

MONETARY POLICY REPORT

JANUARY 2002



CENTRAL BANK OF CHILE

MONETARY POLICY REPORT

JANUARY 2002

16 •

12 •

8 •

4 •

0 •



CENTRAL BANK OF CHILE

.....
LEGAL
REPRESENTATIVE
Jorge Carrasco Vásquez

(c) CENTRAL BANK
OF CHILE
January 2002

ISSN: 0717 - 5493
Edition of 500 copies
Santiago, Chile

Agustinas 1180 - Santiago - Chile
P.O. Box 967, Santiago - Chile
Telephone: 56 - 2 - 670 2000
Fax: 56 - 2 - 670 2231
www.bcentral.cl
bcch@bcentral.cl

Printed in Chile

NO REPRODUCTION IS PERMITTED BY ANY MEANS

CONTENTS¹

TABLES AND GRAPHICS INDEX	4
---------------------------	---

PREFACE	7
---------	---

SUMMARY	9
---------	---

I. INTERNATIONAL OUTLOOK	17
II. FINANCIAL MARKETS	31
III. DEMAND, SUPPLY, AND THE CURRENT ACCOUNT	45
IV. PRICES AND WAGES	59
V. FUTURE INFLATION SCENARIOS	69
REFERENCES	77

BOXES

• Money, inflation, and depreciation	14
• Argentina and contagion to emerging economies	25
• Consensus forecasts' performance	28
• The effects of nominalizing monetary policy	40
• Exchange rate correlations	42
• Inventories throughout the cycle	56
• Private sector inflation expectations	67

¹ The closing date for statistical information in the report is 8 January 2002.

TABLES AND GRAPHICS INDEX

Tables

Baseline scenario assumptions	11
Economic growth and the current account 1997-2003	12
Inflation	12
I.1: World growth	18
I.2: Copper price projections	20
I.3: Brent oil price projections	21
I.4: World inflation	22
I.5: Spreads	25
I.6: Country spreads	27
II.1: Interest rates on Central Bank of Chile notes	31
II.2: Market interest rates	33
II.3: Real, seasonally adjusted monetary aggregates	34
II.4: Public and private sector loans	35
II.5: Loans to the private sector	35
II.6: Internal yield (TIR) on Central Bank notes, mortgage bills, and corporate bonds	36
II.7: Changes in the observed and multilateral exchange rates	37
II.8: International stock indices	38
II.9: Sectoral stock indices	38
II.10: Monthly volatility in market interest rates	40
II.11: Contemporary correlations between variables and the exchange rate	43
III.1: Investment list	47
III.2: Current account	48
III.3: Exports by product category	49
III.4: Exports by product	49
III.5: Exports by category and area	50
III.6: Imports by product category	51
IV.1: CPI and CPIX	59
IV.2: CPIT, CPIXT, CPIN, and CPIXN	61
IV.3: Imported, domestic and total WPI	62
IV.4: Interest on nominal Central Bank of Chile instruments and inflation premium	65
V.1: Inflation scenarios	74

Figures

Quarterly GDP growth scenarios	11
Inflation CPI projection	12
Underlying (CPIX) inflation projection	12
I.1: World growth	18
I.2: Stock price indices	18
I.3: Annualized quarterly GDP	18
I.4: Commodity price index	19
I.5: Copper market	20
I.6: Oil and gasoline prices	21
I.7: Terms of trade	21
I.8: Yen/US\$ exchange rate	21

I.9:	US\$/euro exchange rate	22
I.10:	10-Year government bond yields	23
I.11:	Monetary policy interest rates	23
I.12:	Net capital flows to emerging economies	23
I.13:	Sovereign spreads	24
I.14:	First growth cycle: 93:III - 96:I	28
I.15:	First turning point in cycle: 94:III - 96:III	29
I.16:	Last projections: 99:IV - 03:I	29
II.1:	Monetary policy rate (TPM) and interest on nominal Central Bank notes	31
II.2:	TPM (policy rate), expectations, and forward curve	32
II.3:	Differential between expected TPM, forward curve, and current TPM	32
II.4:	Unindexed 30- to 89-day deposit and lending rates	32
II.5:	Unindexed 90-day to 1-year deposit and lending rates	33
II.6:	TPM and indexed 90-day to 1-year deposit and lending rates	33
II.7:	Real M1A and IMACEC	33
II.8:	Seasonally adjusted real monetary aggregates corrected for interest rates	34
II.9:	Real, seasonally adjusted M2 and M2A minus AFP	34
II.10:	Real, seasonally adjusted M7 and M7 minus AFP	34
II.11:	IMACEC and total loans	35
II.12:	Short-term private foreign debt and loans to companies	35
II.13:	Real, seasonally adjusted credit to individuals	35
II.14:	Real, seasonally adjusted credit to companies	36
II.15:	Private, non-financial sector bonds outstanding in Chile	36
II.16:	Interest differential for fixed income instruments and Central Bank papers	36
II.17:	Chilean peso, Brazilian real, and Argentina's sovereign spread 2001	37
II.18:	Real exchange rate (TCR) index	37
II.19:	IPSA and Dow Jones stock indices	38
II.20:	Latin American ADR and Nasdaq stock indices	38
II.21:	Total deposits	40
II.22:	Total loans	40
II.23:	30 to 89-day deposits	40
II.24:	90-day to one-year deposits	41
II.25:	Loans up to one year	41
II.26:	Nominal exchange rate	42
III.1:	Seasonally adjusted expenditure and gross domestic product	45
III.2:	Manufacturing production and sales of consumer goods	46
III.3:	Seasonally adjusted sales of non-durable and durable consumer goods	46
III.4:	Seasonally adjusted retail and supermarket sales	46
III.5:	Seasonally adjusted consumer goods imports and sales of new vehicles	47
III.6:	Seasonally adjusted capital goods sales and imports	47
III.7:	Seasonally adjusted sales and stock of new housing	47
III.8:	Building permits, new works	48
III.9:	Current income and public absorption	48
III.10:	Quarterly public expenditure with macroeconomic impact	48
III.11:	Current saving and central government general surplus	49
III.12:	Change in countries' share of consumer goods imports and real bilateral depreciation	51
III.13:	Seasonally adjusted national employment	52
III.14:	Seasonally adjusted national unemployment	52
III.15:	Seasonally adjusted national participation rate	52
III.16:	Seasonally adjusted employment by sector	53
III.17:	Seasonally adjusted employment by occupation group	53
III.18:	Employment in construction and total building permits	53
III.19:	Average productivity of work by sector	54
III.20:	Average labor productivity in manufacturing	54
III.21:	Industrial employment according to changing intra-sectoral and inter-sectoral productivity	54
III.22:	Ratio between real wage and the cost of capital use	55
III.23:	Output gap and seasonally adjusted employment	55

III.24: Output gap and inflationary acceleration	55
III.25: Manufacturing production and inventories	56
III. 26: GDP and consumer and intermediate imports	56
III.27: GDP and inventory indicator	57
III.28: Expenditure and inventory indicator	57
IV.1: CPI and CPIX inflation	59
IV.2: Perishables' impact on CPI	60
IV.3: Effect on CPIX by group	60
IV.4: Food prices included in the CPIX	60
IV.5: Prices of durable goods and clothing included in the CPIX	61
IV.6: CPI and CPIXT	61
IV.7: Tradable inflation by group	61
IV.8: Expected depreciation and inflation to one year	62
IV.9: Deviations at the margin compared to trend 1993-1998	62
IV.10: Index of external prices relevant to Chile	62
IV.11: Consumption IVUM and TCM	63
IV.12: Total and non-fuel IVUM	63
IV.13: Imported, domestic and total WPI	63
IV.14: FEPP band for gasoline	64
IV.15: FEPP band for liquefied gas	64
IV.16: CPIN and CPIXN	64
IV.17: Breakdown of non-tradable inflation by group	65
IV.18: Hourly wages, labor costs, and inflation	65
IV.19: Real labor costs and hourly wage index	65
IV.20: Real wage index by sector	66
IV.21: Unit labor costs	66
IV.22: Premium paid on nominal versus real instruments to one year and expectations survey	66
IV.23: CPI prediction error and CPI-CPIX difference in one month	67
IV.24: CPI prediction error and CPI-CPIX difference in one month	67
IV.25: CPI prediction error and expected change in inflation to 12 months the next month	67
IV.26: Change in exchange rate projection and expected inflation to 12 months	68
V.1: Quarterly GDP growth scenarios	72
V.2: CPI inflation projection	73
V.3: Underlying (CPIX) inflation projection	73

PREFACE

The main purpose of the Central Bank of Chile's monetary policy is to keep inflation low and stable, defined as a range of 2% to 4% per annum, centered on 3%. Controlling inflation is the means by which monetary policy contributes to the population's welfare. Low, stable inflation improves economic performance and growth, while preventing the erosion of personal income. Furthermore, monetary policy's focus on inflation targeting helps to moderate fluctuations in employment and domestic output.

The main objectives of this Monetary Policy Report are: (i) to inform and explain to the general public the Board's view of recent and expected inflation trends and their consequences for the conduction of monetary policy; (ii) to publicly explain the medium-term framework used by the Board of the Central Bank to formulate monetary policy; and (iii) to provide information that is useful in the formulation of economic agents' expectations regarding future inflation and output trends.

The report is published three times a year, in January, May and September, focusing on the main factors that influence inflation. These include the international environment, financial conditions, prospects for aggregate demand, the current account, the labor market, and recent price and cost developments. The last chapter summarizes the consequences of this analysis both in terms of prospects and risks affecting inflation and economic growth over the next eight quarters. The report also provides several boxes that offer more detailed information on issues relevant to evaluating inflation and monetary policy.

The Board approved this Report at its meeting on 11 January.

The Board



SUMMARY

The second half of 2001 was marked by a series of events that caused world economic activity to contract and significantly increased uncertainty in financial markets. By mid-year, the economies of the United States and Japan were performing below forecasts from some months earlier, raising doubts about the economic recovery expected for year's end. In Chile's case, this situation of greater uncertainty was reinforced by turbulence in neighboring countries and the strong contagion that, until October 2001, was apparent in financial markets. The economic policy responses that emerged in the world's main economies after the September 11th attacks in the United States were also indicative of their reaction to the more uncertain outlook, especially over the short and medium terms.

This scenario is associated with a less dynamic global environment of reduced activity and lower inflationary risks, with the resulting consequences for the Chilean economy. Nonetheless, since late 2001 the greater uncertainty of the previous months has tended to fade. Since the diagnosis carried out in early September, which recognized some inflationary risk, the Chilean economy has moved toward a situation in which forecast inflation approached the lower end of the target range of 2-4%, over the horizon relevant to monetary policy, due to weakened medium-term inflationary pressures. This motivated the recent decision to reduce the monetary policy rate (TPM) to 6.0%.

The inflationary process can be analyzed as a price response to demand and cost pressures apparent in both the labour market and in imported components of productive processes. The compression of margins during 2001, due to the unexpected behavior of the exchange rate, should turn around gradually, having a one-time effect on price levels. However, the speed with which this decompression advances will depend on cost trends, as well as demand conditions in final goods markets. With regard to the first point, significant peso appreciation in the past two months has undoubtedly provided some relief to those sectors that had experienced substantial compression of their margins. Contrary to expectations, Argentina's increasingly severe problems and its announcement that it would default on its public debt payments led to only a moderate link being drawn between these markets (including Chile's) and that country's fluctuating economy. Thus, despite continual increases to Argentina's sovereign premium, the Chilean peso has appreciated with respect to its maximum level in late October and early November. If the critical situation continues in Argentina, however, adverse consequences for the Chilean economy cannot be ruled out, but they should remain essentially temporary.

Expenditure indicators, on the other hand, reveal that it is not easy to increase margins under current conditions. Imports of consumer goods remain below levels achieved in early 2001 and durable goods sales for the fourth quarter of 2001 declined. The substitution of local consumer goods or lower price (and quality) imported goods from countries that have suffered depreciations similar to or even greater than the Chilean peso does not make raising prices any easier. In fact, a look at the most recent trends in durable goods prices reveals that part of this appreciation has translated into lower retail prices. Aside from the decline in fuel prices, these factors contributed to the fact that last year closed with an annual rise in prices of 2.6%, lower than projections in the last Report, but close to the center of the target range.

Worsening conditions for global growth undoubtedly remain a significant variable that has slowed expenditure and activity in Chile. The US economy fell more than 1% during the third quarter of 2001, and is expected to have fallen somewhat further during the fourth quarter. The US manufacturing sector has experienced its longest decline since the crisis of the eighties, although it has been less profound. Meanwhile, the worsening labour situation is apparent in the unemployment rate, which rose during the course of the year. The outlook for other major economies is no better. The euro zone is suffering from the depressed conditions in Germany since the second quarter, while Japan shows no positive signs of recovery.

The impact of this international situation on the prices of Chile's main exports is similar to estimates prepared some months ago. The price of copper is expected to average 72 cents per pound this year, reaching 80 cents per pound in 2003. With this, for 2001, the decline in the terms of trade is estimated to have been 7%, which will turn around only slightly in 2002 and 2003. Expectations of slightly lower oil prices persist, in line with the difficulties that OPEC recently experienced in coordinating a production cut.

During 2001, the more sluggish performance of the world economy and reduced demand abroad influenced export prices above all, while volumes of non-traditional exports performed strongly. Along with revealing an important capacity for substituting destination markets for shipments, this showed that the depreciation in the real exchange rate since 1999 has improved the competitiveness of an important part of the export sector. Overall, economic growth last year reached 3.0%.

An important part of the economic slowdown during 2001 can be attributed to trends in domestic demand, which fell 0.5% over 2000. Specifically, those components most volatile and sensitive to the exchange rate, such as machinery and inventories, explain this weak performance. Partial indicators reveal that inventory buildup during the second half of 2001 was similar to that of 1999, a year that experienced a strong contraction in demand, while investment in machinery and equipment, in seasonally adjusted terms, remained at more than 4% below the level reached during the first half. This indicates that the successive worsening in the world's economic outlook throughout the year, along with turbulence in exchange markets and generalized uncertainty throughout the region led to a more cautious approach when it came to investment decisions. This should turn around in coming quarters, given the decline in uncertainty apparent at present.

The more permanent components of domestic expenditure, however, grew steadily, although modestly, throughout 2001. Private consumption rose by 3.2%, similar to GDP growth, mainly in non-durable consumer goods and those of domestic origin. This trend has been sustained thanks to a modest turnaround in employment toward mid-year, along with sustained growth in wages and stability in consumer loans, which stopped the fall that had been apparent since the beginning of 2000. Investment in construction rose thanks to favorable credit conditions, partially offsetting the weak performance of investment in machinery. The current account deficit in the balance of payments reached 1.6% of GDP, one percentage point below projections from the September report.

In coming quarters, it is likely that economic growth will strengthen thanks to domestic demand, rather than external demand, which had a noticeably positive effect last year. Private consumption is expected to rise somewhat more this year than last. Although the increase in

seasonally adjusted employment, which occurred in the middle of last year, has slowed substantially, employment in construction and manufacturing has continued to grow in recent months, revealing that productivity increases will not continue at the same pace as they have since 2000. Fiscal policy, in the framework of having achieved the structural surplus, will have a positive impact on aggregate demand in 2002. The budget assumes real growth of 4.9% in expenditure with macroeconomic impact, essentially led by public investment, which will grow 11%.

Baseline scenario assumptions

Specification	2000	2001(e)	2002(f)	2003(f)
(annual change, percent)				
Terms of trade	0.1	-7.1	2.6	3.3
Trading partners' GDP	3.3	1.0	0.9	3.1
External prices (in US\$)	2.4	-0.7	0.8	1.7
(levels)				
Copper price, LME (¢/lb)	82.0	71.6	72.0	80.0
Brent oil price (US\$/barrel)	29.0	25.0	21.0	23.0
LIBOR US\$ (nominal, 90 days, current)	6.5	3.8	2.7	5.1

(e) Estimated.

(f) Projected.

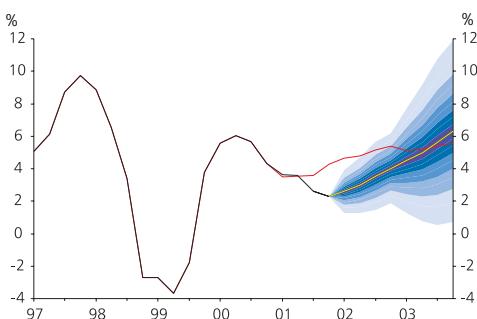
Source: Central Bank of Chile.

