.0	0.8	0.7	0.6	0.6	0.6
Total expenditure	21.4	21.7	21.1	19.9	20.7	19.8	19.7
Current expenditure	18.2	18.2	17.6	16.8	17.2	16.7	16.6
Wages	3.7	3.9	3.9	3.7	3.9	3.9	3.9
Pensions	5.9	6.0	5.9	5.5	5.7	5.5	5.6
Interest	1.5	1.3	1.0	0.7	0.6	0.6	0.5
Other	7.1	7.1	5.2	6.8	6.9	6.6	6.6
Capital expenditure	3.2	3.4	3.4	3.2	3.6	3.1	3.1
Overall surplus or deficit(-)	3.0	2.2	2.2	4.0	2.8	4.0	3.3
Current account	5.2	4.6	4.9	6.4	5.8	6.6	5.8
Capital account	-2.2	-2.4	-2.7	-2.4	-3.0	-2.6	-2.5
Financing	-3.0	-2.2	-2.2	-4.0	-2.8	-4.0	-3.3
Foreign, net	0.1	-0.9	-0.5	...	...	...	...
Foreign, net total	-0.1	-0.9	-0.5	...	...	...	...
Net on-lent to private sector	0.2	0.0	0.0	0.1	0.0	0.1	0.0
Domestic	-3.1	-1.3	-1.8	...	...	...	...
Of which: deposited in the Copper Stabilization Fund (deposit -)	-0.3	0.2	-0.2	-1.0	-0.3	-0.5	-0.2

Sources: Ministry of Finance; and Fund staff estimates.

Table 14. Chile: General Government Revenue

	1992	1993	1994	1995	1996	Prel. January-June 1996	Prel. January-June 1997
	(In billions of Chilean pesos)						
Total revenue	3,782.1	4,397.0	5,102.8	6,377.5	6,982.9	3,450.7	3,748.5
Current revenue	3,613.9	4,218.2	4,965.7	6,183.2	6,811.8	3,368.6	3,655.6
Taxes	3,217.9	3,667.5	4,405.7	5,456.0	6,010.2	2,990.4	3,220.9
Taxes on income and property	924.1	870.6	1,185.4	1,668.1	1,555.4	821.7	862.0
Personal and business income tax	557.1	655.4	805.4	939.1	1,135.9	527.0	589.8
Net taxes of CODELCO 1/	346.4	189.1	350.0	706.3	404.5	283.0	258.2
Property tax	20.6	26.1	30.0	22.7	15.0	11.7	14.0
Real estate	14.6	19.0	20.7	13.0	3.9	1.5	1.6
Other	5.9	7.1	9.2	9.7	11.1	10.2	12.5
Taxes on goods and services	1,695.8	2,093.0	2,452.5	2,870.8	3,390.0	1,654.4	1,827.9
Value-added tax (net) 2/	1,314.6	1,624.5	1,908.0	2,218.1	2,597.0	1,264.8	1,369.7
Excise tax	292.3	342.6	393.3	476.5	574.1	282.4	332.0
Stamp tax	77.2	111.2	135.2	155.1	197.7	96.0	115.1
Other	11.7	14.7	16.1	21.1	21.2	11.2	11.0
Taxes on international trade	327.2	405.1	424.9	532.0	613.0	289.9	286.0
Pension contributions	246.1	276.3	312.9	349.1	403.1	195.8	219.0
Other taxes	24.6	22.4	29.9	36.0	48.8	28.7	26.0
Nontax revenue	396.0	550.6	560.0	727.3	801.6	378.2	434.7
Sales of goods and services	173.4	206.0	241.1	276.1	342.0	157.3	163.4
Transfers from public enterprises	56.5	56.8	110.8	172.1	149.6	69.7	81.9
Other revenue	166.1	287.8	208.2	279.1	309.9	151.3	189.4
Capital revenue	168.2	178.8	166.8	194.2	171.1	82.0	92.9
Sale of assets	91.5	78.4	52.0	59.1	23.6	10.2	19.6
Loan recovery	76.6	100.5	114.9	135.1	147.5	71.8	73.3
	(In percent of GDP)						
Total revenue	24.4	23.8	23.3	23.9	23.6	23.8	23.0
Current revenue	23.3	22.9	22.7	23.2	23.0	23.2	22.4
Taxes	20.8	19.9	20.1	20.4	20.3	20.6	19.7
Taxes on income and property	6.0	4.7	5.4	6.2	5.2	5.7	5.3
Personal and business income tax	3.6	3.6	3.7	3.5	3.8	3.6	3.6
Net taxes of CODELCO 1/	2.2	1.0	1.6	2.6	1.4	2.0	1.6
Property tax	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Real estate	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Taxes on goods and services	10.9	11.3	11.2	10.8	11.4	11.4	11.2
Value-added tax (net) 2/	8.5	8.8	8.7	8.3	8.8	8.7	8.4
Excise tax	1.9	1.9	1.8	1.8	1.9	1.9	2.0
Stamp tax	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Other	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Taxes on international trade	2.1	2.2	1.9	2.0	2.1	2.0	1.8
Pension contributions	1.6	1.5	1.4	1.3	1.4	1.4	1.3
Other taxes	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Nontax revenue	2.6	3.0	2.6	2.7	2.7	2.6	2.7
Sales of goods and services	1.1	1.1	1.1	1.0	1.2	1.1	1.0
Transfers from public enterprises	0.4	0.3	0.5	0.6	0.5	0.5	0.5
Other revenue	1.1	1.6	0.9	1.0	1.0	1.0	1.2
Capital revenue	1.1	1.0	0.8	0.7	0.6	0.6	0.6
Sale of assets	0.6	0.4	0.2	0.2	0.1	0.1	0.1
Loan recovery	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Memorandum item:							
Tax revenue excluding net taxes from CODELCO	18.5	18.8	18.5	17.8	18.9	18.7	18.2

Sources: Ministry of Finance; and Fund staff estimates.

1/ Including deposits by CODELCO for military purchases under Law 13,196.
2/ Net of rebates.

Table 15. Chile: General Government Expenditure

	1992	1993	1994	1995	Prel. 1996	January-June 1996	January-June 1997
	(In billions of Chilean pesos)						
Total expenditure	3,317.9	3,997.2	4,615.1	5,317.9	6,143.8	2,874.1	3,208.6
Current expenditure	2,815.2	3,366.9	3,866.6	4,473.0	5,088.3	2,417.9	2,710.5
Wages and salaries 1/	570.7	713.4	854.1	1,000.3	1,159.4	563.9	637.8
Purchases of goods and services 2/	384.6	428.3	494.6	589.7	625.6	277.3	295.6
Pension payments 3/	908.9	1,105.9	1,282.5	1,465.0	1,698.3	804.1	916.0
Other transfers and subsidies to private recipients	699.2	845.9	988.1	1,191.8	1,390.5	649.2	746.0
Interest on public debt 4/	229.1	242.5	217.4	199.1	172.1	89.9	74.1
Other 5/	22.8	30.8	29.9	27.1	42.4	33.6	40.8
Capital expenditure	502.6	630.3	748.5	845.0	1,055.5	456.2	498.1
Fixed investment	386.5	535.7	653.7	729.6	884.5	383.9	411.5
Financial investment	64.5	62.1	34.8	39.1	44.8	28.0	40.1
Capital transfers	51.7	32.6	60.0	76.2	126.2	44.3	46.6
Memorandum items:							
Current expenditures excluding interest and Law 13,196	2,502.2	3,046.0	3,557.0	4,138.8	4,806.5	2,269.2	2,577.2
Transfers under Law 13,196	84.0	78.3	92.2	135.1	109.7	58.9	59.2
Onlending to private sector	89.7	85.8	98.1	89.0	110.6	46.8	52.6
	(In percent of GDP)						
Total expenditure	21.4	21.7	21.1	19.9	20.7	19.8	19.7
Current expenditure	18.2	18.2	17.6	16.8	17.2	16.7	16.6
Wages and salaries 1/	3.7	3.9	3.9	3.7	3.9	3.9	3.9
Purchases of goods and services 2/	2.5	2.3	2.3	2.2	2.1	1.9	1.8
Pension payments 3/	5.9	6.0	5.9	5.5	5.7	5.5	5.6
Other transfers and subsidies to private recipients	4.5	4.6	4.5	4.5	4.7	4.5	4.6
Interest on public debt 4/	1.5	1.3	1.0	0.7	0.6	0.6	0.5
Other 5/	0.1	0.2	0.1	0.1	0.1	0.2	0.2
Capital expenditure	3.2	3.4	3.4	3.2	3.6	3.1	3.1
Fixed investment	2.5	2.9	3.0	2.7	3.0	2.6	2.5
Financial investment	0.4	0.3	0.2	0.1	0.2	0.2	0.2
Capital transfers	0.3	0.2	0.3	0.3	0.4	0.3	0.3
Memorandum items:							
Current expenditures excluding interest and Law 13,196	16.1	16.5	16.2	15.5	16.2	15.7	15.8
Transfers under Law 13,196	0.5	0.4	0.4	0.5	0.4	0.4	0.4
Military expenditure 6/	3.3	3.2	3.3	3.1	3.0	...	...
Social spending	13.0	13.5	13.5	12.9	13.7	...	...
Onlending to private sector	0.6	0.5	0.4	0.3	0.4	0.3	0.3

Sources: Ministry of Finance; and Fund staff estimates.

1/ Includes employer contributions to the social security system.
2/ Assumes that funds transferred under Law 13,196 by CODELCO to an account for military purchases are spent in the same year.
3/ Includes cash transfers of accumulated contributions of currently retired persons who in the past had moved to a private system.
4/ Includes monetary correction.
5/ Includes net expenditure of the Petroleum Stabilization Fund.
6/ Includes military pensions and amounts transferred directly by CODELCO for military purchases assuming that these transfers are spent in the same year.