For 2002, average growth projections stand at 3.3%, reflecting the growth prospects of Chile's main trading partners, almost two percentage points below September estimates, but incorporating the effect of a powerful combination of expansive monetary and fiscal policy in the US. This is in line with the perceptions of most analysts, in the sense that the international recession will not last any longer than those of the past.

In 2003, also consistent with the turnaround expected in world economic activity, domestic growth should reach 5.3%. As usual, these projections are based on the methodological assumption that the monetary policy rate will remain constant at 6.0%. In this same sense, the working assumption used for the exchange rate assumes nominal depreciation of around 2% over the projection horizon, with regard to the average exchange rate observed during December. In this environment, domestic expenditure is projected to rise by an annual average of 4.8% in 2002-2003, while the current account deficit will reach 1% of GDP, the result of improved terms of trade and a substantial reduction compared to September in the financial services account, the product of lower international interest rates. Although global conditions are expected to be more conducive to sustained economic growth, it is impossible to foresee a reversion in capital flows of the magnitude seen in the mid-nineties.

Aside from these growth prospects, the more stable exchange rate expected for coming quarters brings with it less inflationary pressure. CPI and CPIX inflation should reach 3.0% and 3.5% respectively, in late 2002, and 3.0% (CPI) and 2.6% (CPIX) toward the end of 2003. These controlled inflation levels can be explained in part by the 3.3% growth projected for 2002, which means that difficulties in decompressing margins via final price increases will persist. Margins, moreover, have been accommodated by prospects of a more appreciated (over November) exchange rate and substitution by locally produced consumer goods or lower priced imported goods.

Quarterly GDP growth scenarios (1)
(percentage change over the same quarter
of the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future economic growth, under the assumption that the monetary policy rate remains constant at a nominal 6.0% for the next two years. The red line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

Economic growth and the current account 1997-2003

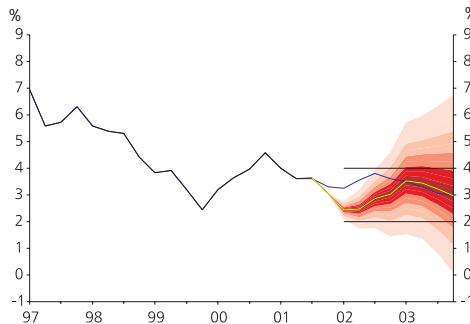
Specification	1997	1998	1999	2000	2001(e)	2002(f)	2003(f)
(annual change, percent)							
GDP	7.4	3.9	-1.1	5.4	3.0	3.3	5.3
National income	7.6	0.5	-4.1	3.1	-0.3	6.5	6.3
Domestic demand	9.1	3.9	-10.0	6.6	-0.5	4.1	5.6
Goods and services exports	9.4	5.9	6.9	7.5	7.1	4.2	7.3
Goods and services imports	12.9	5.4	-14.3	10.1	-0.9	6.7	8.6
Current account (percentage of GDP)	-5.0	-5.7	-0.1	-1.4	-1.6	-1.0	-1.0
(US\$ million)							
CURRENT ACCOUNT	-3,728	-4,144	-78	-990	-1,025	-675	-675
Balance of trade	-1,557	-2,517	1,664	1,440	1,550	1,500	2,050
Exports	16,663	14,830	15,616	18,160	17,450	18,300	21,025
Imports	-18,220	-17,346	-13,951	-16,720	-15,900	-16,800	-18,975
Non-financial services	48	-115	-315	-560	-375	-325	-325
Financial services	-2,738	-1,975	-1,881	-2,400	-2,675	-2,425	-3,000
Unilateral transfers	519	463	453	540	475	575	600

(e) Estimate.

(f) Projection.

Source: Central Bank of Chile.

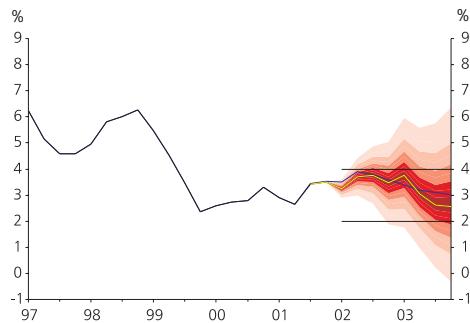
Inflation (CPI) projection (1) (percentage change over the same quarter of the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future inflation, under the assumption that the monetary policy rate remains constant at a nominal 6.0% for the next two years. The blue line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

Underlying (CPIX) inflation projection (1) (percentage change over the same quarter of the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future inflation, under the assumption that the monetary policy rate remains constant at a nominal 6.0% for the next two years. The blue line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

Inflation (1) (annual change, percent)

Specification	2000	2001(e)	2002(f)	2003(f)
Average CPI inflation		3.8	3.6	2.7
December CPI inflation		4.5	2.6	3.0
Average CPIX inflation		2.9	3.1	3.5
December CPIX inflation		3.5	3.2	3.5

(1) Quarterly averages.

(e) Estimate

(f) Projection.

Source: Central Bank of Chile.

Unlike the last Report, these projections suggest higher CPIX than CPI inflation this year, lower in 2003. This reflects fuel price projections that are lower than those forecast some time ago, although in any case a gradual recovery is expected over the next two years. Initially, after the September attacks, markets saw the collapse of the oil price as a temporary phenomenon. However, to the degree that the depressed scenario for world activity consolidated and OPEC suffered problems in coordinating production cuts, the projection for 2002 has fallen to US\$21 per barrel. This change should affect annual inflation in 2002 by somewhat less than half a percentage point, on average. While annual CPI inflation remains at around 3.0% over the projection horizon, CPIX inflation should be higher than this in 2002, and then fall to around 2.5% toward the end of 2003. Private sector inflation expectations also show a reduction with regard to a couple of months ago.

The projections in this Report have been constructed on the basis of the events that the Board considers to be most probable. Although less intense than a few months ago, some degree of uncertainty remains. In the external sphere, today the world's three main economies are suffering from recession. In any case, apart from Japan, it is hoped that the combination of expansive fiscal and monetary policies, above all in the US, will be able to open the way to a recovery in growth and expenditure in the course of this year, avoiding, furthermore, a collapse in confidence and asset markets. In this situation, the Central Bank estimates that the risks for world activity are more balanced today than they were some months ago. The chance of a sudden recovery in the US economy should be weighed against doubts about the speed of recovery in the main European economies, along with conditions of ongoing uncertainty in Japan. Similarly, with regard to the baseline scenario, risks for the terms of trade are also considered to be balanced.

Argentina's financial situation deteriorated much more than could have been expected some months ago. In any case, financial contagion in the exchange market seems to have weakened significantly, which could be attributed to a series of internal factors in the region's other economies. In the case of Chile, the solidity of its fiscal accounts stands out, along with the end to the process of exchange rate hedging, the impact of capital market reforms, and the floating exchange rate regime. Although some degree of uncertainty persists domestically, the Board estimates that the slowdown in expenditure during 2001 essentially responded to the turbulence in financial markets, so there should be a turnaround in the accumulation of inventories during the first half of this year, along with stronger investment in machinery. This, in any case, is based on the assumption that conditions in the labour market will favor higher employment, thus sustaining household confidence over time, permitting growth in private consumption and real estate investment in the coming years over figures for 2001.

More pessimistic alternative scenarios are associated with a more severe deterioration in the labour market, which would affect consumer expectations and delay the process of inventory restocking, or with an international situation in which growth in external demand deteriorates beyond forecasts. More optimistic scenarios are associated with a recovery in investment in inventories and a rapid recovery of the world's main economies. Altogether, these elements lead to a balanced estimation of risks to activity. Alternative higher growth scenarios appear as likely as lower growth scenarios.

With regard to inflation, beyond the impact of conditions in goods and factor markets and the performance of the real exchange rate, the oil price is an important source of uncertainty. It is possible that OPEC could consolidate its control over the crude oil market, but the opposite situation could also occur, with a price that remains persistently under US\$21 per barrel. Either scenario is probably closely tied to the performance of the world economy. As a result, the evaluation of risks to CPI inflation seems balanced.

Nonetheless, the Central Bank will remain alert to any sign that one of these alternative scenarios is actually taking place, in order to apply monetary policy with all the flexibility necessary to avoid compromising its inflation target. The Board will pay special attention in the coming months to how quickly domestic expenditure and employment rise, along with developments in the world economy, particularly growth in the United States and financial conditions affecting other emerging economies.

REPORT SUMMARY BOX: MONEY, INFLATION, AND DEPRECIATION

Since money began showing two-digit rates of annual change, the relationship between money and inflation has once again become an important topic of public debate. In fact, some analysts argue that nominal exchange rate depreciation in 2001 reflected a supposedly excessive increase in money. This box shows that in the long term there should be a relationship between the most liquid monetary aggregates, nominal income, price levels and the exchange rate, and in fact the data supports this. This relationship, however, is not indicative of a causal relationship. This is particularly important given the monetary and exchange rate approach in effect today in Chile, in which the inflation target establishes the economy's nominal anchor, there is a floating exchange rate, and the operating target of the Central Bank is the interest rate and no particular monetary aggregate.

The quantity equation

The basis for understanding the relationship between money and prices is quantity theory. This starts from an identity that relates a flow variable, nominal income ($P \times Y$, where P is the price level and Y is income, or real GDP), with the product of a stock variable, the quantity of money (M), and the number of times that this circulates within the economy or money's speed of circulation:

$$(1) M \times V \equiv P \times Y$$

Then, expressing this identity as a percentage (where Δx denotes the percentage change in x) one obtains the relationship between nominal money growth and inflation, economic growth and fluctuations in the speed of circulation, using:

$$(2) \Delta m + \Delta v \equiv \Delta p + \Delta y$$

Because the quantity equation represents an identity, it is no surprise that the data reveals a relationship between inflation and money growth, to the degree that changes in the speed of money circulation and income are controlled. Now, deducing the causal relationship between these variables requires specifying the economy's nominal anchor.

In the long term, economic growth depends on the accumulation of factors, such as technological change, long-term policies and institutional elements, as well as macroeconomic stability and low inflation. Short-term movements in monetary policy, however, do not affect potential growth and, as a result, in a first approach growth can be considered exogenous and constant. The speed of circulation, which traditionally was thought to depend on the nominal interest rate, can be approximated for the long term using a constant or a gentle trend that incorporates the effects of financial innovation.

Now, if monetary policy is established by setting a target for growth of aggregates, then the nominal anchor is provided by money growth minus changes in velocity, so inflation is determined as the difference between money growth and economic growth. If, on the contrary, the nominal anchor of the economy is given by the existence of a credible inflation target, then money growth is the result of the sum of the inflation target, trend growth in activity, and changes in velocity.

Thus, it is apparent that a single identity, the quantity equation, can provide two opposite results, depending on the nature of the nominal anchor. Either

inflation is the result of a nominal anchor based on monetary aggregates or growth of aggregates is determined based on the existence of a nominal anchor founded on a credible inflation target.

The exchange rate and inflation

The traditional definition of the real exchange rate, Q , is given by the ratio between external price levels measured in pesos and domestic prices.

$$(3) \quad Q \equiv \frac{E \times P^*}{P}$$

where E is the nominal exchange rate.

In terms of percentage changes, this relationship is written as:

$$(4) \quad \Delta q \equiv \Delta e + \Delta p^* - \Delta p$$

As with the quantity equation, a relationship between nominal depreciation and inflation can be inferred from this definition of the real exchange rate. In the very long term, assuming that the inflation expressed in international currency converges among countries, one reaches the traditional formulation from purchasing power parity theory, according to which price increases are transmitted one by one to inflation. Thus, quantity and purchasing power parity theory leads to a direct relationship between monetary aggregates and the exchange rate. Fluctuations in the real exchange rate, however, especially in a small open economy like Chile's, have been large enough in recent decades so that the only time during which a relationship can be detected is when inflation was at its highest and monetary aggregates also adjusted to this situation. Thus, in the long term a relationship between money and the exchange rate can be observed, but more recently, with inflation more stable, this relationship is very weak.

This is to be expected given that in the long term the real exchange rate depends on the other fundamental variables within the economy, such as productivity growth and the degree of openness to trade. As a result, it can be assumed that the conduction of monetary policy is exogenous. Moreover, the choice of an exchange rate regime particularly affects the causal relationship between money growth and depreciation. For example, where there is a credible fixed exchange rate, domestic inflation should be equal to the sum of external inflation and real exchange rate appreciation. The opposite case occurs with a floating exchange rate regime, where the nominal anchor of the economy is the inflation target and depreciation of the nominal exchange rate is equal to depreciation in the real exchange rate plus the differential between domestic and foreign inflation.

The monetary policy and exchange rate regime in Chile

What are the implications of this simple analysis? Within the monetary policy approach in effect in Chile today, in the long term both money and the nominal exchange rate depend on economic fundamentals, such as trends in the real exchange rate and potential growth, as well as the inflation target. Thus, from the casual observation of money movements, one cannot directly infer the effect on inflation or the exchange rate, without controlling for changes in fundamental variables or questioning the credibility of the inflation target. These relationships reveal, moreover, that the more the nominal exchange rate varies, because factors affecting the real exchange rate and monetary policy are based on an inflation commitment, the weaker the impact of exchange rate depreciation on inflation.

It is not the objective of this box to discuss the choice of the nominal anchor, but most countries have chosen as their policy rule an inflation target and

management of monetary policy based on interest rates. In effect, the main challenge facing strict control of some monetary aggregate is choosing the aggregate most closely tied to inflation, which is not an easy choice.¹ Similarly, the difficulties in controlling monetary magnitudes, due to the fact that financial innovation and portfolio changes lead to enormous volatility and lack of predictability of demand for money in the short term, are well known.

¹ Rojas, Patricio: "*El dinero como un objetivo intermedio de política monetaria en Chile, un análisis empírico*," (Money as an intermediate objective in monetary policy in Chile), Cuadernos de Economía N°90, PUC (August 1993).

This chapter examines recent developments and prospects for the world's economy over the next two years, outlining the external scenario most likely to face the Chilean economy. It analyzes recent trends in world economic activity, international inflation, terms of trade, and international financial conditions that will affect Chile.

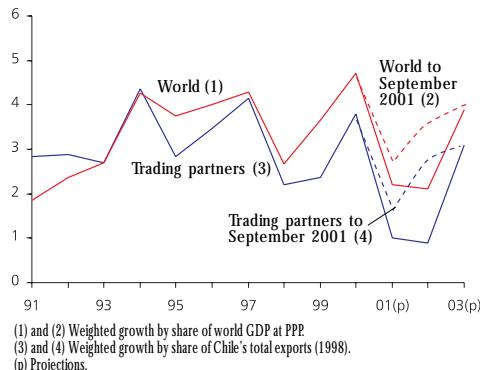
The prospects for world economic activity in 2002 indicate low growth. Japan's already prolonged stagnation and deceleration in the United States, deeper than originally forecast, will combine with the economic effects of the terrorist attacks on New York and Washington last September. Although these elements have worsened the already poor prospects for economic growth for other economies around the world, the recessive conditions in the US are not expected to become significantly grave. In any case, as a result of the simultaneous slowdown of major economies, most commodity prices have fallen. Among those that have fallen particularly hard are oil and copper, which in net terms has led to a further deterioration in the terms of trade. In the financial sphere, the outlook for capital flows has been negatively affected in recent months. A more complex world scenario and the resolution of the critical conditions in Argentina will be decisive. Nonetheless, there are clear signs that investors have differentiated between Chile and Argentina. This is reflected in the fact that Chile's sovereign spread has dropped in recent months and both its level and its volatility show a clear tendency to continue to fall.

World growth

The projection for the average growth of Chile's main trading partners based on Consensus Forecast figures and corrected using estimates from a sample of investment banks is 1.0% for 2001, 0.6 percentage points lower than forecast in September. This is the result of downward corrections to growth projections for most of the world's economies, particularly the US, Japan, and the euro zone, which are experiencing recessive conditions. Projected world growth for 2001, measured at purchasing power parity (PPP),¹ is 2.2%, lower than the 2.7% estimated in the previous report. In 2002, the outlook is much darker than foreseen some months ago, with the expected recovery in the world's economies being delayed until 2003. In fact, the slowdown in the US, deepened by events last September, and its impact on other economies worldwide have led to a severe correction in growth projections for 2002. World economic activity is expected to grow similarly to 2001, 0.9% for Chile's main trading partners, almost two percentage points less than forecast last September. Meanwhile, world growth measured in PPP will reach 2.1%, down from the 3.6% estimated in the previous report. These projections assume some recovery in both the US and the euro zone, starting in the third quarter of this year. Thus, for 2003 world growth should approach 3.1%, weighted for Chile's main trading partners, and 3.9% weighted by PPP (Figure I.1 and Table I.1).

¹ World growth weighted by purchasing power parity (PPP) exceeds the weighted figure for Chile's main trading partners, because of the difference in Asia's share. This is because China, with high growth rates, accounts for a much larger share of world GDP at PPP than it does within Chile's exports. Meanwhile, Japan's share of Chilean exports is almost double its share of world GDP at PPP, and its economy is growing substantially less.

Figure I.1
World growth
(percent)



(1) and (2) Weighted growth by share of world GDP at PPP.
 (3) and (4) Weighted growth by share of Chile's total exports (1998).
 (p) Projections.

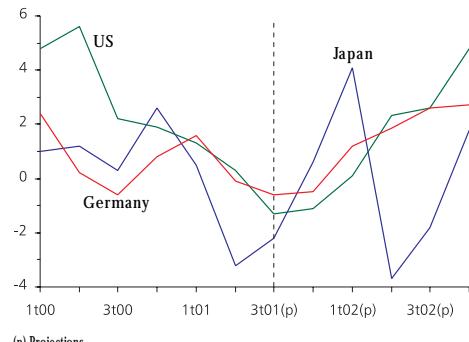
Sources:
 Consensus Forecasts Global Outlook: 2000-2010 (October 2001).
 Consensus Forecasts (December 2001), corrected using projections from a sample of investment banks.
 International Monetary Fund, World Economic Outlook (December 2001).
 Central Bank of Chile.

Figure I.2
Stock price indices



Source: Bloomberg.

Figure I.3
Annualized quarterly GDP
(percent)



(p) Projections.

Sources:
 Consensus Forecasts Global Outlook: 2000-2010 (October 2001).
 Consensus Forecasts (December 2001), corrected using projections from a sample of investment banks.
 International Monetary Fund, World Economic Outlook (December 2001).
 Central Bank of Chile.

Table I.1
World growth
(percent)

	Average 1990-1999	2000 (e)	2001 (p)	2002 (p)	2003 (p)
World (1)	3.3	4.7	2.2	2.1	3.9
United States	3.0	4.1	1.0	0.7	3.6
Europe	2.0	3.3	1.7	1.1	2.6
Japan	1.7	2.3	-0.3	-1.6	0.8
Rest of Asia (2)	7.9	7.4	5.0	5.6	6.5
Latin America (3)	2.8	4.1	0.5	0.9	3.5
Trading Partners (4)	3.0	3.8	1.0	0.9	3.1

(1) Weighted regional growth by share of world GDP at PPP. Countries included represent 85% of world GDP (1999).

(2) China, Indonesia, Malaysia, Thailand, Singapore, Korea, Philippines, Taiwan and Hong Kong.

(3) Brazil, Argentina, Mexico, Colombia, Uruguay, Venezuela, Ecuador, Paraguay, Bolivia and Peru.

(4) Growth of Chile's main trading partners weighted by share of total exports (1998). Countries included account for 94% of total exports.

(e) Estimates.

(p) Projections.

Sources:

Consensus Forecasts Global Outlook: 2000-2010 (October 2001).

Consensus Forecasts (December 2001), corrected using projections from a sample of investment banks.

International Monetary Fund, World Economic Outlook (December 2001).

Central Bank of Chile.

The attacks experienced by the US economy last September, with all their direct and indirect effects, led to a harsher look at growth projections. In effect, from then on, analysts recognized that the slowdown that began in early 2001 was more severe than originally thought and, moreover, these events had magnified its effects. Figures for the US labor market showed a drastic fall in employment, which directly affects private consumption, a variable that had grown steadily during the first part of 2001. The Federal Reserve, however, took determined actions, cutting the policy rate four times (by a total of 175 basis points). This, along with more expansive fiscal policy, due to tax reductions approved during the first half of 2001 along with packages approved after 11 September, together constituted important contributions to the economy. It should be noted that the aggressive reaction of monetary policy prevented the collapse of stock markets, which by November had recovered to levels higher than prior to the attacks. Overall, most projections agree that this recession will not be lengthy and that toward the end of the second quarter of 2002, there should be some positive signs in US economic growth indicators. In fact, more positive signals are already coming from the manufacturing sector and consumer confidence. Thus, after growing just 1% in 2001, the economy will grow a slim 0.7% in 2002, then speed up to reach trend levels (3.6%) in 2003, according to generally agreed upon projections (Figures I.2 and I.3).

The prospects for the Japanese economy look more somber, assuming negative growth in 2001 and an even larger decline in 2002. This discouraging scenario is based on weak domestic demand, which has not only failed to show signs of recovery, but has continued to fall, basically due to private investment and high unemployment. The decline in the external sector, affected by new growth projections for the US, has also contributed. Overall, output is expected to drop to 0.3% in 2001 and 1.6% in 2002. Only toward 2003, and to the degree that the US economy starts to recover could Japan show growth of some 0.8%.

Growth projections for the United States and Japan have a significant impact on Asia's emerging economies, which as a group send over 20% of their exports to the US and almost 15% to Japan, along with significant trade within the region. Because of this, these economies are projected to grow 5% in 2001 and 5.6% in 2002. It should be noted that this last figure is one percentage point lower than forecast in the September

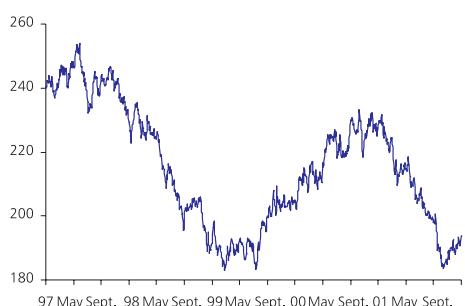
report. Toward 2003, regional growth rates should recover to over 6%. Excluding China, regional growth falls to 1.2% for 2001, 3% for 2002, and 4.6% in 2003.

Europe will not remain immune to downward corrections to economic growth, mainly due to the sharp slowdown in Germany, the main economy within the euro zone. Nonetheless, it will continue to enjoy the highest growth, in 2001 and 2002, within the developed world. As with other economies, growth projections, mainly those for 2002, have been corrected downward, based on sluggish domestic demand in some countries, accentuated by worsening labor conditions and the poor external scenario. The fact that inflation is dropping, however, thanks to falling fuel prices and currency appreciation in recent months, has allowed monetary authorities to cut back the policy rate on two occasions, for a total reduction of 100 basis points. Growth projections for 2001 hover around 1.7%, 1.1% for 2002, then rising to 2.6% in 2003.

Latin America, for its part, has also suffered a significant decline in its growth projections, given corrections to developed economies. Moreover, local factors have also played an important role, particularly Argentina, where enormous economic and financial instability led to default. Fiscal belt-tightening, to achieve a zero deficit, and restrictions on deposit and cash withdrawals continue to be strongly contractionary ingredients. Pressure on the Brazilian real in 2001 led the Central Bank of Brazil to boost interest rates to 19%, which remain in effect to date. Mexico, given its close trading ties with the US economy will see growth fall to 0.3% in 2001, then grow 1.2% in 2002. This figure, while it does represent some recovery, also reveals a significant cutback compared to the 4% expected in the previous report. Thus, estimates indicate that growth in Latin America measured at PPP should reach just 0.5% in 2001, 0.7 percentage points less than forecast in September and 3.5 percentage points less than it grew in 2000. For this year, the scenario is not very promising either, with growth estimated at 0.9%, which, while it does indicate some recovery over the previous years, remains two percentage points lower than forecast some months ago (Table I.1).

Chile's main trading partners are expected to grow 1% on average in 2001 and 0.9% in 2002. This represents a reduction of 0.6 and 1.9 percentage points, respectively, compared to last September's forecasts. Recovery will probably be delayed until 2003, with growth rising to around 3%.

Figure I.4
Commodity price index (1)
(1967=100)



(1) Daily index of futures prices prepared by the Commodity Research Bureau.

Source: Bloomberg.

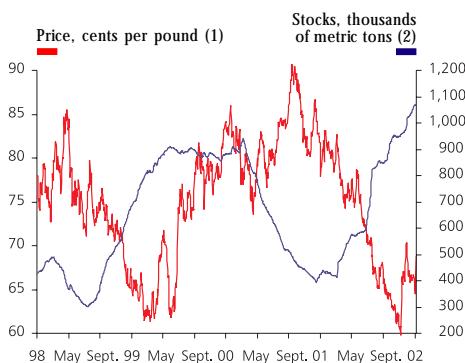
Commodity prices and terms of trade

The more depressed scenario for world economic activity has brought with it an additional decline in commodity prices. Indeed, the CRB commodity price index² at present stands at 4% less than it did when the previous Report closed, and 17% lower than it did in December 2000 (Figure I.4). Chile's export prices have been affected by this trend.

In recent months, the world copper market responded to declining expectations for world growth, with inventories on exchanges rising and the price falling to as little as 60 cents per pound in early November. From then on, the trend seems to have turned around, thanks to

² Commodity Research Bureau.

Figure I.5
Copper market



(1) Daily prices on the London Metal Exchange.

(2) Daily stocks on the London Metal Exchange and New York.

Source: Bloomberg.

perceptions that the world's economy will recover somewhat starting in the second half of 2002 and announcements that production would be cut by some 500,000 metric tons (including Codelco). By year's end the spot price had reached levels similar to those of August, that is 66 cents per pound, ending the year with an average price of 72 cents per pound. Conditions on the world copper market, just described, lead to price projections of 72 cents/pound in 2002, 80 cents per pound in 2003 (Figure I.5 and Table I.2).

Table I.2
Copper price projections
(cents per pound, London Metal Exchange, average)

	2000 (ef)	2001(ef)	2002(p)	2003(p)
Central Bank	82.3	72.2	72.0	80.0
Cochilco	-	-	70-74	-
Goldman Sachs	-	-	63.5	-
Economist Intelligence Unit	-	-	60.8	71.8
JP Morgan	-	-	74.0	85.0
Futures (1)	-	-	70.2	72.5

(1) Average over the 30 days prior to 8 January 2002.

(ef) Actual figures.

(p) Projections.

Sources:

Bloomberg.

Corporación Chilena del Cobre.

Goldman Sachs, The International Economics Analyst (November/December 2001).

JP Morgan, Global Metals & Mining Weekly (December 2001).

Economist Intelligence Unit, Global Outlook (December 2001).

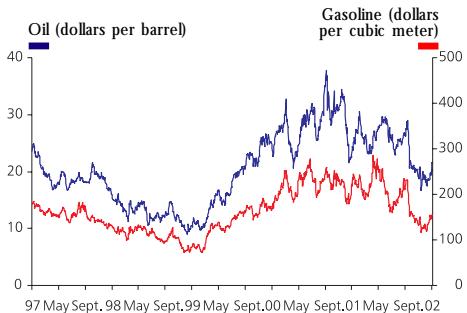
Central Bank of Chile.

Other export commodity prices have stabilized after falling significantly, mainly due to supply factors. Wood pulp prices showed some signs of recovery in October. This was influenced by signs of a declining surplus in this market, precisely at a time when the high demand period was starting up in the northern hemisphere. In this sense, rationalization of capacity, which was the result of this product's significant price decline, has been crucial. Nonetheless, future prices suggest that pulp prices could fall, turning around slightly toward year's end depending on recovery in demand. In the case of fishmeal, prices continued to rise during 2001, due mainly to a 15% drop in world production. Prospects, however, are not very promising, given the poor performance of Japan's economy (the main export destination for this product); trade restrictions imposed by the European Monetary Union; and lower volumes of anchovy catches.

The average copper price is estimated to reach 70 cents/pound in 2002 and 80 cents/pound in 2003.

The oil price averaged US\$25 per barrel in 2001, within the average value of the band established by OPEC, which attempted to achieve three reductions in production quotas as defined by the cartel last year. A more depressed international panorama, however, overproduction by some OPEC members, as well as the lack of agreement with other countries has resulted in a drop in the crude oil price. This is below the band floor, set at US\$22 per barrel, for the first time since this mechanism was established. Since late September 2001, the oil price has hovered around US\$19 per barrel. Since OPEC announced a 1.5 million barrel per day production cutback at its last meeting, to become effective on 1 January 2002, and the main non-OPEC members agreed on cutting down by slightly more than 462,000 barrels per day, the price has risen to just over US\$20 per barrel. Although non-cartel countries have contributed by cutting production, the market questions the effectiveness of the

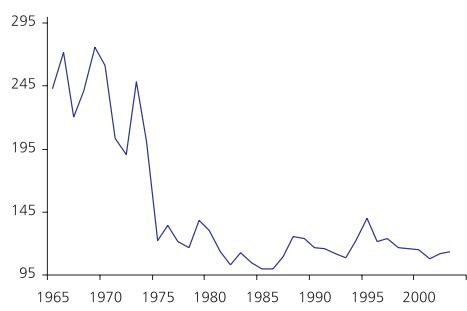
Figure I.6
Oil and gasoline prices (1)



(1) Daily Brent oil prices and 87 octane gasoline.

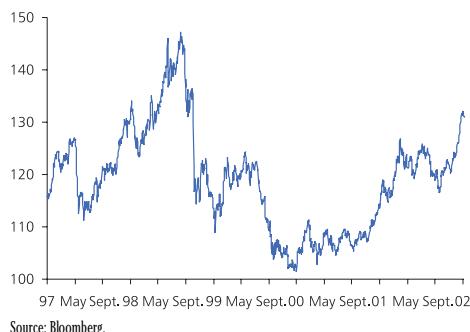
Source: Bloomberg.

Figure I.7
Terms of trade
(base 1990=100)



Source: Central Bank of Chile.

Figure I.8
Yen/US\$ exchange rate



Source: Bloomberg.

threatened cutback. In this context, the projection for the price in 2002 has been reduced compared to September's forecast, to US\$21 per barrel. Toward 2003, the price is expected to reach around US\$23 per barrel, slightly above the target level sought by the oil cartel and in line with the expected recovery in world demand (Figure I.6 and Table I.3).

Table I.3
Brent oil price projections
(dollars per barrel, average)

	2000 (ef)	2001(ef)	2002(p)	2003(p)
Central Bank	28.3	25.0	21.0	23.0
JP Morgan	-	-	24.6	23.5
Goldman Sachs	-	-	19.6	-
Economist Intelligence Unit	-	-	18.3	20.5
Futures (1)	-	-	19.6	20.1

(1) Average over the 30 days prior to 8 January 2002.

(ef) Actual figures.

(p) Projections.

Sources:

Bloomberg.

JP Morgan, Global Metals & Mining Weekly (December 2001).

Goldman Sachs, The International Economics Analyst (November/December 2001).

Economist Intelligence Unit, Global Outlook (December 2001).

Central Bank of Chile.

The baseline scenario assumes an average oil price of US\$21 per barrel in 2002 and US\$23 per barrel in 2003.

Overall, for 2001 the terms of trade are estimated to have fallen by about 7%, a trend that should turn around partially this year and next.

International inflation

In 2001 world inflation remained similar to that of the previous year, in line with expectations from the previous report. This occurred because the upward trend registered during the first part of the year, due to gasoline prices moving higher than inflation in the main developed economies (except Japan) and euro depreciation, was offset by a clear downward trend in fuel prices during the second half of the year. Reduced domestic demand in most economies, along with oil price trends, played a decisive role in the drop in inflation during the second half. In the case of Europe, currency appreciation and the stability that followed also contributed to the decline in inflation between August to October and the stability that followed. For 2002, as the result of the international conditions described here, in terms of economic activity and the oil price, inflation should move downward compared to 2001.

Thus, inflation in the United States in 2001 is thought to have averaged 2.9%, which should fall to 1.7%, then rise to around 2.5% in 2003. In Europe, meanwhile, inflation last year averaged 2.6% and is expected to fall to a figure similar to the United States in 2002 and 2% in 2003. In Japan, despite Central Bank efforts deflation became more acute in 2001 (-0.7%), and the outlook for prices is expected to remain deflationary over the next two years.