Table 16. Chile: Operations of the Public Enterprises

| | 1992 | 1993 | 1994 | 1995 | 1996 | January–June | |
						1996	1997
						Prel.	

(In billions of Chilean pesos)

I. All Public Enterprises

	1992	1993	1994	1995	1996	1996	1997
Operating surplus before taxes and transfers	967.2	923.0	1052.6	1633.7	1514.1	780.8	776.2
Taxes and transfers	700.8	643.4	845.5	1354.1	1194.8	674.4	645.4
Current account surplus	266.4	279.6	207.1	279.6	319.3	106.4	130.8
Capital revenue (net) 1/	-11.0	-5.2	139.0	-4.7	75.2	74.3	3.0
Capital expenditure	257.9	287.5	314.4	355.0	597.6	211.9	336.2
Overall surplus or deficit(-)	-2.4	-13.1	31.6	-80.1	-203.1	-31.3	-202.4

II. CODELCO

	1992	1993	1994	1995	1996	1996	1997
Operating surplus before taxes and transfers	519.2	371.1	388.2	879.1	567.7	314.3	320.3
Taxes and transfers	346.4	189.9	350.0	706.3	404.5	283.0	258.2
Current account surplus	172.8	181.2	38.2	172.8	163.1	31.4	62.1
Capital revenue (net)	-0.9	2.8	142.8	3.2	74.8	74.9	1.8
Capital expenditure	151.3	155.5	159.7	140.5	292.0	91.2	227.3
Overall surplus or deficit(-)	20.6	28.4	21.2	35.5	-54.1	15.1	-163.4

III. Other Public Enterprises

	1992	1993	1994	1995	1996	1996	1997
Operating surplus before taxes and transfers	448.0	552.0	664.4	754.6	946.4	466.5	456.0
Taxes and transfers	354.4	453.5	495.5	647.9	790.3	391.4	387.2
Current account surplus	93.6	98.4	168.9	106.7	156.1	75.0	68.7
Capital revenue (net) 1/	-10.1	-8.0	-3.8	-7.9	0.4	-0.6	1.2
Capital expenditure	106.6	132.0	154.7	214.5	305.5	120.8	108.9
Overall surplus or deficit(-)	-23.1	-41.5	10.4	-115.7	-149.0	-46.3	-39.0

Table 16. Chile: Operations of the Public Enterprises

| | 1992 | 1993 | 1994 | 1995 | 1996 | January-June | |
						1996	1997
					Prel.		
(In percent of GDP)							
I. All Public Enterprises							
Operating surplus before taxes and transfers	6.2	5.0	4.8	6.1	5.1	5.4	4.8
Taxes and transfers	4.5	3.5	3.9	5.1	4.0	4.7	4.0
Current account surplus	1.7	1.5	0.9	1.0	1.1	0.7	0.8
Capital revenue (net) 1/	-0.1	0.0	0.6	0.0	0.3	0.5	0.0
Capital expenditure	1.7	1.6	1.4	1.3	2.0	1.5	2.1
Overall surplus or deficit(-)	0.0	-0.1	0.1	-0.3	-0.7	-0.2	-1.2
II. CODELCO							
Operating surplus before taxes and transfers	3.3	2.0	1.8	3.3	1.9	2.2	2.0
Taxes and transfers	2.2	1.0	1.6	2.6	1.4	2.0	1.6
Current account surplus	1.1	1.0	0.2	0.6	0.6	0.2	0.4
Capital revenue (net)	0.0	0.0	0.7	0.0	0.3	0.5	0.0
Capital expenditure	1.0	0.8	0.7	0.5	1.0	0.6	1.4
Overall surplus or deficit(-)	0.1	0.2	0.1	0.1	-0.2	0.1	-1.0
III. Other Public Enterprises							
Operating surplus before taxes and transfers	2.9	3.0	3.0	2.8	3.2	3.2	2.8
Taxes and transfers	2.3	2.5	2.3	2.4	2.7	2.7	2.4
Current account surplus	0.6	0.5	0.8	0.4	0.5	0.5	0.4
Capital revenue (net) 1/	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Capital expenditure	0.7	0.7	0.7	0.8	1.0	0.8	0.7
Overall surplus or deficit(-)	-0.1	-0.2	0.0	-0.4	-0.5	-0.3	-0.2

Source: Ministry of Finance.

1/ Net of on-lending operations by the state holding company CORFO.

Table 17. Chile: Summary Operations of CODELCO

	1992	1993	1994	1995	Prel. 1996	January-June 1996	January-June 1997
(In billions of Chilean pesos)							
Current revenue	1,151.7	1,102.7	1,258.2	1,663.6	1,354.2	713.5	788.8
Sales of goods and services	1,086.0	1,020.7	1,176.0	1,578.9	1,289.4	684.3	751.9
Other	65.7	82.0	82.2	84.6	64.9	29.2	37.0
Current expenditure	632.4	731.6	870.0	784.5	786.6	399.1	468.6
Wages and salaries 1/	209.1	256.0	291.4	248.4	269.0	142.2	148.6
Purchases of goods and services	403.1	458.8	562.7	518.6	494.1	244.2	309.2
Interest payments	20.2	16.8	15.9	17.5	23.5	12.7	10.8
Operating surplus	519.2	371.1	388.2	879.1	567.7	314.3	320.3
Less: taxes and transfer payments	-394.3	-250.1	-415.7	-760.6	-492.1	-318.5	-333.8
Plus: transfer receipts	47.9	60.2	65.7	54.4	87.5	35.5	75.7
Current account surplus or deficit (-)	172.8	181.2	38.2	172.8	163.1	31.4	62.1
Net capital revenue	-0.9	2.8	142.8	3.2	74.8	74.9	1.8
Revenue	3.3	4.1	142.9	3.2	238.0	236.1	3.9
Less: financial investment and other capital transfers	-4.2	-1.3	-0.1	0.0	-163.2	-161.2	-2.0
Fixed investment	151.3	155.5	159.7	140.5	292.0	91.2	227.3
Overall surplus or deficit(-)	20.6	28.4	21.2	35.5	-54.1	15.1	-163.4
Financing	-20.6	-28.4	-21.2	-35.5	54.1	-15.1	163.4
Foreign	42.6	-22.2	18.2	17.2	...	...	...
Domestic	-63.2	-6.2	-39.4	-52.7	...	...	...
Memorandum items:							
CODELCO average export price 2/	96.8	81.1	100.7	129.5	96.4	98.5	98.2
Average price at the London Metal Exchange 2/	103.6	86.7	104.9	133.2	103.2	105.3	105.0
Copper Stabilization Fund: deposits(+)/withdrawals(-) 3/	0.3	-0.2	0.2	1.0	0.3	0.5	0.2
Transfers under Law 13,196 3/	0.5	0.4	0.4	0.5	0.4	0.4	0.4

Sources: Ministry of Finance; and Fund staff estimates.

1/ Includes employer contributions to the social security system.
2/ U.S. cents per pound.
3/ In percent of GDP.

Table 18. Chile: Real Interest Rates on Central Bank Notes
and Operations of the Financial System

(In percent per annum)

	Central Bank Notes			Financial System Operations 90 to 365 Days	
	Interbank 1/	90 Days	8 Years	Loans	Deposits
1993	...	6.5	7.0	9.2	6.4
1994	...	6.4	6.1	9.3	6.4
1995	6.1	6.1	6.2	8.5	5.9
1996	7.3	7.3	6.3	9.3	6.9
January	6.7	6.9	6.5	9.2	6.8
February	6.7	6.8	6.4	9.1	6.6
March	6.7	6.7	6.5	9.0	6.6
April	7.4	7.2	6.6	9.4	6.9
May	7.7	7.5	6.5	9.6	7.2
June	7.3	7.5	6.4	9.6	7.2
July	7.6	7.5	6.3	9.5	7.1
August	7.4	7.4	6.2	9.3	7.0
September	7.6	7.5	6.2	9.4	7.0
October	7.6	7.4	6.1	9.5	7.1
November	7.6	7.4	6.1	9.3	7.0
December	7.6	7.3	6.1	9.2	6.8
1997	6.9	6.8	6.5	8.7	6.4
January	7.5	7.3	6.1	9.2	6.9
February	7.3	7.1	6.2	9.0	6.8
March	7.2	6.9	6.2	9.1	6.6
April	7.1	6.9	6.2	8.9	6.5
May	7.0	6.9	6.3	8.9	6.5
June	6.8	6.7	6.4	8.7	6.3
July	6.8	6.7	6.5	8.7	6.4
August	6.8	6.6	6.5	8.7	6.3
September	6.6	6.5	6.7	8.5	6.2
October	6.5	6.5	6.9	8.5	6.2
November	6.5	6.5	6.8	8.5	6.2
December	7.1	6.6	6.8	8.4	6.2

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Since May 29, 1995 the interest rate on overnight operations between the central bank and commercial banks has been the main instrument of monetary policy. The values reported here are the equivalent real rate in annual terms. The central bank targets this rate.

Table 19. Chile: Private Sector Holdings of Financial Assets

	1992	1993	1994	1995	1996	QIII 1996	QIII 1997	Proj. 1997
A. Annual Rates of Growth in percent								
(In nominal terms)								
Total liabilities (private sector) 1/	27.6	34.3	24.4	21.0	16.9	21.2	18.7	17.4
Currency	30.4	21.1	14.5	17.7	9.5	7.9	14.2	15.2
Demand and sight deposits	29.4	20.4	23.7	26.2	10.9	22.0	26.3	20.6
Narrow money (M1A)	29.7	20.6	20.6	23.5	10.5	17.5	22.8	19.0
Savings and time deposits	38.1	29.6	18.8	28.9	26.2	25.7	16.2	19.0
Broad money (M3)	35.6	27.0	19.3	27.4	22.0	23.8	17.7	19.0
Pension funds	25.6	44.2	31.5	15.0	13.0	19.3	17.3	18.0
Letters of credit	77.3	39.3	47.8	54.7	29.0	37.0	57.0	3.4
Foreign currency deposits 2/	-16.1	16.8	-10.9	-1.8	-16.1	-8.0	-4.8	-2.7
(In real terms) 3/								
Total liabilities (private sector) 1/	13.3	19.7	14.2	11.8	9.6	15.3	13.6	11.0
Currency	15.7	7.9	5.1	8.8	2.7	2.6	9.3	8.9
Demand and sight deposits	14.8	7.2	13.5	16.6	4.0	16.1	20.9	14.1
Narrow money (M1A)	15.1	7.5	10.7	14.1	3.6	11.9	17.5	12.5
Savings and time deposits	22.5	15.4	9.0	19.1	18.4	19.6	11.2	12.5
Broad money (M3)	20.3	13.2	9.5	17.8	14.5	17.8	12.6	12.5
Pension funds	11.4	28.5	20.7	6.3	6.0	13.5	12.3	11.6
Letters of credit	57.3	24.1	35.7	43.0	20.9	30.4	50.2	-2.2
Foreign currency deposits 2/	-25.6	4.0	-18.3	-9.3	-21.3	-12.5	-8.9	-8.0
B. Distribution								
By issuer	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Central bank 4/	4.5	4.0	3.7	3.6	3.4	2.9	2.8	3.3
Bank and nonbank	50.8	48.4	45.8	48.4	50.3	49.4	50.1	50.1
Pension funds	44.6	47.6	50.5	48.0	46.3	47.7	47.1	46.5
By asset	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Currency	4.5	4.0	3.7	3.6	3.4	2.9	2.8	3.3
Demand and sight deposits	9.0	8.1	8.0	8.4	7.9	7.2	7.7	8.1
Narrow money (M1A)	13.6	12.1	11.8	12.0	11.3	10.1	10.5	11.5
Savings and time deposits	34.0	32.5	31.2	33.2	35.8	35.5	34.8	36.3
Broad money (M3)	47.5	44.6	42.9	45.2	47.1	45.6	45.3	47.8
Pension funds	44.6	47.6	50.5	48.0	46.3	47.7	47.1	46.5
Letters of credit	2.5	2.6	3.1	4.0	4.4	4.4	5.8	3.9
Foreign currency deposits 2/	5.3	5.1	3.5	2.8	2.1	2.3	1.9	1.8

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Includes liabilities of pension funds to the private sector, but excludes intrafinancial flows as well as central bank notes and treasury notes in hands of the private sector.
2/ Foreign deposits are valued at end-of-period exchange rates.
3/ Nominal changes deflated by changes in the consumer price index.
4/ Excludes central bank promissory notes.

Table 20. Chile: Operations of the Financial System

(Percentage change with respect to liabilities to the private sector at the beginning of the period) 1/

	1992	1993	1994	1995	1996	QIII 1996	QIII 1997	Proj. 1997
Net international reserves	-4.8	2.9	9.5	4.1	2.4	2.8	7.4	6.8
Central Bank	2.2	2.9	10.3	3.1	1.3	1.0	5.0	4.3
Rest of the financial system	-7.1	0.0	-0.8	1.1	1.1	1.8	2.3	2.5
Net domestic assets	32.0	30.4	15.1	16.7	11.5	15.3	10.9	9.9
Nonfinancial public sector (net)	-5.3	-0.3	-1.9	-1.9	-0.1	-0.6	0.6	-2.6
Private sector	25.3	28.1	16.4	18.0	12.6	16.6	15.1	15.4
Central Bank promissory notes	-4.2	-0.1	-0.5	-1.1	-2.3	-2.3	-4.0	-1.4
Other assets (net)	16.2	2.8	1.1	1.7	1.3	1.6	-0.8	-1.4
Net medium- and long-term foreign liabilities	-0.5	-1.0	0.2	-0.2	-2.9	-3.0	-0.4	-0.6
Central bank 2/	-0.4	-0.3	0.1	-1.0	-2.9	-3.5	0.0	0.0
Rest of the financial system	-0.1	-0.7	0.1	0.9	0.0	0.5	-0.4	-0.6
Liabilities to the private sector	27.6	34.3	24.4	21.0	16.9	21.2	18.7	17.4
Narrow money	4.0	2.8	2.5	2.8	1.3	1.8	2.3	2.2
Savings and time deposits	12.0	10.0	6.1	9.0	8.7	8.8	5.8	6.8
Other liabilities 3/	11.7	21.6	15.8	9.2	6.9	10.6	10.6	8.4
Memorandum items:								
Growth of banking system credit to private sector 4/	35.1	29.5	15.3	27.5	20.8	22.7	20.3	19.0
Medium- and long-term foreign liabilities of the central bank (in millions of U.S. dollars)	1,995.2	1,912.3	1,933.1	1,491.6	3.4	3.4	3.1	3.1
Medium- and long-term foreign liabilities of commercial banks (in millions of U.S. dollars)	816.4	729.6	882.3	1,108.0	1,215.3	1,177.6	1,200.7	1,105.0
Narrow money/GDP ratio 5/	9.3	9.4	9.6	9.7	9.6	8.3	9.1	10.2
Broad money/GDP ratio 5/6/	32.6	34.8	34.9	36.5	40.1	37.5	39.1	42.3
Total liabilities to private sector/GDP ratio 5/	68.6	77.9	81.3	80.8	85.1	82.3	86.5	88.6
Inflation rate (CPI; 12-month percentage change, end-of-period)	12.7	12.2	8.9	8.2	6.6	6.3	6.0	6.0

Sources: Central Bank of Chile; Superintendency of Pension Funds Administrators; and Fund staff estimates.

1/ Flows measured at constant end-of-period exchange rates.

2/ Includes liabilities on account of deposits placed by the corporate sector in the context of the rescheduling agreements with foreign commercial banks.

3/ Includes dollar deposits, mortgage bonds, and deposits with pension funds.

4/ Annual percentage change. Excludes pension funds.

5/ Nominal quarterly GDP is Fund staff estimates.

6/ Broad money includes narrow money (M1A) plus savings and time deposits.

Table 21. Chile: Operations of the Central Bank

(Percentage change with respect to liabilities to the private sector at the beginning of the period) 1/

	1992	1993	1994	1995	1996	QIII 1996	1997	Proj. 1997
Net international reserves	50.1	63.9	255.0	82.5	36.6	25.7	172.7	126.0
Net domestic credit	-28.6	-50.3	-239.1	-91.8	-107.9	-124.3	-158.5	-110.8
Net credit to the nonfinancial public sector 2/	-96.9	1.4	-48.3	-19.1	-21.5	-18.0	30.0	-34.1
Net credit to financial intermediaries	-139.4	-171.6	-233.8	-103.2	-119.7	-163.3	-184.7	-202.5
Central bank promissory notes	-95.2	-2.2	-13.2	-29.5	-62.9	-71.0	-136.3	-42.4
Credit to the private sector	-0.4	-11.0	1.6	-4.1	-5.6	-16.4	-24.3	0.4
Capital and reserves	-9.3	60.0	23.3	7.2	52.0	14.7	94.6	77.1
Other	312.6	73.2	31.3	56.9	49.8	129.9	62.2	90.8
Of which: capitalization notes	32.8	24.1	14.2	16.3	-20.1	-15.2	-71.7	-4.6
subordinated debt	44.6	34.2	12.3	10.2	-9.0	-12.1	-235.8	-192.5
Net medium- and long-term foreign liabilities 3/	-23.1	-17.3	3.6	-66.4	-190.1	-257.6	0.0	0.0
Liabilities to the private sector	30.4	21.1	14.5	17.7	9.5	7.9	14.2	15.2
Currency	30.4	21.1	14.5	17.7	9.5	7.9	14.2	15.2
Memorandum items:								
Change in net international reserves (in millions of U.S. dollars)	482.6	711.7	3,668.0	1,347.6	674.3	410.7	2,956.8	2,471.3
Change in medium- and long-term foreign liabilities (in millions of U.S. dollars)	-84.9	-82.9	20.8	-441.5	-1,488.2	-1,697.5	-0.3	-0.3
Inflation rate (CPI; 12-month percentage change, end-of-period)	12.7	12.2	8.9	8.2	6.6	6.3	6.0	6.0

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Flows measured at constant end-of-period exchange rates.

2/ Excludes holdings of Treasury notes on account of the 1983-86 capitalization of the central bank, which are included in other net domestic assets.

3/ Includes foreign liabilities on account of deposits placed by the corporate sector in the central bank, in the context of the 1983-85 rescheduling agreements with foreign commercial banks.

Table 22. Chile: Operations of Banks, Nonbanks, and Pension Funds

(Percentage change with respect to liabilities to the private sector at the beginning of the period) 1/

	1992	1993	1994	1995	1996	QIII 1996	1997	Proj. 1997
A. Bank and Nonbank Financial Intermediaries								
Net international reserves	-14.0	0.1	-1.7	2.3	2.2	3.8	4.7	5.0
Net domestic assets	43.2	26.2	20.8	26.7	19.4	21.0	15.6	11.6
Nonfinancial public sector	-2.0	-0.7	-0.9	-3.6	-0.4	-1.6	-1.3	-3.1
Net credit to financial intermediaries	3.5	-3.6	1.8	-2.2	-1.6	-1.3	-3.1	-2.2
Credit to the private sector	43.6	35.9	21.6	35.8	26.5	29.5	27.0	24.0
Capital and reserves	-3.4	-2.9	-2.9	-3.0	-2.4	-2.6	-2.9	-2.1
Other	1.4	-2.4	1.1	-0.4	-2.7	-3.0	-4.0	-4.9
Net medium- and long-term foreign liabilities	-0.1	-0.7	0.9	1.1	0.4	0.9	0.1	-0.4
Liabilities to the private sector 2/	29.3	26.9	18.2	27.9	21.2	23.9	20.3	16.9
B. Pension Funds								
Net international reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net domestic assets	25.6	43.4	30.9	15.7	12.6	19.4	16.4	17.0
Nonfinancial public sector	0.0	-0.1	1.1	1.0	1.8	1.7	0.7	0.3
Net credit to financial intermediaries 3/	18.1	20.3	17.6	9.4	10.2	10.8	9.4	12.7
Credit to the private sector	7.5	23.0	12.3	3.5	-0.2	5.9	5.2	7.1
Capital and reserves and other	0.0	0.1	-0.1	1.8	0.7	1.0	1.0	-3.0
Net medium- and long-term foreign liabilities	0.0	-0.8	-0.6	0.7	-0.4	0.1	-0.9	-1.0
Liabilities to the private sector	25.6	44.2	31.5	15.0	13.0	19.3	17.3	18.0

Sources: Central Bank of Chile; Superintendency of Pension Funds Administrators; and Fund staff estimates.