Because during 2001 adjustments to US growth prospects did not lead to a weaker dollar, dollar deflation has remained in line with forecasts from last September. For the future, expectations remain that the euro will recover gradually, so, with less inflation affecting local currencies, dollar inflation will rise by 1 – 1.5% per year, on average, in 2002 and 2003 (Figures I.8 and I.9 and Table I.4).

Figure I.9
US\$/euro exchange rate (1)



(1) Through 31 December 1998, figures are for the US\$/ecu.

Source: Bloomberg.

Table I.4
World inflation
(percent)

	Average 1990-1999	2000 (p)	2001 (p)	2002 (p)	2003 (p)
(Average monthly change in local currency)					
United States	3.0	3.4	2.9	1.7	2.5
Europe	3.2	2.3	2.6	1.8	2.0
Japan	1.2	-0.7	-0.7	-0.9	-0.6
Rest of Asia (1)	7.6	1.1	2.3	2.3	3.2
Latin America (2)	380.7	8.2	6.1	5.6	5.0

(1) China, Indonesia, Malaysia, Thailand, Singapore, Korea, Philippines, Taiwan and Hong Kong.

(2) Brazil, Argentina, Mexico, Colombia, Uruguay, Venezuela, Ecuador, Paraguay, Bolivia and Peru.

(e) Estimates.

(f) Projections.

Sources: Consensus Forecasts (December 2001), corrected using projections from a sample of investment banks.

International Monetary Fund, World Economic Outlook (December 2001).

Central Bank of Chile.

International financial markets

In recent months, markets have had to adjust to changes in the economic conditions prevailing in the main industrialized countries. The attacks in the United States, in mid-September of last year, undoubtedly influenced this process.

On one hand, the Federal Reserve Bank of the United States continued to aggressively slash policy rates, going from 3.5% in late August to the 1.75% in effect today. Although the recessive scenario could not be avoided, authorities have sought to limit its size and duration and the market at least believes they have achieved this, judging from the fact that it is treating current rates as a floor. To the degree that economic recovery becomes reality in coming quarters, we can expect interest rates to rise during the second half of the year.

In the euro zone, the European Central Bank (ECB) has cut its policy rate less aggressively to reach the 3.25% in effect today. The monetary authorities' stance is based on favorable price conditions and encouraging signals for economic activity according to current indicators. The market expects new cuts, which would put the policy rate at somewhere between 2.75% and 3.0% during the first quarter of 2002. Toward the second half, the rate is expected to rise gradually, to the degree that domestic and external activity actually recover.

In the case of Japan, there have been no significant changes in terms of monetary policy, given that the authorities have maintained their zero rate regime, placing their hopes for reactivating the economy more on the long term, based on long-awaited reforms that are widely anticipated by domestic and external agents.

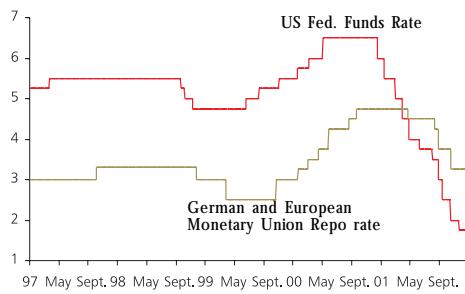
In terms of longer-term bond performance, the yield on the US 10-year bond fell as low as 4.5% as a result of downward corrections to growth after the September attacks. Since then and to the degree that the market projects a recovery in the economy toward the second half of 2002, the rate has risen to somewhat more than 5%. Moreover, the fiscal development plan set up by the government to counteract the negative effects of the terrorist attacks may have contributed to the recovery in ten-year bond rates. It is also important to note that the long-term segment of the yield curve in the United States has been affected by a Treasury policy of repurchasing 30-year securities. This has set a ceiling

Figure I.10
10-Year government bond yields
(percent)



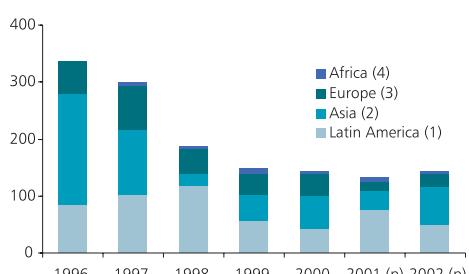
Source: Bloomberg.

Figure I.11
Monetary policy interest rates
(percent)



Source: Bloomberg.

Figure I.12
Net capital flows to emerging economies
(US\$ billion)



(1) Argentina, Brazil, Mexico, Colombia, Ecuador, Peru, Venezuela and Chile.
(2) China, India, Indonesia, South Korea, Malaysia, Philippines, Taiwan and Thailand.
(3) Russia, Poland, Hungary, Czech Republic, Slovak Republic, Bulgaria and Turkey.
(4) Morocco, Nigeria and South Africa.
(p) Projections.

Source: JP Morgan Chase, Global Economic Forecast (13 November 2001).

on mortgage rates, in an effort to keep the real estate sector rolling. Finally, long-term rates based on the forward curve reveal that the market expects long-term yields to recover slowly to reach 6.0% toward the end of 2003 (Figure I.10).

Euro-denominated bonds have performed similarly: after falling in September and October due to the economic activity and price factors mentioned above, their yields improved in late 2001. Thus, the market has modified its expectations about the nominal long-term rate, assuming a scenario with little inflationary pressure and some mild recovery in expectations for growth, motivated by the actions of the Central Bank. This has partially validated the interest rate cuts that the market expects.

Finally, yen-denominated bonds have not moved significantly in recent months, given the slow decision-making and implementation processes of the early stages of the reforms necessary to shake off the stagnation affecting Japan's economy (Figure I.11).

The market expects no further interest rate cuts from the Fed, but does expect some additional monetary belt loosening on the part of the European Central Bank.

Emerging financial markets

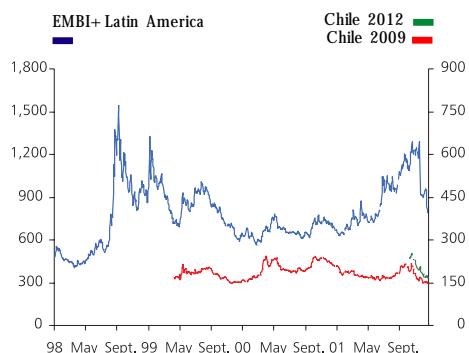
Net capital flows into emerging markets fell in 2001. Nonetheless, prospects for Latin America held steady from September through to the end of 2001, given that events in Argentina had already been incorporated into agents' decisions. For 2002, projections for capital flows into emerging economies should remain similar to 2001. This is consistent with changing asset prices for the main industrialized economies, which limit the availability of investment funds. Moreover, emerging economies are expected to show less demand for capital, given low growth expectations for 2002 (Figure I.12).

At the same time, the emerging debt market denominated in foreign currency has performed unevenly in recent months. Initially, the increased perception of international risk touched off by September's events in the US and the start of the war against terrorism generated an upward movement that affected not only sovereign spreads for all emerging economies, but also those for US firms with an A- rating. This turbulence has gradually settled and spreads have started to reflect risk conditions for each economy.

Argentina's sovereign spread has hit historic highs, reflecting the complex political, economic and social scenario that country faces. While the Argentine crisis seems reasonably isolated, it is important to mention the measures adopted by its economic authorities in recent months and possible scenarios that could arise from them, given the importance of this economy to the region and evidence of contagion apparent in previous periods.

After an announcement to this effect in mid-2001, the Argentine executive attempted to reduce the fiscal deficit to zero with little success; it started a debt swap process in early November, which markets undoubtedly interpreted as default in disguise. In its first stage this involved local investors and resulted in the swap of US\$50 billion of general and provincial public debt, for a US\$6 billion reduction in

Figure I.13
Sovereign spreads
(basis points)



Sources: JP Morgan Chase, Merrill Lynch.

interest and amortizations during 2002. In late November, the Central Bank set a ceiling on deposit interest rates, producing scarce liquidity and a deposit flight, and it then half-froze and dollarized deposits and loans, along with restricting capital flows out of the country. Despite all these efforts, the authorities were unable to restore market confidence or with the IMF, which did not make the payment due in December. Explosive social conditions and political turbulence led Minister Cavallo and President De la Rúa to resign, leaving the presidency in the hands of opposition leaders. By early January, the new, national unity government with Duhalde as President confirmed the default on the debt and announced a peso devaluation.

While turbulence in Argentina generated some signs of contagion in neighboring economies, these later faded (Figure I.13). Brazil has managed to remain untouched by Argentine risk, with its sovereign spread dropping; a currency that has appreciated strongly (by a nominal 15% in the last two months of 2001); and stock indicators on the rise toward the end of 2001.

In Chile's case, these signs of differentiation, mainly in terms of sovereign spread, were already apparent when the previous Report was prepared, and continued to deepen in the following months, along with an appreciation of the exchange rate (Box I.1). One factor reflecting Chile's favorable access to international financial markets was its successful placement of a sovereign bond worth US\$650 million last October. Despite the climate of uncertainty, demand practically doubled the amount on offer.

Toward the end of 2001, sovereign premiums for emerging economies showed clear signs of differentiation with regard to the situation in Argentina.

Sources of risk

The external baseline scenario forecast some months ago has been corrected for lower than expected growth in the US economy. Currently, the sources of risk from this factor are considered to be significantly limited, considering the combination of active monetary and fiscal policy, along with corrections already made to growth prospects. In fact, there is some possibility that growth may be higher than expected (Box I.2).

While the risk scenario for Argentina has become more acute, observers are still waiting to see how effective the policies implemented to move out of the critical economic conditions in that country will be, so this remains an active source of risk. Nonetheless, signs that the region's main economies, including Chile, have successfully isolated themselves from contagion have limited the negative effects from this source of instability in terms of both magnitude and duration.

BOX I.1: ARGENTINA AND CONTAGION TO EMERGING ECONOMIES

In the past two years, financial markets have watched the constant deterioration in the Argentine economy with concern, fearing that this crisis could spread to other countries, as occurred during the Mexican crisis (1994), the Asian crisis (1997) and the Russian crisis (1998). Despite the expectations of many analysts, country risk indicators for the region's main economies have held steady and in some cases tended to fall, despite the fact that Argentina recently defaulted on its foreign debt and the political and social upheaval there. This could be treated as a sign suggesting that the rest of Latin America's economies have successfully dissociated themselves from events in Argentina, and indicating that widespread contagion is less likely.

Spreads for the main latin american economies

One of the most important country risk indicators is the sovereign spread (measured using the EMBI+ index), so dissociation can be analyzed by comparing this indicator's performance in recent years. To make this easier, we have divided the March 2000 – December 2001 period into four sub-periods, characterized by frequent changes in the spreads for Argentine bonds and peaks that had never been seen before.³

Compared to March 2000, in late 2001 Argentina's spread soared above 5000 basis points, an increase ten times higher than those observed at the beginning of our sample (Table I.5). During the same period, the spread for other economies in this region experienced no major changes: Chile's fell by 18 basis points, Mexico's by eight basis points. Although Brazil's rose 35%, this was much lower than the increase in Argentina's spread. This indicates that despite the fact that the perception of Argentine risk rose explosively, other countries were able to maintain some degree of dissociation.

Table I.5
Spreads
(basis points)

	Level		Percentage change over initial value		
	Initial (1)	Final (2)	Maximum value	Final	Peak
March 2000 - December 2001					
Chile (9)	170	152	245	-10.9	43.8
Argentina	535	4,755	5,470	788.9	922.4
Mexico	317	309	454	-2.5	43.2
Brazil	655	885	1,256	35.2	91.7

The sample includes working days from 1 March 2000 to December 2001.
 (1) The initial value is the average for the first ten working days of the period.
 (2) The final value is the average for the last ten working days of the period.

Sources: Bloomberg, JP Morgan - Chase.

Nonetheless, these countries experienced significant rises during the period under study. Brazil's sovereign spread peaked at 1256 basis points on 8 August 2001, Mexico's at 454 basis points on 27 September 2001, and Chile's at 245 basis points on 14 April 2000, which suggests that turbulence

³ Another alternative is to look at trends in correlations between spreads, so that if this rises at times of crisis than there is some economic contagion. However, given the non-linearity of the relation between different countries' spreads, this is a very poor approximation to the relation between them and may be very sensitive to the periods chosen.

in the Argentine economy has temporarily affected other economies. To explore this point more fully, Table I.6 offers initial, final and maximum figures for each sub-period. We have added the spread for US-based firms with an A- rating, which has proven to be a good benchmark for evaluating the Chilean bond, and which as a result allows us to identify periods when Chile's sovereign spread rose excessively.⁴

During the first period, March – August 2000, Argentina's sovereign spread rose by around 200 basis points, to peak at 776 basis points. During this same period, spreads for all economies posted significant increases, which, moreover, coincided with Argentina's maximum spread. The maximum percentage increase posted by each country was very similar to Argentina's. In Chile's case, the highest point reached was 43%, practically 40 basis points over the A- bond, although it ended the period below the latter.

During the second period, September 2000 - February 2001, Argentina's spread rose again, although more moderately, to peak at around 1000 basis points (47% over its initial value). Again the peak values for the spread on Chilean, Brazilian and Mexican sovereign bonds were higher than usual, but this time the percentage change was less than Argentina's. Similarly, the first differences in the speed of this reaction among the different countries became apparent. Chile ended up 3% lower than initially, at a spread very similar to the A- firms, while the other countries ended the period with a higher spread, in line with their neighboring country.

For March - August 2001, the situation in Argentina worsened considerably. By the end of this period, the country's sovereign spread had virtually doubled, reaching almost 1800 basis points. During this period also the differences between the other countries in the region and Argentina became even more apparent. While Chile and Mexico were unaffected by the blow to the Argentine economy, since both ended this period with a substantially lower spread, Brazil saw its spread rise by over 200 basis points (a 30% rise over its initial value), peaking at 1028 basis points. In the case of Chile's sovereign bond, the spread rose no more than two basis points over its initial value, remaining very close to the spread for A- rated firms.

Finally, the last three months of 2001⁵ revealed the independence of all economies with regard to events in Argentina, even when it defaulted on its external debt. In December 2001, Argentina's spread rose to over 5500 basis points, while other countries' spreads tended to drop steadily over their initial value.

Conclusions

While the spreads on Latin America's sovereign bonds have not performed identically in recent years, changes in their values reveal that the impact of economic turbulence in Argentina has grown less with time. In Chile's case, while changes in Argentina's spread have had some negative impact, this has remained temporary. Chile's spread during the different episodes of turbulence returned to values close to those for the bonds of US A- minus rated companies, while fluctuations in this sense, caused by shocks in Argentina, have become increasingly less noticeable. This is particularly true starting in 2001, a period of considerable upset in Argentina, during which Chile's spread has remained low and stable, with Mexico's, and more recently Brazil's⁶ presenting a similar pattern.

⁴ See box in the May 2001 Report: "Chile's economic soundness faced with crises in emerging economies."

⁵ September 2001 is not used due to distortions in financial markets caused by terrorist attacks in the United States.

⁶ In Mexico's case, we can argue that most of the idiosyncratic variations in its spread are due to changes in the US economy, rather than events in Argentina.

Table I.6
Country spreads
(basis points)

	Level		Percentage change over initial value		
	Initial (1)	Final (2)	Maximum value	Final	Peak
March 2000 - August 2000					
Chile (9)	170	197	245	15,7	43,8
A-	150	208	209	38,8	39,9
Argentina	535	705	776	31,8	45,0
Mexico	317	326	444	2,7	40,0
Brazil	655	673	854	2,7	30,4
September 2000 - February 2001					
Chile (9)	193	187	240	-3,2	24,3
A-	209	196	228	-6,3	8,9
Argentina	673	731	987	8,6	46,6
Mexico	326	412	428	26,3	31,4
Brazil	678	718	833	5,8	22,8
March 2001 - August 2001					
Chile (9)	187	173	190	-7,6	1,4
A-	196	172	198	-12,2	0,8
Argentina	769	1,463	1,755	90,3	128,2
México	402	349	439	-13,1	9,3
Brasil	729	958	1,028	31,5	41,1
October 2001 - December 2001					
Chile (9)	210	152	219	-27,9	3,9
A-	205	182	208	-9,9	1,4
Argentina	1,811	4,755	5,470	162,6	202,0
Mexico	424	309	446	-27,1	5,2
Brazil	1,207	885	1,256	-26,7	4,0

The sample includes working days from 1 March 2000 to December 2001.

(1) The initial value is the average for the first ten working days of the period.

(2) The final value is the average for the last ten working days of the period.