1/ Flows measured at constant end-of-period exchange rates.

2/ Excludes deposits of pension funds.

3/ Consists mostly of holdings of central bank promissory notes, commercial bank letters of credit, and time and savings deposits.

Table 23. Chile: Summary Accounts of the Financial System

(End-of-period stocks; in billions of Chilean pesos)

| | December | | | | | | | | | Proj. | September | |
| | 1992 | 1993 | 1993 | 1994 | 1994 | 1995 | 1995 | 1996 | 1996 | 1997 | 1996 | 1997 |
	(Ch$431.04=US$1)	(US$1)	(Ch$404.09=US$1)	(US$1)	(Ch$407.13=US$1)	(US$1)	(Ch$424.97=US$1)	(US$1)	(Ch$437=US$1)	(US$1)	(Ch$415.2=US$1)	
Net international reserves	2,570.9	2,981.9	2,700.7	4,066.1	4,096.7	4,834.6	5,046.5	5,567.1	5,724.7	7,440.6	5,439.2	7,236.6
Central bank	3,669.6	4,077.5	3,727.8	5,210.0	5,249.2	5,797.9	6,051.9	6,338.5	6,517.9	7,597.8	6,103.5	7,331.2
Rest of the financial system 1/	-1,098.7	-1,095.6	-1,027.1	-1,143.9	-1,152.5	-963.2	-1,005.5	-771.3	-793.2	-157.2	-664.3	-94.5
Net domestic assets	9,340.2	12,377.2	12,655.9	14,815.1	14,797.1	17,775.1	17,635.5	20,128.1	19,998.5	22,507.8	19,388.9	22,047.1
Nonfinancial public sector (net) 2/	-1,261.7	-1,302.8	-1,230.4	-1,498.8	-1,508.4	-1,843.7	-1,907.1	-1,925.1	-1,971.9	-2,630.3	-2,001.4	-1,857.3
Private sector	8,862.5	11,880.3	11,768.1	14,115.6	14,125.6	17,330.9	17,406.8	20,119.0	20,168.0	24,046.2	19,344.3	23,026.9
Central bank promissory notes	-1,469.6	-1,491.3	-1,479.9	-1,556.9	-1,556.9	-1,752.9	-1,752.9	-2,245.0	-2,245.0	-2,608.5	-2,256.0	-3,225.1
Other assets (net)	3,208.9	3,291.0	3,598.2	3,755.2	3,736.8	4,040.9	3,888.7	4,179.2	4,047.4	3,700.4	4,302.0	4,102.6
Net medium- and long-term foreign liabilities	1,211.9	1,138.8	1,067.6	1,137.7	1,146.2	1,058.4	1,104.7	517.9	532.6	484.2	490.4	499.8
Central bank 3/	860.0	824.3	772.7	781.1	787.0	607.3	633.9	1.4	1.5	1.3	1.4	1.3
Rest of the financial system	351.9	314.5	294.8	356.5	359.2	451.1	470.9	516.5	531.1	482.9	488.9	498.5
Liabilities to the private sector	10,699.1	14,371.7	14,325.5	17,824.3	17,828.9	21,572.4	21,599.1	25,240.4	25,255.5	29,643.9	24,376.2	28,931.8
Narrow money	1,441.2	1,738.3	1,738.3	2,096.1	2,096.1	2,588.7	2,588.7	2,859.6	2,859.6	3,402.9	2,469.6	3,033.0
Savings and time deposits	3,610.0	4,677.2	4,677.2	5,555.6	5,555.6	7,161.8	7,161.8	9,040.3	9,040.3	10,757.9	8,656.1	10,059.9
Other liabilities 4/	5,647.9	7,956.2	7,910.0	10,172.5	10,177.1	11,821.9	11,848.6	13,340.5	13,355.7	15,483.1	13,250.4	15,839.0

Source: Central Bank of Chile; Superintendency of Pension Funds Administrators; and Fund staff estimates.

1/ Consists of commercial banks, including the Banco del Estado, insurance companies, and the pension funds.
2/ Excludes holdings of treasury notes on account of the 1983-85 capitalization of the central bank. These notes are included in other assets.
3/ Includes foreign liabilities on account of deposits placed by the corporate sector in the central bank in the context of the 1983-85 rescheduling agreements with foreign commercial banks.
4/ Include mortgage bonds, U.S. dollar deposits, and deposits with pension funds.

Table 24. Chile: Summary Accounts of the Central Bank

(End-of-period stocks; in billions of Chilean pesos)

	December									Proj.	September	
	1992	1993	1993	1994	1994	1995	1995	1996	1996	1997	1996	1997
	(Ch$431.04=US$1)		(Ch$404.09=US$1)		(Ch$407.13=US$1)		(Ch$424.97=US$1)		(Ch$437=US$1)		(Ch$415.2=US$1)	
Net international reserves	3,669.6	4,077.5	3,727.8	5,210.0	5,249.2	5,797.9	6,051.9	6,338.5	6,517.9	7,597.8	6,103.5	7,331.2
In millions of U.S. dollars	8,513.4	9,459.7	9,225.2	12,893.2	12,893.2	14,240.8	14,240.8	14,915.1	14,915.1	17,386.4	14,700.2	17,657.0
Net domestic assets	-2,329.7	-2,784.4	-2,373.8	-3,763.6	-3,796.9	-4,407.7	-4,635.2	-5,479.8	-5,659.2	-6,609.1	-5,391.3	-6,518.2
Net credit to the nonfinancial public sector 1/	-961.5	-959.9	-887.6	-1,168.6	-1,178.2	-1,305.6	-1,368.5	-1,537.0	-1,583.6	-1,875.7	-1,575.6	-1,362.5
Net credit to financial intermediaries	-3,503.1	-4,104.0	-4,326.7	-5,685.3	-5,685.3	-6,371.9	-6,371.9	-7,309.2	-7,309.2	-9,045.5	-7,056.8	-8,369.9
Central bank promissory notes	-1,469.6	-1,491.3	-1,479.9	-1,556.9	-1,556.9	-1,752.9	-1,752.9	-2,245.0	-2,245.0	-2,608.5	-2,256.0	-3,225.1
Credit to the private sector	4.8	-33.3	-45.0	-35.6	-35.8	-63.4	-66.2	-110.0	-113.1	-110.0	-142.6	-315.0
Capital and reserves	-732.3	-725.6	-428.6	-293.1	-294.9	-247.0	-266.2	141.3	129.7	790.3	-173.7	498.6
Other	4,331.9	4,529.6	4,794.0	4,975.8	4,954.3	5,333.1	5,190.6	5,580.2	5,462.0	6,240.3	5,813.5	6,255.7
Of which: capitalization notes	3,198.6	3,314.1	3,136.2	3,218.5	3,239.0	3,347.6	3,472.2	3,315.2	3,394.8	3,355.7	3,328.8	2,818.9
subordinated debt 2/	1,417.1	1,581.1	1,581.1	1,652.8	1,652.8	1,720.7	1,720.7	1,650.0	1,650.0	0.0	1,676.0	0.0
Net medium- and long-term foreign liabilities 3/	860.0	824.3	772.7	781.1	787.0	607.3	633.9	1.4	1.5	1.3	1.4	1.3
In millions of U.S. dollars	1,995.2	1,912.3	1,912.3	1,933.1	1,933.1	1,491.6	1,491.6	3.4	3.4	3.1	3.4	3.1
Liabilities to the private sector	479.9	581.2	581.2	665.3	665.3	782.9	782.9	857.3	857.3	987.4	710.8	811.7
Currency in circulation	479.9	581.2	581.2	665.3	665.3	782.9	782.9	857.3	857.3	987.4	710.8	811.7

Sources: Central Bank of Chile, and Fund staff estimates.

1/ Excludes holdings of treasury notes on account of the 1983-86 capitalization of the central bank, which are included in other net domestic assets.

2/ Substandard loans to the private sector taken over by the central bank in 1984-87.

3/ Includes foreign liabilities on account of deposits placed by the corporate sector in the central bank in the context of the 1983-85 rescheduling agreements with foreign commercial banks.

Table 25. Chile: Summary Accounts of Banks and Nonbanks Financial Intermediaries 1/

(End-of-period stocks; in billions of Chilean pesos)

	December										September	
	1992	1993	1993	1994	1994	1995	1995	1996	1996	Proj. 1997	1996	1997
	(Ch$431.04=US$1)	(US$1)	(Ch$404.09=US$1)	(US$1)	(Ch$407.13=US$1)	(US$1)	(Ch$424.97=US$1)	(US$1)	(Ch$437=US$1)	(Ch$437=US$1)	(Ch$415.2=US$1)	(US$1)
Net international reserves	-1,098.7	-1,095.6	-1,027.1	-1,143.9	-1,152.5	-963.2	-1,005.5	-771.3	-793.2	-157.2	-664.3	-94.5
In millions of U.S. dollars	-2,549.1	-2,541.7	-2,541.7	-2,830.8	-2,830.8	-2,365.9	-2,365.9	-1,815.0	-1,815.0	-359.8	-1,599.9	-227.7
Net domestic assets	6,925.6	8,360.5	8,226.1	9,661.5	9,677.4	11,854.9	11,943.6	13,977.1	14,028.7	15,498.0	13,193.6	15,077.7
Nonfinancial public sector	-335.6	-375.7	-375.6	-438.5	-438.5	-733.8	-734.3	-772.7	-772.9	-1,171.8	-760.5	-911.9
Net credit to financial intermediaries	879.8	682.1	682.1	808.7	808.7	631.0	631.0	460.9	460.9	175.5	532.5	158.8
Credit to the private sector	7,256.0	9,220.1	9,119.6	10,614.3	10,624.7	13,546.2	13,624.9	16,396.6	16,448.7	19,496.2	15,428.9	18,675.2
Capital and reserves	-1,009.4	-1,168.9	-1,168.9	-1,370.4	-1,370.4	-1,612.7	-1,612.7	-1,863.2	-1,863.2	-2,133.1	-1,724.7	-2,075.6
Other	134.9	3.0	-31.0	47.4	52.9	24.2	34.7	-244.5	-244.8	-868.8	-282.6	-768.7
Net medium- and long-term foreign liabilities	351.9	314.5	294.8	356.5	359.2	451.1	470.9	516.5	531.1	482.9	488.9	498.5
In millions of U.S. dollars	816.4	729.6	729.6	882.3	882.3	1,108.0	1,108.0	1,215.3	1,215.3	1,105.0	1,177.6	1,200.7
Liabilities to the private sector	5,475.0	6,950.4	6,904.2	8,161.1	8,165.7	10,440.5	10,467.3	12,689.4	12,704.5	14,857.8	12,040.4	14,484.6

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Excludes the pension funds.

Table 26. Chile: Summary Accounts of Pension Funds

(End-of-period stocks; in billions of Chilean pesos)

	December										September	
	1992 (Ch$431.04=US$1)	1993	1993 (Ch$404.09=US$1)	1994	1994 (Ch$407.13=US$1)	1995	1995 (Ch$424.97=US$1)	1996	1996 (Ch$437=US$1)	Proj. 1997	1996 (Ch$415.2=US$1)	1997
Net international reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In millions of U.S. dollars	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net domestic assets	4,744.2	6,801.1	6,803.6	8,917.1	8,916.5	10,328.0	10,327.1	11,630.7	11,628.9	13,619.0	11,586.6	13,487.6
Nonfinancial public sector	35.5	32.8	32.8	108.3	108.3	195.7	195.7	384.5	384.5	417.2	334.8	417.2
Net credit to financial intermediaries	3,157.7	4,122.8	4,122.8	5,326.0	5,326.0	6,175.2	6,175.2	7,231.1	7,231.1	8,713.0	7,015.7	8,113.7
Credit to the private sector	1,601.7	2,693.5	2,693.5	3,536.8	3,536.8	3,848.1	3,848.1	3,832.4	3,832.4	4,660.0	4,057.9	4,666.7
Capital and reserves	5.0	5.5	5.5	2.1	2.1	9.6	9.6	2.7	2.7	11.5	5.5	2.2
Other	-55.6	-53.5	-51.0	-56.0	-56.6	99.4	98.5	180.0	178.2	-182.8	172.8	287.8
Net medium- and long-term foreign liabilities	0.0	-38.9	-36.5	-80.8	-81.4	-21.0	-22.0	-63.1	-64.9	-179.7	-38.4	-147.9
Liabilities to the private sector	4,744.2	6,840.1	6,840.1	8,997.9	8,997.9	10,349.0	10,349.0	11,693.8	11,693.8	13,798.7	11,625.0	13,635.5

Sources: Central Bank of Chile; Superintendency of Pension Funds Administrators; and Fund staff estimates.

Table 27. Chile: Pension Funds--Selected Indicators

(End-of-period values; unless otherwise indicated)

	1991	1992	1993	1994	1995	1996	Nov. 1997
(In thousands of persons)							
Number of affiliates 1/	4,109.2	4,434.8	4,708.8	5,014.4	5,320.9	5,571.5	5,739.0
Contributors (cotizantes) 1/ 2/	2118.4	2297.9	2366.7	2436.3	2489.5	2548.4	3218.1
(In percent per annum)							
Real rate of return of pension fun	29.7	3.0	16.2	18.2	-2.5	3.5	2.9
(As a percentage of annual GDP)							
Total assets of pension funds	31.4	30.6	37.1	41.1	38.8	39.4	40.3
(As a percentage of total assets)							
Pension funds portfolio composition							
Total assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Government securities	38.3	40.9	39.3	39.7	39.4	42.1	39.1
Financial institutions instruments	26.7	25.2	20.7	20.1	23.1	24.6	29.9
Firms shares and debentures	34.9	33.8	39.4	39.3	37.2	32.8	29.7
Foreign assets 3/	0.0	0.0	0.6	0.9	0.2	0.5	1.2
Other	0.1	0.1	0.1	0.0	0.1	0.0	0.0

Sources: Central Bank of Chile, Superintendency of the AFPs, and Fund staff estimates.

1/ Data for 1997 correspond to October.
2/ Includes all workers afiliated to an AFP that during the speciefied month pay, or declare and do not pay, the contributions to the pension fund.
3/ Until May 1993 pension funds were not allowed to invest in foreign assets. Currently, they can invest up to 12 percent of the value of the fund.

Table 28. Chile: Balance of Payments

(In millions of U.S. dollars)

	1992			1993		
	Credit	Debit	Balance	Credit	Debit	Balance
Current account balance	**13,332**	**14,031**	**-699**	**12,683**	**14,760**	**-2,077**
Goods and nonfactor services	12,440	11,711	729	11,797	12,776	-979
Merchandise trade, f.o.b.	10,008	9,237	771	9,199	10,181	-982
Nonfactor services	2,433	2,474	-41	2,599	2,595	3
Freight and transportation	1,059	1,289	-230	1,037	1,331	-294
Travel	704	530	174	833	560	274
Government services	73	116	-43	71	116	-45
Other services	597	540	57	657	588	68
Factor services	442	2,302	-1,860	497	1,964	1,468
Direct investment	5	897	-892	6	753	-748
Interest	437	1,405	-968	491	1,211	-720
Medium- and long-term	1	1,232	-1,231		1,020	-1,020
Public sector 1/	1	794	-793		651	-651
Private sector		438	-438		369	-369
Short-term	436	173	263	490	191	299
Public sector 1/	400	48	352	444	40	404
Private sector	37	125	-88	47	151	-104
Transfers	450	18	431	389	19	370
Capital account balance	**6,665**	**3,781**	**2,884**	**7,455**	**4,730**	**2,723**
Direct investment	1,137	485	652	1,916	801	1,115
Of which: debt conversion		32	-32	12	55	-43
Debt conversion and						
extraordinary amortization	336	672	-336	272	555	-284
Public sector	218	436	-218	246	493	-246
Private sector	118	237	-118	25	55	-30
Financial capital flows	5,191	2,624	2,567	5,267	3,374	1,893
Public sector	1,054	750	305	506	953	-448
Medium- and long-term	636	583	53	386	873	-487
Nonfinancial public sector	635	523	112	274	832	-557
Financial public sector 1/	2	60	-59	112	42	70
Short-term	368	166	202	119	80	39
Nonfinancial public sector	196	102	94	47	50	-3
Financial public sector 1/	172	65	108	73	30	42
Change in medium- and long-term assets	50		50			
Private sector	3,422	943	2,480	3,826	1,692	2,134
Medium- and long-term	1,067	545	522	1,899	619	1,280
Banking system	198	2	195	64	27	38
Other private sector	870	543	327	1,835	592	1,242
Short-term	2,353	397	1,956	1,925	1,073	851
Change in international reserves						
of commercial banks	1,716	272	1,445	842	862	-20
Other private sector	637	126	512	1,083	212	871
Change in other assets	2		1	2		2
Change in commercial credit	715	932	-217	935	728	207
Public sector	154	112	42	130	61	69
Private sector	561	820	-259	805	668	138
Errors and omissions	**393**	**77**	**315**	**68**	**139**	**-70**
Overall balance 2/			**2,499**			**577**
Valuation adjustment 3/			**-107**			**135**
Change in net official reserves (increase -)			**-2,392**			**-712**

Table 28. Chile: Balance of Payments

(In millions of U.S. dollars)

	1994			1995		
	Credit	Debit	Balance	Credit	Debit	Balance
Current Account balance	**15,324**	**15,963**	**-639**	**20,566**	**20,419**	**147**
Goods and nonfactor services	14,451	13,705	747	19,297	17,979	1,318
Merchandise trade, f.o.b.	11,604	10,879	725	16,136	14,655	1,481
Nonfactor services	2,847	2,826	22	3,160	3,324	-164
Freight and transportation	1,201	1,406	-205	1,403	1,695	-292
Travel	863	639	224	840	709	131
Government services	76	120	-44	84	135	-51
Other services	707	660	47	833	786	47
Factor services	498	2,241	-1,743	824	2,304	-1,480
Direct investment	3	1,058	-1,056	13	901	-888
Interest	495	1,183	-688	811	1,403	-592
Medium- and long-term		1,009	-1,009		1,199	-1,199
Public sector 1/		562	-562		608	-608
Private sector		447	-447		591	-591
Short-term	495	174	321	811	204	607
Public sector 1/	454	41	414	746	48	698
Private sector	41	134	-93	65	157	-92
Transfers	375	18	358	445	135	310
Capital account balance	**10,075**	**5,501**	**4,573**	**12,049**	**10,739**	**1,310**
Direct investment	3,619	1,864	1,754	3,700	2,693	1,007
Of which: debt conversion		104	-104		214	-214
Debt conversion and extraordinary amortization	63	127	-63	136	273	-137
Public sector	27	53	-27	134	267	-133
Private sector	37	74	-37	3	5	-2
Financial capital flows	6,393	3,510	2,882	8,213	7,774	439
Public sector	632	822	-190	414	2,272	-1,858
Medium- and long-term	402	602	-200	212	2,188	-1,976
Nonfinancial public sector	300	547	-247	212	1,827	-1,615
Financial public sector 1/	102	54	47		361	-361
Short-term	230	220	10	202	83	119
Nonfinancial public sector	214	50	164	148	44	104
Financial public sector 1/	16	170	-154	54	40	14
Change in medium- and long-term assets						
Private sector	4,480	1,592	2,887	5,896	2,755	3,141
Medium- and long-term	2,443	850	1,593	3,196	1,328	1,868
Banking system	16	35	-19	226	23	203
Other private sector	2,427	815	1,612	2,970	1,305	1,665
Short-term	2,034	737	1,297	2,699	1,425	1,274
Change in international reserves of commercial banks	966	497	469	822	1,319	-497
Other private sector	1,068	240	828	1,876	106	1,770
Change in other assets	2	5	-3	2	2	0
Change in commercial credit	1,281	1,097	185	1,902	2,747	-845
Public sector	81	200	-119	226	331	-105
Private sector	1,200	897	304	1,676	2,417	-741
Errors and omissions	**44**	**784**	**-740**	**24**	**420**	**-396**
Overall balance 2/			**3,194**			**1,061**
Valuation adjustment 3/			**474**			**287**
Change in net official reserves (increase -)			**-3,668**			**-1,348**