Sources: Bloomberg, JP Morgan - Chase.

There are many reasons that could contribute to explaining the above. In the first place, the Argentine crisis has been a lengthy one, foreseen by markets, so their incorporation of its effects may have been gradual. Secondly, investors' exposure to emerging economies has fallen since the Asian crisis, so purely speculative capital has probably played a less important role in changes in capital flows. Finally, the world economic situation has grown more stable in recent months, thus reducing uncertainty in financial markets.

With regard to Chile, it could be added that because of its A- risk rating it stands in a very different position from other Latin American countries. In fact, it is one of the region's few investment grade countries, so presumably enjoys more solid macroeconomic, political and financial conditions, making it reasonable to expect investors to differentiate between the different qualities of economic policies. Moreover, the floating exchange rate system has allowed corrections to take place more rapidly and efficiently through the exchange rate, thus reducing the possibility of macroeconomic imbalance.

BOX I.2: CONSENSUS FORECASTS' PERFORMANCE

World growth is a vital input when preparing projections for the Chilean economy. Thus, the following analysis reviews quarterly growth estimates carried out on a monthly basis by Consensus Forecast (CF),⁷ to examine the degree of error in their predictions. Using this same basis, we examine economic cycles using as a case in point growth projections for the United States published in the March, June, September and December⁸ issues, from the third quarter of 1993 (93:III) to the third quarter of 2001 (01:III).

Corrections to quarterly projections

If we look at six-quarter projections for each quarterly issue of CF from September 1993 to September 2000, the relative error in their prognosis⁹ is 0.33 with an average quadratic error¹⁰ of 1.33. This means that quarterly growth rates are under- or over-estimated by 33%, which in magnitude corresponds to 1.33 percentage points. This is an important degree of error for projections over an 18-month horizon. Similar results can be obtained using non-CF projections. For example, Blix et al. (2001), using projections for the US from 1991 to 2000 from a sample of 59 institutions achieves an average quadratic error of 1.2 for projections over one year.¹¹

It is also important to evaluate whether projections have correctly forecast inflection points and changes in growth profiles. To do so, we now examine two periods: one, a growth period that includes an inflection point, and which goes from the third quarter of 1993 to the third quarter of 1996; and a second period, considering the latest projections, covering the period from the fourth quarter of 1999 to the first of 2003.

Period 93:III-96:I

Projections from September 1993 indicated a slowdown during the last quarter of that year, followed by a recovery that would bring growth to 3.0% by the end of the third quarter, which did not occur, since the actual growth rate was over 4.0% (Figure I.14). Later, a higher growth scenario was included, with new profiles starting at around 3.5% to 4.0%. Similarly, expectations of a slight slowdown toward the end of 1995 and early 1996 were maintained. Nonetheless, the world's economies grew more quickly than estimated, reaching 2.5% by the second quarter of 1995. Thus, for this set of projections, the convergence growth rate for 1995 was correctly estimated, but both the peak in growth achieved in 1994 and the speed of that convergence were underestimated.¹²

After the 1994-1995 period, an inflection point in the growth rate was observed. Figure I.15, indicates that CF projections generally managed to foresee this change. In fact, they correctly included the floor for output

⁷ CF forecasts are carried out using a monthly survey of a sample of investment banks. Thus, when CF delivers its projections these are in line with those of the investment banks, but then there is some lag, because they publish their projections more often (normally weekly).

⁸ These include the new information available every quarter to project over the next six periods, without including actual growth figures for the quarter in which projections are published.

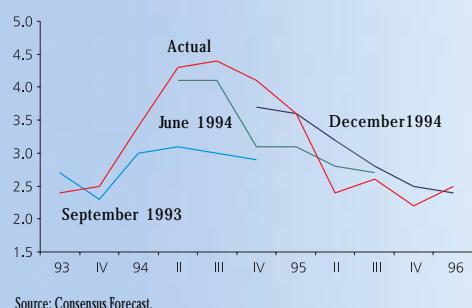
⁹ This is calculated as the percentage of average deviation in the absolute value over the actual value for growth for each quarter.

¹⁰ This is the square root of the average of the squares of absolute deviations of projections over actual growth rates for each quarter.

¹¹ Blix, M, Joachim Wadefjord, Ulrika Wienecke and Martin Adahl (2001): "How Good is The Forecasting Performance of Major Institutions," Economic Review 3/2001, Central Bank of Sweden.

¹² A situation similar to the 96:I – 01:I period.

Figure I.14
First growth cycle: 93:III - 96:I
(percent)



Source: Consensus Forecast.

Figure I.15
First turning point in cycle: 94:III - 96:III
(percent)

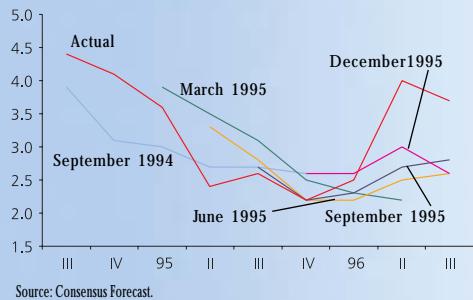
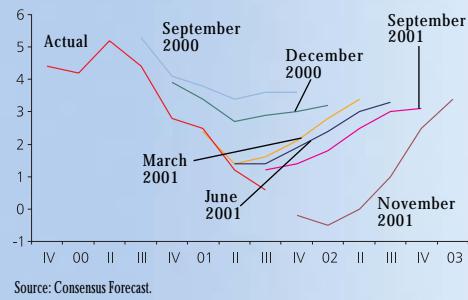


Figure I.16
Last projections: 99:IV - 03:I
(percent)



acceleration at the close of 1995 and suitably estimated acceleration in early 1996. Nonetheless, they underestimated the ceiling on output acceleration, setting it at 2.5% to 3.0%, well under the actual rate of 4.5%.

The latest projections 99:IV -03:I

An analysis of Figure I.16 indicates that estimates during 2000 projected a floor of around 3.0% for the drop in growth over 12 months. Deceleration, however, was more pronounced, reaching an actual 0.6% during the second half of 2001. In retrospect, the first projections for 2001 estimated a floor for this growth cycle during the second quarter, which was then postponed for the third quarter in September Report projections, even though CF maintained the recovery slope and the growth convergence level for 2001-2002 at around 3%.

If we analyze the November 2001 projection, corresponding to the curve in the lower section, we can see that the minimum value of the projection for early 2002 is down, thus increasing the slope for the growth rate profile, due to maintaining the convergence growth rate at 3.0%. An important part of this correction was triggered by the terrorist attacks suffered by the United States, which contributed to more sincere projections, because from then on analysts recognized that the slowdown that began in early 2001 was deeper than expected and as a result, these events would worsen it. Nonetheless, the error in predicting the depth of the recession should not be underestimated.

Conclusions

This analysis leads to the conclusion that CF forecasts have systematically assumed that economic growth will return to trend rates, estimated at 2.5% to 3.0% per year. Except for the early moments of deceleration in the mid-nineties –the smooth landing late in 1995 and early in 1996– this has not occurred. Growth has recovered more intensely, as occurred during 1996 and 1997, or has performed under trend growth, as has occurred systematically since early 2001. This is associated with a second systematic error, which consists of the low capacity for predicting phase changes, that is, the length, the beginning and the end of each economic cycle.

This section reviews recent trends in financial markets, particularly monetary policy, interest rates and the exchange rate, monetary and credit aggregates, and external financing of the Chilean economy.

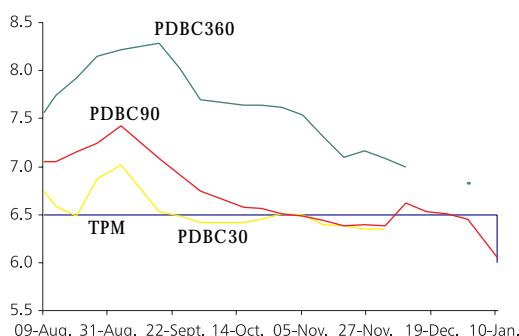
Monetary policy and the structure of interest rates

The monetary policy rate was reduced for the first time since nominalization of the monetary policy rate began in August 2001. At its monthly meeting, on 10 January, the Board of the Central Bank decided to reduce the monetary policy rate (*Tasa de Política Monetaria, TPM*) by 50 basis points (bp), in response to a series of domestic and external factors that altogether represent the consolidation of a scenario characterized by fewer medium-term inflationary pressures. In general, the market anticipated this event, mainly through lower interest rates during auctions of nominal securities. This was also apparent more recently in expectations about interest rates expressed during the January survey.

The Monetary Policy Rate (TPM) was reduced by 50 basis points to 6.0% for the first time since nominalization.

The prices of financial assets remain in line with a lower TPM in the short term. In fact, according to the nominal yield curve that covers from one day to one year, based on short-term nominal securities included in the market as a result of nominalization of monetary policy, a reduction in the TPM of around 50 bp can be deduced. Further along, this curve suggests the TPM will return to 6.5% in the next 90 days, to end the year at 6.8% (Table II.1 and Figure II.1).

Figure II.1
Monetary policy rate (TPM) and interest on
nominal Central Bank notes
(weekly averages, percent)



Source: Central Bank of Chile.

Table II.1
Interest rates on Central Bank of Chile notes (1)
(monthly average; percent)

	2001						2002
	Jul.	Aug. (2)	Sept.	Oct.	Nov.	Dec.	Jan. (3)
TPM	3.50	6.50	6.50	6.50	6.50	6.50	6.5 - 6.0
PDBC							
30 days		6.66	6.86	6.44	6.38	6.35	
60 days		6.86	7.23			6.52	6.40
90 days	6.44	7.07	7.18	6.61	6.44	6.51	6.45
360 days	7.44	7.86	8.17	7.66	7.25	7.03	6.81
PRBC							
90 days	3.72						
360 days		4.82	3.70	3.68	4.21	4.46	
PRC							
8 years		5.08	5.45	5.20	4.85	4.80	4.85
20 years		5.54	5.95	5.68	5.39	5.27	5.32
PRD							
2 years				4.45	4.28	4.56	4.85
4 years				5.53	5.45	5.55	6.01
							5.25
							6.23

(1) Corresponds to auctions.

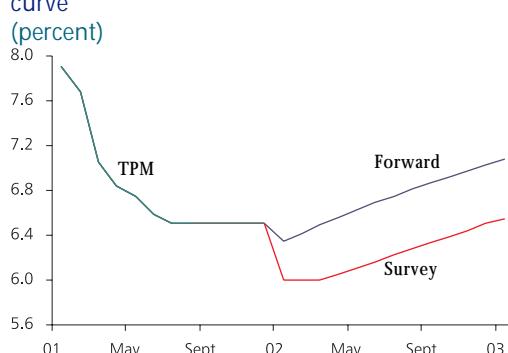
(2) As of 9 August, the TPM is expressed in nominal terms.

(3) 10 January, the monetary policy rate (TPM) was set at 6.0%.

Source: Central Bank of Chile.

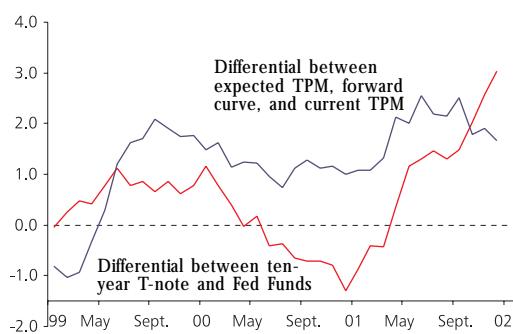
Asset prices and market expectations already foresaw a reduction in the monetary policy rate.

Figure II.2
TPM (policy rate), expectations, and forward curve



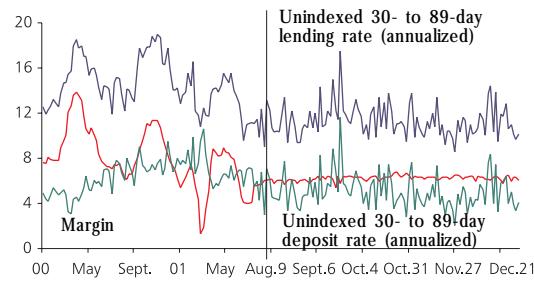
Source: Central Bank of Chile.

Figure II.3
Differential between expected TPM, forward curve, and current TPM (percent)



Sources: Central Bank of Chile, Bloomberg.

Figure II.4
Unindexed 30- to 89-day deposit and lending rates (weekly average and daily figures since August; percent)



Source: Central Bank of Chile.

Market expectations expressed in the January survey also confirm this reduction. Thus, after holding steady since nominalization (August 2001), January 2002 results reveal an important turnaround in expectations regarding the monetary policy rate. From then on, expectations indicate the rate will reach 6.5% by late 2002 and rise 50 basis points more in 2003. The forward curve, based on secondary market trading in Central Bank securities, shows a slight tendency for the TPM to fall in the short term, perhaps associated with the lack of transactions in the days following the announcement of negative inflation for December 2001 (Figure II.2).

Given that the forward curve reveals market expectations about the TPM, the difference between the expected TPM over a medium-term horizon and actual TPM provides an indicator of how expansive or contractive monetary policy (Figure II.3) is.¹ This indicator reveals that at present the market continues to consider monetary policy to be expansive.²

Interest rates and most liquid monetary aggregates

The new monetary policy approach has brought with it the inclusion of short-term nominal securities and changes in the structure of indexed securities (the Central Bank stopped issuing 90-day PRBCs and 10-, 12- and 14-year PRCs, which were replaced by auctions of one-year PRBCs), along with increasing the amounts of 8- and 20-year PRCs auctioned. Moreover, the Central Bank started to buy back its own long-term securities.

In general, since nominalization began and through mid-November 2001, interest rates on long-term indexed Central Bank papers (PRCs) fell by over 80 basis points. Nonetheless, in December and the early days of January 2002 PRC-8 rates reached almost UF + 4.5% and PRC-20 rates UF + 5.0%, the smallest figures posted since these papers were created. This, notwithstanding an erratic behaviour, influenced by the behavior of rates for US treasury notes and reduced expectations for growth and inflation at the local and global level.

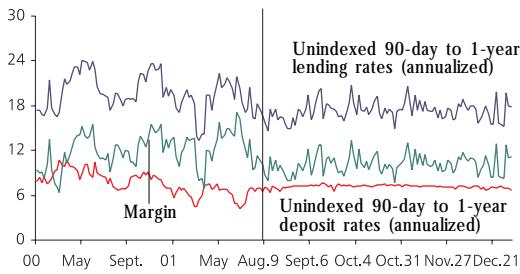
The drop in interest on Central Bank notes during 2001 was also apparent in the general trends in interest rates that the banking system applies in operations with the general public. This complied with expectations for monetary policy nominalization. In fact, in an environment of steadily dropping inflation, the use of the nominalized system reduces short-term (month on month) variability in nominal rates and generates a marginal increase in the monthly volatility of rates in UFs. These effects of nominalization on interest rates suggest a gradual shift in the composition of operations with different maturities, with nominal operations gradually replacing indexed operations (Box II.1).

Although since the application of the new monetary policy stance nominal interest rates have grown substantially less volatile, this situation has affected mainly deposit rates, especially those for short-term operations (30-89 days). The short-term spread in pesos has fallen, providing more transparency to short-term credit operations (Table II.2 and Figures II.4 and II.5).

¹ For the purpose of comparison, we also show the spread between 10-year T-notes and the Fed's policy rate.

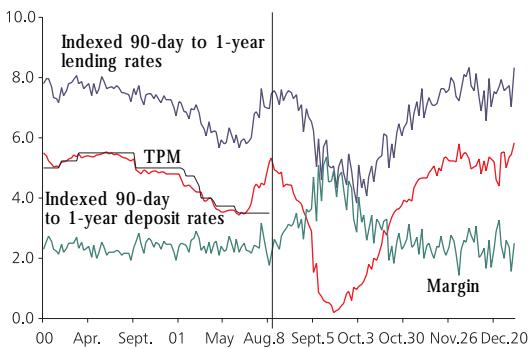
² This indicator is incomplete, but the conclusion is also based on an examination of the strong performance of monetary aggregates and other leading indicators.

Figure II.5
Unindexed 90-day to 1-year deposit and lending rates
(weekly average and daily figures since August; percent)



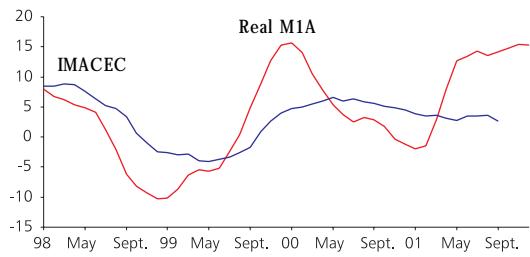
Source: Central Bank of Chile.

Figure II.6
TPM and indexed 90-day to 1-year deposit and lending rates
(weekly average and daily figures since August; percent)



Source: Central Bank of Chile.

Figure II.7
Real M1A and IMACEC
(Real change over 12 months, moving quarters)



Source: Central Bank of Chile.

Table II.2
Market interest rates
(monthly average; percent)

	2000	2001	2002											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Unindexed operations														
Deposit (30 to 89 days)	0.61	0.49	0.52	0.24	0.66	0.69	0.53	0.34	0.49	0.51	0.52	0.51	0.51	0.51
Lending (30 to 89 days)	1.17	1.07	1.04	0.84	1.09	1.13	0.97	0.80	0.84	0.94	0.86	0.83	0.86	0.79
Deposit (90 days to 1 year)	0.60	0.54	0.51	0.42	0.59	0.62	0.47	0.43	0.56	0.60	0.59	0.58	0.57	0.56
Lending (90 days to 1 year)	1.57	1.42	1.49	1.18	1.36	1.59	1.55	1.46	1.27	1.35	1.36	1.35	1.31	1.42
Indexed operations														
Deposit (90 days to 1 year)	4.81	4.50	4.24	3.97	3.77	3.60	3.54	3.66	4.41	0.82	2.40	4.67	5.24	5.45
Lending (90 days to 1 year)	6.97	6.85	6.77	6.18	5.94	5.98	5.83	5.96	7.07	5.23	5.29	7.28	7.53	7.62

Source: Central Bank of Chile.

At the same time interest rates on indexed operations have become more volatile due to arbitrage involving nominal rates and monthly fluctuations in inflation. This phenomenon is particularly strong in the case of indexed deposit rates and, to a lesser degree, lending rates. As was to be expected, this greater volatility in indexed operations has also meant larger spreads for this type of operation (Figure II.6).

During most of 2001, liquid money has posted high rates of expansion over 12 months, influenced by the low basis for comparison from 2000. In any case, the monthly rate of money growth is in line with normal seasonal patterns, the pace of growth in activity and lower nominal interest rates (Figure II.7).

To understand what is happening in the monetary market, we must review trends affecting money and its components, which, given the monetary policy approach applied in Chile, respond primarily to movements in demand for money balances. This is determined by changes in real activity and market interest rates.

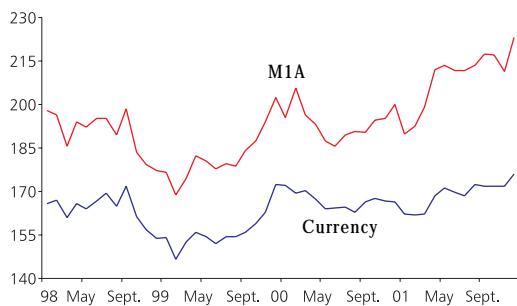
In 1998, the downward trend in real money over twelve months was the result of high interest rates, especially during the second half of the year, along with a contraction in economic activity. The drop in real money was apparent primarily in demand deposits and checking accounts, while currency fell less. Although in 1999 money responded to better prospects for activity and lower nominal interest rates, in quantitative terms the most relevant phenomenon was growth in liquid money demand toward year's end, for fear of possible computer problems associated with Y2K.

Once this specific situation passed, in 2000 real liquid money balances fell significantly during the first half. Moreover, trends remained below forecasts, given the sluggish performance of economic activity and private expenditure. A breakdown of checking accounts for individuals and companies reveals that companies performed more strongly during that period, particularly in terms of demand accounts. Thus, in 2001, part of the increase in money's annual growth rates was the result of the poor basis for comparison from 2000.

Moreover, other factors may be influencing normalization of demand for liquid money. On one hand, there have been some portfolio changes (transfers of funds out of time deposits and into currency and demand deposits) in a climate of lower interest rates and inflation. On the other, large companies have used demand accounts more often as a means of payment.

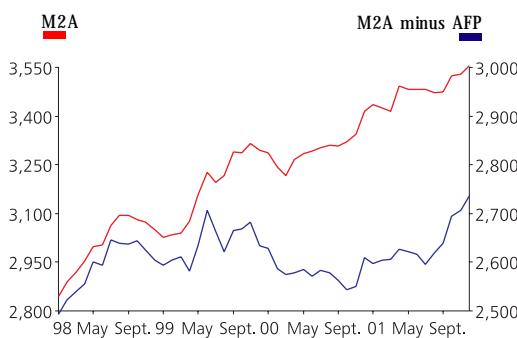
In the months that have passed since the previous Report, the most liquid monetary aggregates experienced a seasonal rise in September and then

Figure II.8
Seasonally adjusted real monetary aggregates corrected for interest rates
(January 1990=100)



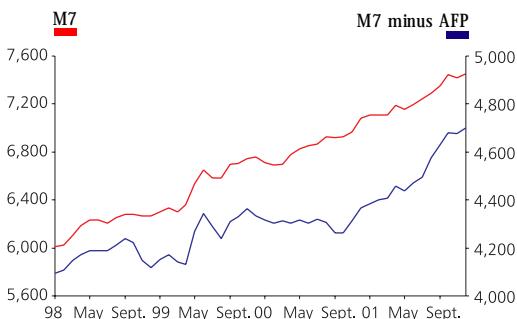
Source: Central Bank of Chile.

Figure II.9
Real, seasonally adjusted M2 and M2A minus AFP
(billions of 1986 pesos)



Source: Central Bank of Chile.

Figure II.10
Real, seasonally adjusted M7 and M7 minus AFP
(billions of 1986 pesos)



Source: Central Bank of Chile.

have fallen as is typical for the time of year. The exception was money's behavior in November, with the monthly change being the lowest since March 2000. Despite this monthly fall, however, the real change in M1A over 12 months remained at over two digits, closing 2001 at around 14% (Table II.3 and Figure II.8).

Annual growth rates for money from late 2001 should persist through the first two months of 2002, then fall to around half in March, the result of a sharp change expected in the basis for comparison, thanks to the impact of negative monthly inflation for February 2001 on the UF. This will remain a long way from representing a genuine turnaround in money trends, so it should not be mechanically interpreted as a change in the expansiveness of monetary policy.

Private sector demand for money is consistent with nominal interest rates and economic growth.

Table II.3
Real, seasonally adjusted monetary aggregates (monthly change)

	2001						
	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Currency (1)	-0.9	-0.6	2.2	-0.3	-0.1	0.1	2.4
M1A (1)	-0.8	0.0	0.8	1.8	0.0	-2.7	5.6
M2A							
with AFP	0.0	0.0	0.0	0.3	1.0	0.4	1.1
without AFP	-0.2	-0.8	1.0	0.7	2.1	0.4	1.1
M7A							
with AFP	0.5	0.7	1.0	1.0	1.0	-0.4	0.6
without AFP	0.8	0.6	1.8	1.2	1.1	0.0	0.5

(1) Seasonally adjusted monthly change corrected by interest rate.

Source: Central Bank of Chile.

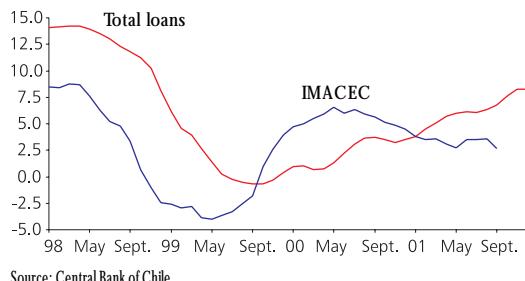
Other long-term interest rates, credit and monetary aggregates in the financial system

M2 and M7, the broader monetary aggregates, have performed more moderately than money, because of resources being redirected into investments other than those included in definitions of monetary aggregates, the result on one hand of the rise in corporate bond issues, with interest rates offering premiums over PRCs and, on the other, although to a lesser degree, because institutional investors have redirected some resources abroad. Altogether, given the smaller issues of Central Bank papers, the result of sterilization of exchange operations carried out after announcements of exchange rate intervention made in August, there has been more demand for this kind of security among banks, mainly to comply with the technical reserve. Moreover, due to trends in the exchange rate during most of the second half, monthly foreign currency deposits rose significantly. AFPs have performed similarly to other economic agents in terms of their investments, except for increasing their holdings of foreign corporations' bonds once the regulation³ covering pension fund investments in foreign instruments was changed in April 2001⁴ (Figures II.9 and II.10).

³ This allows the AFPs more flexibility in deciding their investments abroad, making them responsible for directly accrediting and verifying compliance with conditions required by the Superintendent of AFP regarding foreign debt instruments.

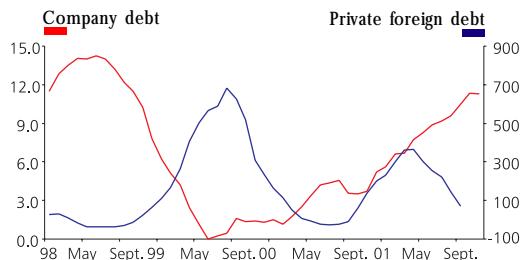
⁴ The Administradoras de Fondos de Pensiones (pension fund managers, AFPs) represent about 23% of M2A and 37% of M7.

Figure II.11
IMACEC and total loans
(percentage change over 12 months, moving quarters)



Source: Central Bank of Chile.

Figure II.12
Short-term private foreign debt and loans to companies
(12 month change, moving quarterly averages)



Source: Central Bank of Chile.

Figure II.13
Real, seasonally adjusted credit to individuals
(millions of 1986 pesos; monthly balance)



Source: Superintendent of Banks and Financial Institutions.

Historic evidence indicates that toward late 2000, there was a strong positive correlation with a six-month lag, approximately, between trends in loans and economic activity. Since late 2000, however, the performance of these variables has diverged, with lending tending to grow while the annual Imacec has tended to fall since mid-2000 (Figure II.11).

If we compare the behavior of credits to companies, particularly commercial loans, with trends in short-term private debt, the latter has fallen significantly since mid-2000. This may be associated with debt substitution resulting from better conditions on the national market, given current interest rates and the propensity of the national financial system to favor those agents affording less risk and more solid guarantees (Figure II.12). This is confirmed by an analysis of the commercial lending portfolio by tranche and debtors, which reveals that loans are concentrated (45% of total commercial debt) in the tranche covering UF500,000 and over. The fact that debtors have been changing external debt into domestic debt offers one explanation for the apparent dissociation of lending as a lagging indicator for economic activity.

Total credit during the last months of 2001 continued to expand with monthly increases averaging more than in the first half. This growth was driven by trends in mortgages. Actual loans, from October on, started to recover, which could be associated with trends in nominal interest rates that affect consumer credit (Table II.4). In disaggregate terms, total credit to the private sector has continued to grow thanks primarily to lending to companies, in particular operations involving large amounts. Credits for housing, meanwhile, grew steadily during the first half, then declined during August and September, affected by higher interest rates. In the following months, however, these loans resumed levels from mid-year. Similarly, after falling steadily since May 2001, consumer credit turned around in October, offering hope that consumption could recover in coming months (Table II.5, Figures II.13 and II.14).

Table II.4
Public and private sector loans
(monthly change over real, seasonally adjusted series)

	2001						
	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Loans in Chilean currency							
Actual	0.0	0.3	0.2	0.2	0.9	0.7	-0.8
Mortgage	1.1	1.4	0.2	0.6	1.2	0.8	0.6
Loans in foreign currency (1)	2.3	1.6	6.2	-1.0	3.4	-0.4	-2.2
Total	0.5	0.7	0.9	0.2	1.4	0.7	-0.6

(1) Loans in foreign currency have been converted using the observed exchange rate.

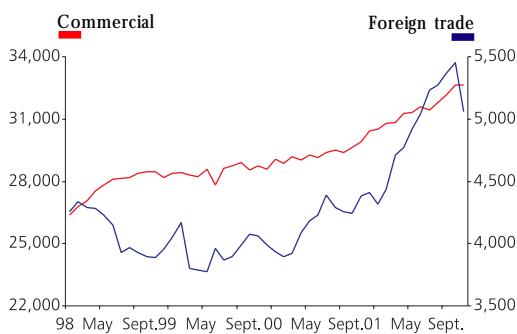
Sources: Superintendent of Banks and Financial Institutions and Central Bank of Chile.

Table II.5
Loans to the private sector
(monthly change over real, seasonally adjusted series)

	2001						
	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.
Loans to individuals							
Consumption	-0.2	0.2	-0.1	-0.6	0.2	0.3	0.1
Housing	-0.1	1.0	1.0	-0.3	-0.2	1.0	0.4
Loans to companies							
Commercial	3.2	2.4	3.8	0.8	1.7	1.7	-7.3
Foreign trade	0.2	0.9	-0.5	1.1	1.1	1.5	0.0
Total	0.4	1.0	0.2	0.6	0.9	1.4	-0.8

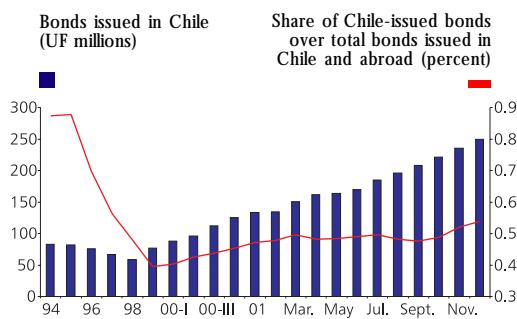
Sources: Superintendent of Banks and Financial Institutions and Central Bank of Chile.

Figure II.14
Real, seasonally adjusted credit to companies
(millions of 1986 pesos; monthly balance)



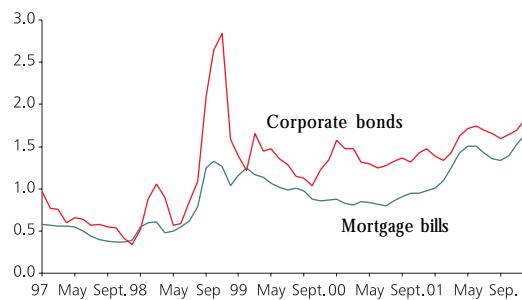
Source: Superintendent of Banks and Financial Institutions.

Figure II.15
Private, non-financial sector bonds outstanding
in Chile
(UF millions and percent)



Sources: Superintendent of Securities and Insurance, Central Bank of Chile

Figure II.16
Interest differential for fixed income
instruments and Central Bank papers
MDRR* secondary markets
(moving quarterly average; percent)



*Monthly Domestic Rate of Return.

Source: Santiago Stock Exchange.

Along with important growth in bank credits to companies, corporate bond issues continue to rise significantly.

A similar substitution phenomenon is apparent in the domestic corporate bond market, with issues rising since the second quarter of 2000. The purpose of these issues has been to transfer short-term liabilities to the medium and long term, with a marked preference for peso debt in response to the volatile exchange rate. To date, these operations total UF250 million, of which practically half were issued in 2001 (UF117 million). Although corporate bond issues abroad had been falling since 2000, during the second half of 2001 large firms with good risk ratings have successfully issued bonds on international markets, also taking advantage of more favorable financing conditions (Figure II.15).

In August 2001, after auction amounts of long-term instruments were reduced and concentrated in eight- and 20-year PRCs, the premium on corporate bond interest rates over PRCs fell, given demand substitution favoring bonds. However, as a result of a significant decline in rates on indexed securities, which was not completely transferred to bond rates, the premium rose considerably, to reach around 178 basis points. Similarly, the premium on mortgages over PRC-8s tended to fall from May on, but in August the gap began to rise, reaching over 153 basis points at present (Table II.6 and Figure II.16).

Table II.6
Internal yield (TIR) on Central Bank notes, mortgage bills, and corporate bonds
(monthly average; percent)

	2001						
	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Mortgage bills	6.62	6.52	6.78	6.69	6.44	6.50	6.60
Premium*	1.32	1.20	1.20	1.43	1.51	1.55	1.53
Corporate bonds	6.82	6.73	7.05	7.11	6.74	6.70	6.85
Premium*	1.52	1.41	1.48	1.86	1.81	1.75	1.78
Central Bank	5.30	5.32	5.57	5.26	4.93	4.95	5.07

*Difference between the TIR and the average price for Central Bank notes on the Stock Exchange.