Table 28. Chile: Balance of Payments

(In millions of U.S. dollars)

	1996		
	Credit	Debit	Balance
Current account balance	**20,021**	**22,939**	**-2,918**
Goods and nonfactor services	18,711	20,087	-1,376
Merchandise trade, f.o.b.	15,353	16,500	-1,147
Nonfactor services	3,358	3,587	-229
Freight and transportation	1,396	1,775	-379
Travel	927	802	125
Government services	86	136	-50
Other services	950	874	76
Factor services	695	2,710	-2,015
Direct investment	14	1,434	-1,420
Interest	680	1,277	-597
Medium- and long-term	1	1,067	-1,066
Public sector 1/	1	368	-367
Private sector		699	-699
Short-term	679	209	470
Public sector 1/	624	54	570
Private sector	55	155	-100
Transfers	615	142	473
Capital account balance	**15,965**	**10,949**	**5,016**
Direct investment	6,311	2,198	4,113
Of which: debt conversion		82	-82
Debt conversion and extraordinary amortization	5	10	-5
Public sector			
Private sector	5	10	-5
Financial capital flows	9,649	8,741	908
Public sector	1,095	3,124	-2,029
Medium- and long-term	992	2,788	-1,796
Nonfinancial public sector	842	1,149	-307
Financial public sector 1/	149	1,639	-1,490
Short-term	98	336	-238
Nonfinancial public sector	48	276	-228
Financial public sector 1/	50	60	-10
Change in medium- and long-term assets	5		5
Private sector	6,056	3,045	3,011
Medium- and long-term	4,294	1,918	2,376
Banking system	204	233	-29
Other private sector	4,090	1,685	2,405
Short-term	1,761	1,121	640
Change in international reserves of commercial banks	514	972	-458
Other private sector	1,246	149	1,097
Change in other assets	1	5	-4
Change in commercial credit	2,498	2,572	-74
Public sector	356	17	339
Private sector	2,142	2,555	-413
Errors and omissions	**349**	**1,267**	**-918**
Overall balance 2/			**1,181**
Valuation adjustment 3/			**-506**
Change in net official reserves (increase -)			**-675**

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Includes Banco del Estado.
2/ Excludes the effects of valuation adjustment.
3/ Reserve stock adjustment for changes in cross exchange rates.

Table 29. Chile: Export and Import Values,
Volumes and Prices, and Terms of Trade

(Annual percentage changes)

	1992	1993	1994	1995	Prel. 1996	Jan.-Sep. 1996	Jan.-Sep. 1997
Export values (f.o.b.)	11.9	-7.7	26.1	38.1	-4.9	-1.8	9.3
Volumes	16.7	4.0	9.9	11.5	13.7	15.6	9.1
Prices	-4.1	-11.3	14.8	23.9	-16.3	-15.1	0.2
Import values (c.i.f.)	25.1	9.8	6.3	34.6	12.0	11.6	8.2
Volumes	26.8	12.5	6.7	24.7	11.6	11.6	12.7
Prices	-1.4	-2.4	-0.4	7.9	0.3	0.0	-4.0
Terms of trade	-2.7	-9.0	15.3	14.8	-16.6	-15.1	4.4
Memorandum items:							
Noncopper exports	15.0	-2.8	23.6	29.8	-3.4	-2.1	3.0
Volumes	16.9	4.7	12.0	8.7	7.8	9.0	4.0
Prices	-1.6	-7.2	10.4	19.4	-10.4	-10.2	-0.9
Export volumes 1/							
Copper	1,905	1,946	2,071	2,344	2,885	2,115	2,465
Fishmeal	1,080	929	1,164	1,325	1,053	828	741
Whitened wood pulp	947	1,151	1,244	1,353	1,382	1,080	1,055
Fresh fruit (grapes)	429	441	459	443	513	481	430
Fresh fish	136	144	162	180	206	154	158
Export prices 2/							
Copper 3/	0.93	0.76	0.93	1.25	0.95	0.98	1.01
Fishmeal	499	392	386	474	578	578	580
Whitened wood pulp	442	316	470	826	418	428	426
Fresh fruit (grapes)	1,023	1,043	1,039	1,200	1,079	1,076	1,139
Fresh fish	3,868	3,590	3,685	4,087	3,717	3,568	4,185

Source: Central Bank of Chile.

1/ Thousands of metric tons.
2/ U.S. dollars per metric ton.
3/ U.S. dollars per pound.

Table 30. Chile: Exports (f.o.b.) by Main Categories

	1992	1993	1994	1995	1996	Prel. Jan.-Sep. 1996	1997
(In millions of U.S. dollars)							
Total	10,008	9,199	11,604	16,137	15,353	11,850	12,959
Mining products	4,724	3,976	5,191	7,850	7,324	5,553	6,467
Copper	3,886	3,248	4,242	6,487	6,029	4,574	5,464
CODELCO	2,231	1,776	2,226	3,116	2,391	1,759	2,301
Other	1,655	1,472	2,016	3,371	3,638	2,815	3,163
Other	838	728	949	1,363	1,295	979	1,003
Agricultural and fishery products	1,803	1,722	1,960	2,398	2,442	2,033	2,058
Fresh fruit	968	845	923	1,117	1,205	1,110	990
Fresh fish 1/	563	569	683	858	877	636	772
Other	272	308	354	423	360	287	296
Semi-industrial and industrial products	3,481	3,501	4,453	5,889	5,587	4,264	4,434
Fishmeal	538	364	449	628	608	479	430
Woodchips	164	137	164	233	171	133	114
Woodpulp	527	444	716	1,316	670	539	523
Other	2,252	2,556	3,124	3,712	4,138	3,113	3,367
(In percent of total exports)							
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mining products	47.2	43.2	44.7	48.6	47.7	46.9	49.9
Copper	38.8	35.3	36.6	40.2	39.3	38.6	42.2
Agricultural and fishery products	18.0	18.7	16.9	14.9	15.9	17.2	15.9
Fresh fruit	9.7	9.2	8.0	6.9	7.8	9.4	7.6
Fresh fish 1/	5.6	6.2	5.9	5.3	5.7	5.4	6.0
Other	2.7	3.3	3.1	2.6	2.3	2.4	2.3
Semi-industrial and industrial products	34.8	38.1	38.4	36.5	36.4	36.0	34.2
Fishmeal	5.4	4.0	3.9	3.9	4.0	4.0	3.3
Woodchips	1.6	1.5	1.4	1.4	1.1	1.1	0.9
Woodpulp	5.3	4.8	6.2	8.2	4.4	4.5	4.0
Other	22.5	27.8	26.9	23.0	27.0	26.3	26.0
(In percent of GDP) 2/							
Total	23.4	20.1	22.2	24.0	21.4	22.2	21.9
Copper	9.1	7.1	8.1	9.6	8.4	8.6	9.2

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Includes frozen and semi-processed fish.
2/ Nominal quarterly GDP figures are Fund staff estimates.

Table 31. Chile: Imports (c.i.f.) by Type of Goods 1/2/

	1992	1993	1994	1995	1996	Prel. January-September 1996	1997
			(In millions of U. S. dollars)				
Total imports	10,129	11,125	11,827	15,914	17,828	12,911	13,972
Consumer goods	1,576	1,762	1,865	2,669	3,160	2,314	2,430
Agriculture	28	38	35	39	41	30	31
Industrial	1,548	1,725	1,829	2,630	3,119	2,284	2,399
Intermediate goods	5,390	5,804	6,086	8,138	8,993	6,557	6,894
Agricultural	199	202	266	321	429	266	236
Mining	918	912	918	1,227	1,458	1,001	1,085
Of which: crude oil	833	780	748	906	1,159	n.a.	n.a.
Industrial	4,273	4,691	4,903	6,590	7,106	5,290	5,572
Of which: petroleum products	275	294	396	n.a.	377	n.a.	n.a.
Capital goods	2,473	2,969	3,190	4,091	4,652	3,256	3,607
Agricultural	1	1	1	1	2	1	1
Industrial	2,471	2,967	3,186	4,088	4,645	3,250	3,602
Other	1	1	3	3	5	4	3
Unclassified	689	590	685	1,016	1,023	784	1,042
Memorandum item:							
Imports of automobiles	477	445	407	687	799	617	614
			(In percent of total imports)				
Total imports	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Consumer goods	15.6	15.8	15.8	16.8	17.7	17.9	17.4
Agriculture	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Industrial	15.3	15.5	15.5	16.5	17.5	17.7	17.2
Intermediate goods	53.2	52.2	51.5	51.1	50.4	50.8	49.3
Agricultural	2.0	1.8	2.2	2.0	2.4	2.1	1.7
Mining	9.1	8.2	7.8	7.7	8.2	7.8	7.8
Of which: crude oil	8.2	7.0	6.3	5.7	6.5	n.a.	n.a.
Industrial	42.2	42.2	41.5	41.4	39.9	41.0	39.9
Of which: petroleum products	2.7	2.6	3.3	n.a.	2.1	n.a.	n.a.
Capital goods	24.4	26.7	27.0	25.7	26.1	25.2	25.8
Agricultural	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial	24.4	26.7	26.9	25.7	26.1	25.2	25.8
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unclassified	6.8	5.3	5.8	6.4	5.7	6.1	7.5
Memorandum item:							
Imports of automobiles	4.7	4.0	3.4	4.3	4.5	4.8	4.4
			(In percent of GDP) 3/				
Total imports	23.7	24.4	22.7	23.6	24.8	24.2	23.6
Consumer goods	3.7	3.9	3.6	4.0	4.4	4.3	4.1
Agriculture	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Industrial	3.6	3.8	3.5	3.9	4.3	4.3	4.0
Intermediate goods	12.6	12.7	11.7	12.1	12.5	12.3	11.6
Agricultural	0.5	0.4	0.5	0.5	0.6	0.5	0.4
Mining	2.1	2.0	1.8	1.8	2.0	1.9	1.8
Of which: crude oil	1.9	1.7	1.4	1.3	1.6	n.a.	n.a.
Industrial	10.0	10.3	9.4	9.8	9.9	9.9	9.4
Of which: petroleum products	0.6	0.6	0.8	n.a.	0.5	n.a.	n.a.
Capital goods	5.8	6.5	6.1	6.1	6.5	6.1	6.1
Agricultural	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industrial	5.8	6.5	6.1	6.1	6.5	6.1	6.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unclassified	1.6	1.3	1.3	1.5	1.4	1.5	1.8

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Starting in 1990, some consumer and capital good imports were reclassified as intermediate imports to be consistent with national accounts criteria.
2/ Excludes imports through Free Trade Zones.
3/ Nominal quarterly GDP figures are Fund staff estimates.

Table 32. Chile: Capital Goods Imports

(In millions of U.S. dollars)

	1992	1993	1994	1995	Prel. 1996
Total	2,471	2,967	3,186	4,088	4,645
Machinery and equipment	1,606	2,056	2,192	2,986	3,415
Textiles industry	56	46	33	39	26
Mechanical industry	34	48	36	34	37
Wood and furniture industry	19	40	19	35	40
Telecommunications	70	90	73	86	116
Loading-unloading	81	133	131	247	192
Earth moving	166	178	188	271	350
Generators, motors, and transformers	73	154	141	163	159
Computers	171	199	237	320	369
Pumps and compressors	46	63	56	74	71
Others	891	1,106	1,279	1,717	2,055
Transportation	865	911	995	1,102	1,231
Goods	234	215	190	336	334
Automobiles	113	138	148	133	142
Tractors	42	31	28	32	40
Ships	45	67	84	101	130
Other	431	459	545	501	585

Source: Central Bank of Chile.

Table 33. Chile: Direction of Trade

(In percent)

	1992	1993	1994	1995	1996	January-September 1996	January-September 1997
Exports	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Europe	31.7	28.0	25.3	29.4	25.9	26.3	25.5
European Union	29.0	26.0	23.3	26.0	22.8	23.0	23.5
Belgium and Luxembourg	1.8	1.4	1.8	2.4	1.6	1.8	1.8
France	3.9	4.0	3.5	3.1	2.6	2.5	2.8
Germany	6.0	5.2	5.0	5.1	4.8	4.9	4.0
Italy	3.8	3.5	3.1	3.7	3.1	3.1	2.8
Netherlands	3.3	2.8	3.0	2.7	2.6	2.7	2.6
Spain	3.6	2.6	1.9	1.9	1.8	1.9	1.9
United Kingdom	5.6	5.9	4.5	6.5	5.8	5.4	6.4
Other 1/	0.8	0.7	0.7	0.6	0.6	0.6	1.1
Sweden	0.7	0.7	0.6	0.5	0.5	0.6	0.7
Other	2.1	1.4	1.4	2.9	2.6	2.7	1.3
Western Hemisphere	33.7	38.0	38.9	33.8	37.3	36.5	36.6
Canada	0.6	0.6	0.6	0.6	0.9	0.8	0.7
LAIA countries	16.0	19.0	20.1	18.2	18.9	18.4	18.9
Andean Pact countries 2/	5.3	6.0	6.6	6.6	6.6	6.5	6.3
Argentina	4.6	6.3	5.5	3.6	4.6	4.2	4.4
Brazil	4.5	4.3	5.2	6.4	6.1	6.0	5.4
Mexico	0.9	1.4	1.8	0.8	1.0	0.9	2.1
Other	0.8	1.0	0.9	0.7	0.8	0.8	0.7
United States	16.3	17.6	17.3	14.4	16.6	16.5	16.0
Other	0.8	0.8	0.9	0.6	0.9	0.8	0.9
Rest of the world	34.5	34.0	35.8	36.7	36.8	37.2	37.9
China, People's Republic of	2.8	1.9	1.1	1.8	2.3	2.4	2.4
Japan	16.9	16.0	17.0	17.7	16.2	16.3	16.1
Other	14.9	16.1	17.7	17.3	18.2	18.5	19.4
Imports 3/	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Europe	24.2	24.2	23.3	22.2	22.4	22.8	22.2
European Union	19.5	19.6	19.2	18.4	18.0	18.7	18.5
Belgium and Luxembourg	0.9	1.0	1.0	0.8	0.8	0.9	0.7
Denmark	0.4	0.5	0.5	0.6	0.5	0.5	0.5
France	3.0	3.2	3.2	2.9	3.4	3.6	2.8
Germany	6.7	5.8	4.9	5.1	4.2	4.2	4.4
Italy	2.9	3.2	3.1	3.3	3.2	3.3	3.8
Netherlands	0.9	0.8	0.8	0.7	0.7	0.8	0.6
Spain	2.4	2.6	3.0	2.9	3.1	3.2	3.4
United Kingdom	2.0	2.0	2.2	1.6	1.7	1.7	1.7
Other 1/	0.4	0.4	0.5	0.5	0.5	0.6	0.6
Sweden	1.1	1.1	1.1	1.3	1.6	1.6	1.5
Switzerland	1.1	1.0	1.0	0.8	0.7	0.7	0.6
Other	2.5	2.5	2.0	1.8	2.1	1.8	1.7
Western Hemisphere	48.7	48.3	51.7	53.4	53.3	52.8	53.5
Canada	1.7	1.9	2.3	2.0	2.4	2.3	2.1
LAIA countries	25.3	22.8	25.5	26.2	26.8	26.8	27.3
Venezuela	1.4	1.3	1.2	1.5	1.8	1.8	1.5
Other Andean Pact countries 2/	3.6	2.9	3.8	3.5	3.5	3.4	3.6
Argentina	6.7	5.5	8.5	9.0	9.4	9.3	9.5
Brazil	10.5	10.0	8.9	7.8	6.1	6.0	6.4
Mexico	1.9	2.0	2.3	3.9	5.3	5.7	5.8
Other	1.2	1.1	0.9	0.6	0.7	0.7	0.6
United States	21.0	23.3	23.4	24.7	23.7	23.3	23.5
Other	0.6	0.3	0.5	0.5	0.4	0.4	0.5
Rest of the world	27.1	27.6	25.0	24.4	24.3	24.4	24.3
China, People's Republic of	1.6	2.0	2.5	2.6	3.0	2.9	3.2
Japan	10.2	8.3	8.9	6.6	5.5	5.7	5.2
South Korea	2.6	3.2	3.0	3.4	3.2	3.2	3.1
Other	12.7	14.0	10.6	11.8	12.7	12.5	12.8

Source: Central Bank of Chile.

1/ Denmark, Greece, Ireland, and Portugal.
2/ Bolivia, Colombia, Ecuador, Peru, and Venezuela.
3/ Excludes imports through Free Trade Zones.

Table 34. Chile: Net International Reserves of the Financial System

(In millions of U.S. dollars)

| | December 31 | | | | | November 30 | |
	1992	1993	1994	1995	1996	1996	1997
Central Bank	8,513	9,225	12,893	14,241	14,915	14,696	18,359
Assets	9,236	9,704	13,184	14,241	14,915	14,696	18,359
Gold 1/	79	79	79	79	79	79	78
SDRs 2/	1	1	1	3	2	2	1
Reserve position at the Fund	0	0	0	0	50	51	60
Foreign exchange	9,167	9,639	13,087	14,137	14,781	14,571	18,220
Payment agreements (net)	-11	-15	17	22	4	-6	0
Liabilities (-)	-722	-479	-290	0	0	0	0
Short-term liabilities	-1	0	0	0	0	0	0
Liabilities to the IMF	-722	-479	-290	0	0	0	0
Commercial banks 3/	3,588	3,567	3,897	3,311	2,985	2,931	1,878
Assets	519	513	533	472	585	487	705
Gold 1/	2	0	0	0	0	0	0
Foreign exchange	517	513	533	472	585	486	705
Liabilities (-)	3,068	3,055	3,364	2,838	2,400	2,445	1,173
Short-term loans	2,866	3,032	3,311	2,823	2,384	2,426	1,163
Foreign bank deposits	202	23	54	15	16	18	10
Financial System	12,101	12,792	16,791	17,551	17,900	17,627	20,238
Assets	9,755	10,217	13,717	14,713	15,500	15,182	19,064
Liabilities	2,346	2,576	3,074	2,838	2,400	2,445	1,173
Memorandum item:							
Medium- and Long-Term							
financial system liabilities (-)	-2,812	-2,552	-2,616	-2,548	-1,070	-1,082	-823
Central Bank	-1,995	-1,912	-1,933	-1,492	-3	-3	-3
Assets	0	0	455	0	0	0	0
Liabilities	1,995	1,912	2,388	1,492	3	3	3
Commercial banks	-816	-730	-882	-1,108	-1,215	-1,206	-1,173
Assets	11	9	12	16	19	18	99
Liabilities	828	739	894	1,124	1,234	1,223	1,272
Pension funds	0	90	200	52	148	127	353
Assets	0	90	200	52	148	127	353

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Valued at US$42.22 per ounce; valued at market price the gold held by the Central Bank at end-November 1997 was worth US$542.1 million, and that of commercial banks US$1.4 million.
2/ SDRs are valued at end-of-period rates with respect to the U.S. dollar.
3/ Includes Banco del Estado.