Source: Santiago Stock Exchange.

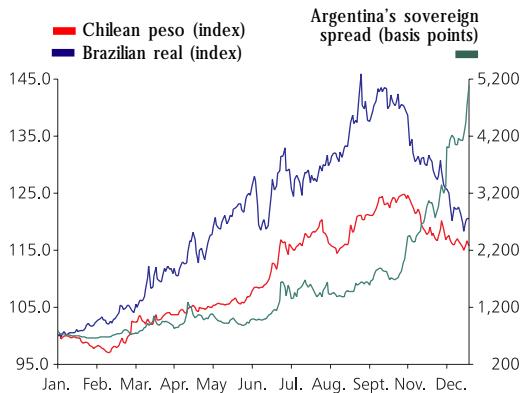
In summary, the private corporate sector continues to enjoy ready access to domestic financing sources, an important factor when it comes time to evaluating the effectiveness of monetary policy and the strength of the financial system as a whole.

The exchange rate

In 2001, the effects of the Argentine crisis produced enormous volatility and a sharp depreciation in the observed exchange rate (*tipo de cambio observado, TCO*) that reached almost 20% between December 2000 and August 2001. Facing this situation, the Central Bank applied measures (16 August) to ensure liquidity in foreign currency and increase the supply of foreign currency hedging instruments. The announcement and application of these measures provided more stability and the TCO tended to appreciate slightly.

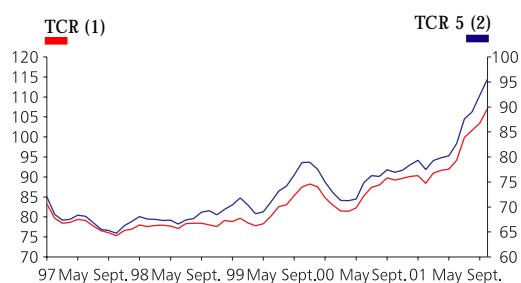
International prospects changed with the attacks in the US on 11 September, making the TCO very volatile at first. After the announcements of war, the dollar rose, closing at 695 pesos by month's end. The copper

Figure II.17
Chilean peso, Brazilian real, and Argentina's sovereign spread 2001
(exchange rate indices: 2.01.2001 = 100)



Sources: Bloomberg, Central Bank of Chile.

Figure II.18
Real exchange rate (TCR) index



(1) Based on parities of Chile's main trading partners (ordered by weight): United States, Japan, Argentina, Brazil, Mexico, Germany, Spain, Italy, France, United Kingdom, Korea, Canada, Peru, Holland, Belgium, Colombia, Taiwan, Venezuela, Ecuador, Sweden and China.
(2) Includes USA, Japan, Canada, United Kingdom, Euro.

Source: Central Bank of Chile.

price continued to drop, confirming the general deterioration in the outlook for the world's economy, reaching an all time low of 60 cents per pound. The next month, the TCO followed the trends in Argentina's sovereign spread, the main external indicator of risk perception for that country. Given the increased instability in foreign exchange, the Central Bank increased the supply of foreign exchange coverage instruments (swaps) and intervened from time to time in the market. The deteriorated conditions in Argentina and the poor performance of the copper price pushed the TCO to over 700 pesos per dollar.

In November, Argentina applied a series of measures that caused risk-rating agencies to severely punish its debt, causing its sovereign spread to rise from 1800 to 4000 points in a single leap in mid-December. Despite these poor conditions, in early November the Chilean and Brazilian currencies began to appreciate significantly, with the peso reaching just under 660 pesos per dollar in late December (Figure II.17). Confirmation that the Chilean peso had pulled out of the Argentine orbit came just as Argentina faced its worst political upset in years: while its sovereign spread soared to over 5500 basis points, the Chilean foreign exchange market remained stable. It is worth pointing out that behind this dissociation from the Argentine situation and stronger performance of the Chilean currency during the last weeks of 2001 was also the strong performance of the non-traditional export sector, and some recovery in the copper price (Box II.2).

By examining a broader currency basket, it is apparent that the multilateral exchange rates, the TCM and TCM5, depreciated over the year by 12% and 14%. This is a change over September's Report, given that larger economies such as Japan and the United Kingdom were performing at levels that suggested their currencies would appreciate against the dollar. After September's events in the United States, these currencies appreciated strongly, a trend that only retreated to the degree that the US response to the attacks became more apparent (Table II.7). In real terms, the exchange rate will close 2001 with accumulated depreciation of 14%, close to averages for 1992-1993 and similar to the trend in TCM5 (Figure II.18).

Table II.7
Changes in the observed and multilateral exchange rates

	Average (1)	Dec '01	Dec '00	One-month change	One-year change 2001
TCO	653.0	669.1	574.6	-2.4	16.4
TCM (2)	128.0	131.5	117.2	-2.7	12.2
TCM 5 (3)	138.1	142.6	125.4	-3.1	13.7

(1) January average.

(2) The multilateral exchange rate index (TCM) represents the nominal value of the peso against a broad basket of foreign currencies.

(3) The TCM5 brings together currencies from the US, Japan, the United Kingdom, Canada and the Euro zone.

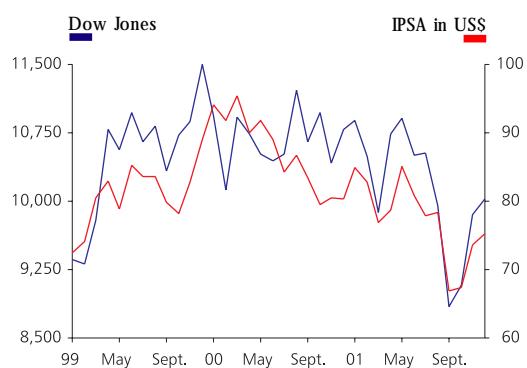
Source: Central Bank of Chile.

Trends expected for the nominal exchange rate as identified by Bloomberg based on market quotes suggest it will depreciate by almost 3% during the next semester. Similarly, results from Central Bank expectations surveys conducted in January point to 2.5% depreciation this year and 4% by late 2003, bringing the dollar to 670 and 680 pesos, respectively. The working assumption used for the exchange rate is nominal depreciation of around 2% over the average observed exchange rate during December.

Other financial asset prices

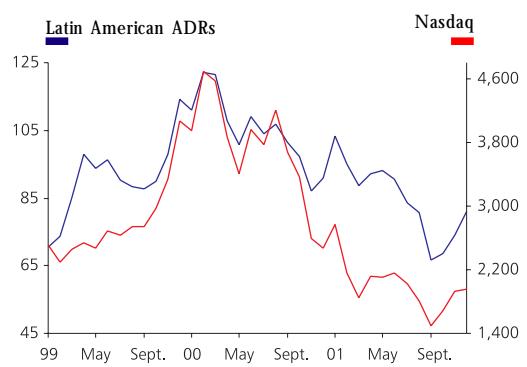
National stock indices show that in pesos the IPSA rose 9.1% and the IGPA 10.9% in 2001. The decline in growth toward late 2001 over

Figure II.19
IPSA and Dow Jones stock indices



Sources: Bloomberg, Santiago Stock Exchange.

Figure II.20
Latin American ADR and Nasdaq stock indices



Source: Bloomberg

September was the result of the strong drop in the world's stock markets after the attacks on the United States. Upon measuring local indicators in dollars and comparing them to other international benchmarks (Table II.8), we can see that while both the IPSA and the IGPA fell, they declined less than the Nasdaq and Latin American ADRs (Figure II.19 and II.20).

Table II.8
International stock indices

	IPSA (1)	IGPA (1)	Dow Jones	ADR LAT.	NASDAQ
Jan. '01	5.6	5.5	0.9	13.7	12.2
Feb.	-2.3	-2.4	-3.6	-8.0	-22.4
Mar.	-7.2	-3.6	-5.9	-6.7	-14.5
Apr.	2.2	0.7	8.7	4.0	15.0
May	8.2	7.2	1.6	1.1	-0.3
Jun.	-5.1	4.6	-3.8	-2.8	2.4
Jul.	-3.6	-12.1	0.2	-7.6	-6.2
Aug.	0.5	0.7	-5.4	-3.6	-10.9
Sept.	-14.5	-11.4	-11.1	-17.2	-17.0
Oct.	0.7	-1.8	2.6	2.6	12.8
Nov.	9.1	7.9	8.6	7.9	14.2
Dec.	2.3	2.2	1.7	9.5	1.0
Average	-6.3	-4.8	-7.1	-10.8	-21.1

(1) Expressed in US\$.

Sources: Bloomberg, Santiago Stock Market.

All sector stocks suffered heavy losses during September as a result of the attacks in the US, except the chemical sector, where values rose due to expectations that non-traditional weapons could be used (Table II.9).

Table II.9
Sectoral stock indices (1)

	One-year change 2001	One-month change
IPSA	9.1	-0.8
IGPA	10.9	-0.8
Sectors		
Banking and finance	15.2	-1.8
Agriculture, hunting, and forestry	-17.7	0.5
Mining	27.5	2.8
Manufacturing	11.0	-1.2
Food and drink	6.6	-5.0
Construction	0.6	-0.5
Different products	21.7	-0.2
Metal-mechanical	3.9	4.0
Fishing	6.0	0.2
Chemical products	54.6	0.1
Textiles and clothing	-27.2	0.0
Services various	10.1	-0.7

(1) Changes to December.

Sources: Stock Market, Electronic Stock Exchange of Chile.

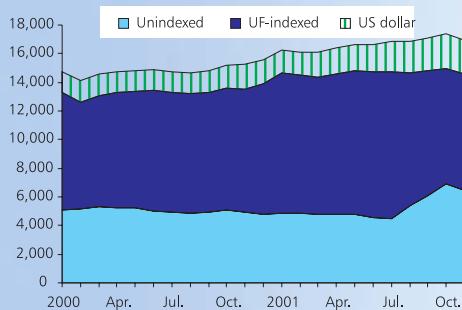
In November, stock indices everywhere recovered strongly. In December, however, local indicators fell due to the Argentine situation. Overall, stocks performed similarly to trends observed in the previous Report, that is, the banking sector emerged strengthened by capital market reforms; some manufacturing sectors such as food and drinks and other products were on the rise, while agriculture and forestry were in decline due to the falling wood pulp price.

In December 2000, the *Oferta Pública de Acciones* (public offerings for shares, OPA) law was approved and it kept trading strong during the first half, with daily transactions worth some ten billion pesos on average. With capital market reforms coming into effect last November, which included measures to eliminate capital gains taxes, average daily transactions almost doubled over the first half. In particular, most of November was affected by investors taking advantage of the tax break without changing their portfolio. In aggregate terms, in 2001, trading diminished, due to shifts in the composition of company financing.

In summary, 2001 saw a general fall in interest rates on Central Bank instruments, in line with the performance of the monetary policy rate, trends in growth expectations, and international interest rates. Lower interest rates also contributed to a rising trend that affected the most liquid monetary rates during 2001, a trend that also reflected the low basis for comparison from the previous year. Chile's foreign exchange market was strongly influenced upward by the economic situation in Argentina, which prompted the Central Bank to intervene from the end of the third quarter on. Nonetheless, since early November, the exchange rate appreciated substantially. Combined with lower inflation during the fourth quarter, this led the market to expect a lower monetary policy rate. In effect, slow recovery in domestic demand, along with the prospect of lower inflation in the medium term, led the Central Bank Board to reduce the monetary policy rate by 50 basis points at its meeting on 10 January, to 6.0%.

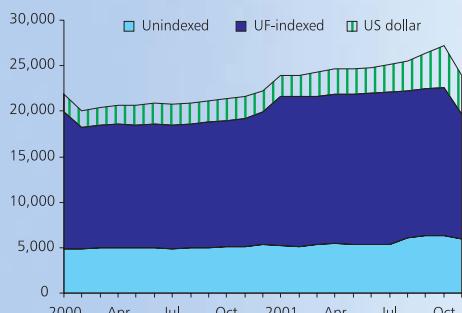
BOX II.1: THE EFFECTS OF NOMINALIZING MONETARY POLICY

Figure II.21
Total deposits
(balance, billions of pesos)



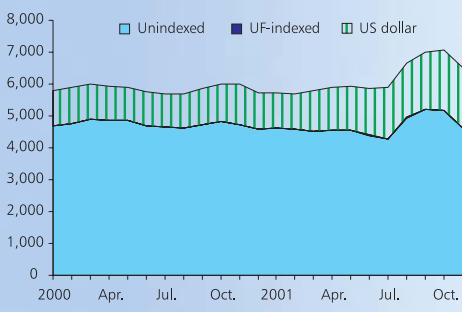
Source: Superintendent of Banks and Financial Institutions.

Figure II.22
Total loans
(balance, billions of pesos)



Source: Superintendent of Banks and Financial Institutions.

Figure II.23
30 to 89 day deposits
(balance, billions of pesos)



Source: Superintendent of Banks and Financial Institutions.

Since August 2001, the monetary policy rate is defined on a nominal basis, that is with regard to a peso rather than a UF value as it was previously. Likewise, the Central Bank replaced issues of UF-indexed securities maturing in less than one year with notes expressed in pesos for similar periods. This measure forms part of a process of modernizing Central Bank policies, which previously had included improving the inflation targeting system, a floating exchange rate, elimination of restrictions on capital flows, and the gradual placement of peso-denominated notes on financial markets.

The decision to nominalize the monetary policy rate was based on the need to adjust monetary policy operations to a new reality of low, stable inflation. This new system prevents erratic fluctuations in the monthly CPI, which have little to do with underlying inflation or its projections, from translating into changes in short-term interest rates. Moreover, this is the way that virtually all central banks that, like Chile use the interest rate as their main instrument, have been implementing their monetary policy.

In particular, this system seeks to achieve the following objectives:

- reduce the volatility of nominal interest rates
- reduce the volatility of nominal variables, such as the exchange rate and money demand
- make it easier to match the financing of unindexed loans, making these operations more transparent
- simplify international financial integration
- encourage the nominalization of short-term contracts.

One offshoot of nominalizing the monetary policy rate is that interest on UF-denominated instruments tends to vary more, with values shifting from month to month to offset changes in the UF and bring returns into line with nominal rates. Thus, for months when the UF is unusually low, UF rates rise, and the opposite happens when the change in the UF is unusually high.

Because nominal rates are more stable than indexed ones, another result expected from nominalization was a change in the composition of financial system assets and liabilities from UF to pesos. The greater stability in nominal rates favors a gradual adjustment of the financial system toward nominal operations, as these are renewed.

The next section discusses this measure's effects on interest rates and the composition, by denomination, of banking operations.

Effects on Interest rates

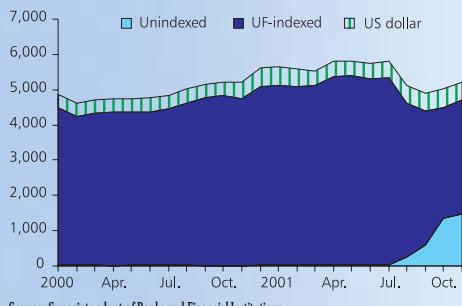
As expected, application of the new system has brought more stability to nominal interest rates. Volatility of interest rates on short- and medium-term deposits and loans (30 to 89 days, 90 to 365 days) has fallen significantly. In the case of UF-denominated operations, in contrast, we see greater variability in order to accommodate fluctuations in monthly inflation (Table II.10).

Table II.10
Monthly volatility in market interest rates
(averages)

Period	Unindexed operations		Indexed operations	
	30 to 89 days	90 days to one year	90 days to one year	90 days to one year
	Deposit	Lending	Deposit	Lending
2000	0.06	0.12	0.10	0.14
January-July 2001	0.07	0.15	0.06	0.14
Since August 2001	0.02	0.10	0.02	0.09

Source: Central Bank of Chile.

Figure II.24
90-day to one-year deposits
(balance, billions of pesos)



Source: Superintendent of Banks and Financial Institutions.

For long-term fixed income instruments, inflation does not affect interest rates as directly and their behavior basically reflects changing expectations about monetary policy, which arise from the changing prospects for inflation and policy, along with trends on international markets.

Spreads between rates for asset and liability operations in the financial system have fallen in the case of those in pesos over both the short and medium terms, while they initially increased for indexed operations over 90 to 365 days, but then returned to normal (see Figures II.4, II.5 and II.6).