Table 35. Chile: Outstanding External Debt and Debt Service

| | December 31 | | | | Prel. | Sep. 30 | |
	1992	1993	1994	1995	1996	1996	1997
(In millions of U. S. dollars)							
Total external debt 1/	17,922	18,861	21,155	21,191	20,985	20,077	22,267
Medium- and long-term	14,447	15,375	17,289	17,681	18,350	17,603	20,940
By debtor							
Public	8,855	8,532	8,609	6,886	4,813	4,701	4,479
Private	5,592	6,843	8,680	10,785	13,537	12,902	16,461
By creditor							
Multilateral	4,430	4,381	4,301	3,023	2,469	2,701	1,896
Official	1,301	1,364	1,412	1,308	1,238	1,275	1,290
Financial institutions	6,468	7,041	8,529	9,752	10,417	9,868	12,786
Suppliers credits and others	2,248	2,589	3,047	3,598	4,226	3,759	4,966
Short-term	3,475	3,486	3,866	3,510	2,635	2,474	1,327
Public	448	488	526	615	350	484	528
Private	3,027	2,999	3,339	2,895	2,285	1,990	799
Total debt service	2,517	2,353	2,600	4,890	5,955	4,514	3,246
Amortization 2/3/	1,115	1,144	1,418	3,490	4,678	3,556	2,285
Interest 4/	1,402	1,209	1,182	1,400	1,277	958	961
Medium- and long-term public and publicly guaranteed debt	1,376	1,528	1,200	3,030	3,465	2,841	1,102
Amortization 2/3/	597	875	602	2,373	3,057	2,473	867
Interest 5/	779	653	598	658	408	368	235
Private debt	847	549	1,164	1,589	2,188	1,458	1,931
Amortization 2/3/	518	269	816	1,117	1,621	1,083	1,418
Interest 5/	329	280	348	472	567	375	513
Short-term debt interest payments 5/	294	276	236	270	303	215	213
(In percentage of GDP) 6/							
Total external debt	41.9	41.3	40.6	31.5	29.2	37.6	37.5
Medium- and long-term	33.8	33.7	33.1	26.3	25.5	33.0	35.3
Short-term	8.1	7.6	7.4	5.2	3.7	4.6	2.2
(In percent of export goods and nonfactor services)							
Total external debt	144.1	159.9	146.4	109.8	112.2	139.5	141.1
Medium- and long-term	116.1	130.3	119.6	91.6	98.1	122.3	132.7
Short-term	27.9	29.5	26.7	18.2	14.1	17.2	8.4
Total debt service	20.2	19.9	18.0	25.3	31.8	31.4	20.6
Amortization 2/3/	9.0	9.7	9.8	18.1	25.0	24.7	14.5
Interest 4/	11.3	10.2	8.2	7.3	6.8	6.7	6.1
Medium- and long-term debt service	17.9	17.6	16.4	23.9	30.2	29.9	19.2
Public debt	11.1	13.0	8.3	15.7	18.5	19.7	7.0
Private debt	6.8	4.7	8.1	8.2	11.7	10.1	12.2

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Excludes bonds, trade credits, and short-term foreign liabilities of the central bank.
2/ Excludes reductions of debt through debt conversions.
3/ Amortization payments may differ from those reported in external debt statistics, as the latter do not include certain valuation changes that affect those flows.
4/ Includes interests on short-term trade credits, Fund credit, taxes on interest payments and interest on bonds.
5/ Excludes taxes on interest payments and interest on bonds.
6/ GDP in current pesos converted to U. S. dollars at the following exchange rates: CH$362.6 for 1992; Ch$404.2 for 1993; Ch$420.2 for 1994; Ch$396.7 for 1995; 409.6 for January-September 1996 and 417.1 for January-September 1997.

Table 36. Chile: Medium- and Long-Term External Debt Operations by Type of Creditor 1/

(In millions of U.S. dollars)

	1992				1993			
	Drawings	Amortization 2/	Interest	12/31/92	Drawings	Amortization 2/	Interest	12/31/93
Total	1,583.5	1,114.7	1,108.4	14,447.3	1,977.6	1,144.0	933.4	15,375.2
Public sector	532.1	596.5	779.9	8,854.9	399.1	555.3	653.1	8,532.2
Multilateral organizations 3/	460.8	305.0	333.2	3,927.1	256.0	351.0	351.3	3,900.2
Official lenders 3/	71.2	130.4	42.8	808.5	26.2	114.0	36.8	752.9
Private banks and financial institutions	0.1	111.8	386.0	3,913.6	111.7	46.0	252.3	3,711.2
Suppliers' credits	--	49.3	17.9	205.7	5.2	44.3	12.7	167.9
Private sector	1,051.4	518.2	328.5	5,592.4	1,578.5	588.7	280.3	6,843.0
Private banks	592.4	215.2	119.4	2,554.5	897.7	328.2	129.2	3,653.8
Other	459.0	303.0	209.1	3,037.9	680.8	260.5	151.1	3,189.2
Bonds excluded	(120.0)		(17.5)	(320.0)				

	1994				1995			
	Drawings	Amortization 2/	Interest	12/31/94	Drawings	Amortization 2/	Interest	12/31/95
Total	2,845.1	1,417.8	945.4	17,289.2	3,408.2	3,489.9	1,129.6	17,681.4
Public sector	402.1	606.7	597.5	8,609.2	212.3	2,372.5	657.5	6,886.4
Multilateral organization 3/	231.1	393.1	352.1	3,863.3	148.3	1,989.4	364.7	2,572.0
Official lenders 3/	55.8	95.7	37.9	765.8	47.3	98.4	37.9	714.0
Private banksand financial institutions	115.2	28.1	199.7	3,901.3	16.0	261.1	250.0	3,544.1
Suppliers' credits	--	89.8	7.8	78.8	0.7	23.6	4.9	56.3
Private sector	2,443.0	811.1	347.9	8,680.0	3,195.9	1,117.4	472.1	10,795.0
Private banks	1,503.3	397.6	118.4	4,951.8	2,112.7	502.8	253.6	6,208.1
Other	939.7	413.5	229.5	3,728.2	1,083.2	614.6	218.5	4,586.9

	Prel. 1996			
	Drawings	Amortization 2/	Interest	12/31/96
Total	5,285.5	4,677.9	974.4	18,350.0
Public sector	991.6	3,056.5	407.8	4,813.0
Multilateral organization 3/	121.8	757.7	184.5	2,020.6
Official lenders 3/	31.8	84.2	29.0	615.2
Private banksand financial institutions	837.3	2,159.5	191.8	2,175.0
Suppliers' credits	0.7	55.1	2.5	2.2
Private sector	4,293.9	1,621.4	566.6	13,537.0
Private banks	2,959.5	1,041.2	443.5	8,242.2
Other	1,334.4	580.2	123.1	5,294.8

Source: Central Bank of Chile.

1/ Excludes Fund credit, debt payable in local currency and bonds. Totals may not add up horizontally bacause of exchange rate adjustments, loan cancellations and rounding.
2/ Actual amortization including prepayments, but excluding operation under Chapters XVIII and XIX of the foreign exchange compendium. Includes valuation changes.
3/ Excludes bank credits and suppliers credits guaranteed by multilateral organizations or foreign official agencies. Such credits are included under private banks and financial institutions or under suppliers' credit.

Table 37. Chile: Exchange Rates

| | Chilean pesos per U.S. dollar | | Real effective exchange rate | |
	End of period	Period average	Index 1990 = 100 1/	Percentage change 2/
1990	337.1	321.7	100.0	-3.1
1991	374.5	349.4	102.9	2.9
1992	382.1	362.6	108.6	5.6
1993	428.5	404.3	110.7	1.9
1994	402.9	420.1	113.0	2.0
1995	406.9	396.8	119.4	5.7
1996				
January	412.3	408.8	121.0	3.6
February	412.6	411.0	121.1	5.4
March	411.6	411.5	121.8	7.1
April	407.3	408.2	124.5	6.9
May	408.9	406.3	126.2	3.2
June	410.7	410.0	125.5	1.5
July	410.7	410.7	124.8	1.6
August	411.1	411.1	123.9	0.4
September	413.3	412.0	124.8	1.3
October	421.2	415.9	124.5	5.1
November	421.2	420.0	123.2	4.8
December	424.9	422.6	124.5	3.9
1997				
January	420.1	423.6	126.7	4.7
February	413.1	415.8	133.2	10.0
March	415.7	414.1	135.1	11.0
April	419.1	417.7	134.7	8.2
May	418.9	418.6	133.3	5.7
June	416.5	417.3	134.0	6.7
July	416.9	416.6	136.4	9.3
August	415.2	414.8	139.2	12.4
September	414.5	414.9	138.9	11.4
October	421.1	414.7	139.2	11.8
November	437.4	425.8	136.7	10.9
December	439.2	438.4	...	...

Sources: Central Bank of Chile; and Fund staff estimates.

1/ Trade-weighted exchange rate index, adjusted by relative movements in consumer prices. Period averages. A decline in the index represents an effective depreciation of the Chilean peso.

2/ Percentage change with respect to the same period of the previous year.