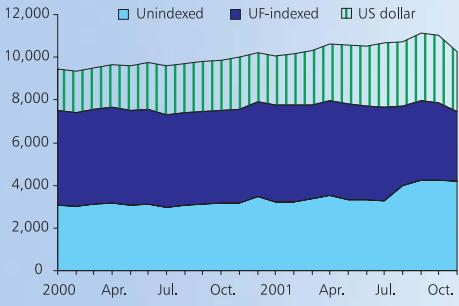
Effects on the composition of operations

Between August and December 2001 peso operations rose while indexed operations fell. Of total deposit and loans operations up to August, on average 25% were nominal, while for the last months of 2001 this rose to 30% (Figures II.21 and II.22).

In the case of deposits, operations in pesos rose while deposits in UF over 90 days to one year fell significantly. The decline in the average maturity on deposits reflects the deeply rooted custom within the Chilean financial system of depositing in pesos up to 30 days and in UF for up to 90 days. This situation is considered temporary and at the margin a significant increase in peso deposits over three months or more was apparent. In the case of deposits there was also a discreet increase in peso operations maturing in under one year replacing UF operations over the same period (Figures II.23, II.24 and II.25).

In summary, the results of nominalization after several months of implementation have been as expected, both in terms of the stability of short-term nominal rates and falling spreads, as well as the kind of operations that have been carried out. As time passes, these effects should further intensify.

Figure II.25
Loans up to one year
(balance, billions of pesos)



Source: Superintendent of Banks and Financial Institutions.

BOX II.2: EXCHANGE RATE CORRELATIONS

Introduction

In mid-1997, the whole world was shaken by the Asian crisis. Although Chile was not directly affected at first, because there was some differentiation between emerging economies, second round effects hit the value of the Chilean peso, causing it to depreciate 4.1% against the dollar between December 1997 and June 1998. In mid-1998, a series of measures were applied in Chile to overcome the effects of the crisis. The productivity adjustment factor applied to the reference exchange rate since 1995 was eliminated; an asymmetrical exchange rate band was applied; the reserve requirement on foreign capital was reduced from 30% to 10%; and the Central Bank introduced promissory notes in dollars (*Pagarés Reajustables en Dólares, PRD*) as a foreign exchange hedging mechanism.

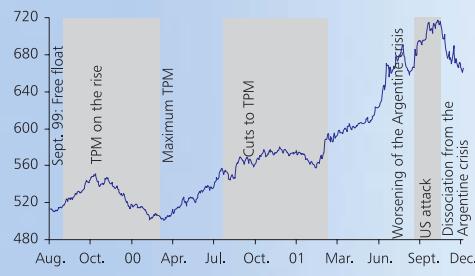
The international outlook changed again when Russia declared default, raising questions about the credibility of all emerging economies, particularly Brazil's. In September 1998, in response to these changes in international conditions, the Board of the Central Bank decided to increase the monetary policy rate to normalize markets. In the last quarter of the year, the peso depreciated moderately, the result of further reductions in the monetary policy rate.

In early 1999, the region was again hard hit, this time by Brazil, which suffered a considerable loss in its reserves, the result of speculative attacks on its currency. This forced that country's monetary authority to change the crawling exchange rate to a free floating regime. This process was carried out at the same time as domestic rates were increased and was supervised by the International Monetary Fund. These events temporarily affected the Chilean foreign exchange market and, as a result, depreciations in the first half were more related to successive reductions in the monetary policy rate. The second half was fundamental to Chilean exchange rate policy, because after maintaining the exchange rate at the ceiling of the exchange rate band, authorities decided to eliminate this formal commitment and agreed to intervene in the market only under exceptional circumstances. These measures, while similar to those applied in Brazil earlier in the year, occurred in a completely different context for the Chilean economy, given that both external and fiscal variables were still posting acceptable levels of debt, thus avoiding speculative attacks on the local currency.

Free float

With liberalization of the exchange rate, the value of the Chilean peso is determined by a series of variables, which can be grouped as follows: stock market-related (Nasdaq, Dow Jones and IPSA); arbitrage of rates (deposit 30-89 days, 3-month LIBOR; PRC8; Indexed US bond and Chile's sovereign; real (copper and oil prices); financial (M1A) and regional (Argentine sovereign spread). We took paired correlations⁵ for each of these variables compared to the exchange rate during six periods (Figure II.26), marked by some significant event on the local exchange market (Table II.11).

Figure II.26
Nominal exchange rate
(Sep. 99-Dec.01)



Source: Central Bank of Chile.

⁵ Paired correlations mentioned are corrected, as per Rigobon (2001), on the basis of variance in the different variables over the entire period.

Table II.11
Contemporary correlations between variables and the exchange rate
(1) (2)

	Free float (09/99- 12/01)	TPM on the rise (09/99- 03/00)	Maximum TPM (03/00- 08/00)	Ongoing cuts to TPM (08/00- 03/01)	Worsening Argentine crisis (03/01- 09/01)	Post US attack (09/01- 10/01)	Dissociation from Argentine crisis (10/01- 12/01)
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Nasdaq	-0.30	-0.23	-0.08	-0.01	-0.39	0.35	-0.27
Dow Jones	-0.28	-0.05	-0.62	-0.06	-0.48	0.37	-0.43
IPSA	-0.37	-0.33	-0.26	-0.04	-0.44	0.45	-0.64
30-89 day deposit	-0.16	0.18	-0.42	0.08	-0.62	0.52	-0.03
3-month LIBOR	-0.03	0.43	0.05	0.40	0.29	-0.03	-0.71
PRC8	-0.05	0.31	0.19	0.50	-0.21	0.92	-0.26
US indexed bond	-0.20	-0.12	0.61	0.02	-0.41	-0.02	-0.11
M1A	0.04	0.11	0.26	0.14	0.02	-0.33	-0.08
Argentina's spread	-0.11	-0.08	-0.02	0.17	0.57	0.36	0.31
Chile's spread	0.22	-0.39	-0.48	0.50	0.25	-0.36	0.39
Copper price	-0.27	0.06	0.41	0.18	-0.21	-0.18	-0.32
Oil price	-0.14	-0.02	0.18	0.22	-0.61	-0.02	-0.57
3-month forward	-0.03	0.00	0.00	0.00	0.12	0.07	-0.12
6-month forward	-0.01	0.00	0.00	0.00	0.14	0.11	-0.05

Notes: (1) Indices and prices were taken from level logarithms. (2) Correlations include the Rigobon correction for columns 2 to 7, based on sample variance for the whole period.

The first of the periods considered (September 1999-March 2000) was marked by an exchange rate that was depreciating, after remaining at the band ceiling for a lengthy period. This trend was attenuated by a monetary policy rate on the rise, which pushed the exchange rate up to around 500 pesos per dollar at the end of the first quarter of 2000. The Chilean economy remained at the margin of the economic difficulties that affected some countries within the region, such as Argentina and Ecuador, a situation reflected in the negative correlation of the exchange rate with the IPSA. Moreover, the copper price rose throughout 1999, reaching 85 cents per pound, before falling back to 80 cents as the period closed. It is also apparent that there was no relationship between our currency and the Argentine situation. In this climate of confidence, during the first six months of a free floating exchange rate monetary policy was the main variable affecting exchange rate trends.

In the next period (March-August 2000) the monetary policy rate reached its highest point since September 1999 and as it started to fall it released pressure on the exchange rate, which was apparent in the negative correlation of this last variable and 30-89 day deposit rates. The drop in rates also came when the prospects were for lower world growth and weaker domestic demand. This all affected longer-term rates, such as the PRC8, which fell by 50 basis points during this period.

The third period under analysis (August 2000-March 2001) was affected by the oil price, which pushed inflation out of the target range. Continuing with this trend, long-term rates (both domestically and abroad) fell sharply, with the PRC8s reaching 5%. However, the exchange rate performed relatively stably during the period, with conditions in Argentina becoming the main focus of volatility.

During the second and third quarters of 2001, the Chilean exchange market became solidly anchored to conditions in Argentina, with the peso depreciating significantly given the worsening of the economic crisis in that country. Without a doubt, a 0.6 correlation between the exchange rate and the SSA reflects this, indicating regional contagion. A strong drop in the copper price, pointing to depressed demand worldwide, also affected this regional scenario. Under these circumstances the Board of the Central Bank decided in August to increase the supply of foreign exchange hedging instruments and liquidity in foreign currencies, through the announcement of the auction of US\$2 billion in PRDs and US\$2 billion more to intervene where justified in the exchange rate market through December 2001. These

measures restored calm to the Chilean exchange market, with the dollar falling to under the 670 pesos where it stood prior to the attacks in the US. Moreover, the 3-month LIBOR fell sharply as well, in an effort to speed recovery in the US, making the US currency become much more expensive against the peso. Altogether, these events took the exchange rate to almost 720 pesos per dollar in late October 2001.

Finally, in November and December 2001, contagion from Argentina's economic and political upheaval receded, with the correlation starting to fall until it even changed sign. This also occurred in Brazil, where the local currency appreciated by around 15% during the last two months of 2001. In the case of the Chilean peso, the appreciation for this period reached some 9%, and was accompanied by some recovery in the copper price, which was also reflected in the correlations.

During the early days of 2002, while Argentina was looking at giving up the fixed parity with the dollar regime, Chile's exchange rate remained relatively stable, thus revealing that the effect of regional contagion was under control.

In summary, it is apparent that since the floating regime was established fluctuations in the exchange rate have been associated with a wide range of variables that have changed over time. This seems to be inherent to the exchange regime, given that the exchange rate is the main correction variable in the face of turbulences in the world economy. The stability of other variables relevant to financial markets, such as sovereign spread and domestic interest rates, reveal the robustness of the current exchange and monetary policy regime, despite the magnitude of fluctuations affecting international markets.

This section analyzes recent and foreseeable trends in the real sector of the economy, including prospects for economic activity, fiscal policy, the labor market, and the current account, in order to examine their relevance to the future behavior of inflation. To do so, it reviews in detail factors influencing both domestic and external demand, recent trends in employment, productivity and resource use, in order to examine possible future inflationary pressures derived from factor markets.

Chapter synthesis

In 2001, economic activity grew by 3.0%, below forecasts in the previous report. Growth during the second half of the year was lower than the first, reaching 2.6% in the third quarter and 2.3% in the fourth, both over the same period in 2000. Manufacturing affected general results, experiencing the lowest sectoral growth for the year (0.6%), while agriculture (6.3%) and fishing (13.6%) pushed growth, although with a low impact on overall results. Transport and communications (5%) and energy (7.1%) grew more than average, although more moderately than their significant rates from the previous year.

Expenditure contracted throughout 2001 (-0.5%), except in the first quarter, due to the persistent decumulation of inventories and decelerating expenditure on machinery and equipment, both trends that deepened during the second half of the year (Figure III.1).

Gross capital formation rose 2.6% in 2001, tending to slow as the year progressed, as machinery and equipment declined, turning around the high level reached during the first half. The rest of domestic demand, meanwhile, fell 2.6% during the year. Capital goods imports significantly influenced investment's behavior, performing modestly in the fourth quarter, affected by trends in the exchange rate.

The housing market performed well during the first half of 2001. Thus, the housing component of investment in construction and other works rose steadily throughout the year, in line with an increase in building permits, which nonetheless toward year's end tended to fall.

Private consumption grew 3.2% during the year, with an uneven contribution by its components. Sales of non-durable consumer goods continued to rise, but other components, such as durable consumption performed increasingly poorly.

For the first quarter of 2002, the GDP looks likely to post annual growth of 3.2%, while domestic demand is expected to rise 2.6%.

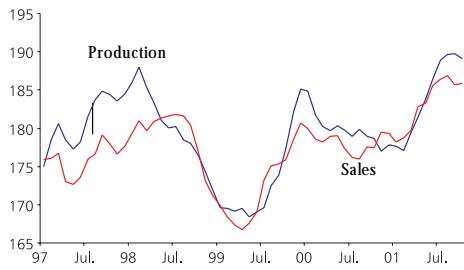
Domestic demand

Consumption and inventory change

The most permanent components of expenditure grew steadily although somewhat modestly in 2001, with private consumption averaging 3.2% annually. This trend was supported by the performance of Chilean non-durable consumer goods, while durables, particularly imported goods,

¹ All figures for the fourth quarter, second half or year as a whole is provisional.

Figure III.2
Manufacturing production and sales of consumer goods (average 1989=100)



(1) Moving quarterly average.

Source: National Statistics Bureau.

Figure III.3
Seasonally adjusted sales of non-durable and durable consumer goods (1) (average 1989=100)



(1) Moving quarterly average.

Source: National Statistics Bureau.

Figure III.4
Seasonally adjusted retail and supermarket sales (1) (average 2000=100)



(1) Moving quarterly average.

Source: National Chamber of Commerce.

plunged deeply in 2001. Thus, toward year's end retail and supermarket sales (CNC) continued to rise, as did non-durable manufactured goods. In contrast, durable consumer goods sales continued to fall, as did imports of consumer goods and sales of new vehicles, which nonetheless did post a slight improvement in recent months. This indicates that peso depreciation has led to the postponement of durable consumption and restocking decisions of commercial inventories (Figures III.2, III.3, III.4, and III.5).

As for the manufacturing sector, early in the fourth quarter of 2001 some important increases in production and sales indicators appeared. These were higher than forecast and strongest in manufacturing sales in October, mainly for goods headed abroad. This growing trend in the manufacturing sector is expected to persist in the coming months.

Fixed investment: construction and machinery and equipment

The worsening conditions abroad throughout 2001, along with turbulence in foreign exchange markets and ongoing uncertainty throughout the region significantly affected investment decisions. Thus gross fixed capital formation slowed down as the year advanced. In fact, after strong growth during the second quarter, growth slowed steadily and finally fell in the fourth quarter. Underlying this performance was the decline in investment in machinery and equipment noted during the second half.

Thus, after rising by almost 10% during the first quarter, gross fixed capital formation rose 3.3% in the second and third, then fell 4.8% in the fourth, dragged down by machinery and equipment, which moved the most. In the first half, this item rose 7.6%, then fell 3.6% in the second half, closing 2001 with an average of 1.7%. For the first quarter of 2002, growth is expected to reach 3.0%. It should be noted that most capital goods affected were from abroad, so changes in the exchange rate strongly affected this variable and its projections (Figure III.6).

On average the housing market performed more strongly, mostly in the first half of 2001. This was particularly influenced by construction of housing, which rose steadily throughout the year.

Although September was not a good month for the real estate sector, with low sales and high mortgage rates, in November stocks grew slightly more than new housing, thus partially recovering from the sharp decline in the number of months necessary to sell off existing supply, which reached 17.7 months. Nonetheless, also in November, housing building permits performed rather weakly (Figures III.7 and III.8).

In terms of projects, the most recent investment list generally maintains the volume forecast in the September Report. Nonetheless, this will probably decline in the coming years, due to postponements in the public works, residential and hydroelectric sectors. Starting in 2003 and 2004, investment should rise significantly, both from the perspective of consolidating previously started investment and developing new projects. In terms of magnitude, over the next two years the mining, real estate and public works (associated with auctions of roads and public utilities) sectors continue to stand out. Similarly, investment expected for the forestry industry and energy tend to rise substantially in 2002, a phenomenon that should grow stronger in 2003. Similarly, in 2002 investment in ports (Puerto Mejillones) stands out, but will not be repeated the next year. Finally, investment in telecommunications will continue to fall (Table III.1).

Figure III.5
Seasonally adjusted consumer goods imports
and sales of new vehicles (1)
(units and US\$ million)



(1) Moving quarterly average.

Sources: Central Bank of Chile, Asociación Nacional Automotriz de Chile (national car association of Chile).

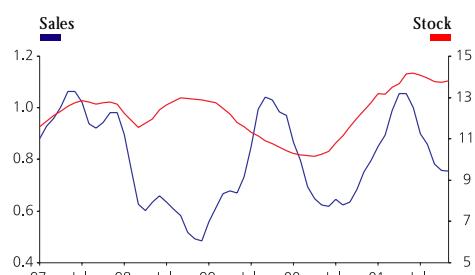
Figure III.6
Seasonally adjusted capital goods sales
and imports (1)
(average monthly index 1990=100 and
US\$ million)



(1) Moving quarterly average.

Sources: Central Bank of Chile, National Statistics Bureau.

Figure III.7
Seasonally adjusted sales and stock of new
housing (1)
(thousands of units)



(1) Moving quarterly average.

Source: Cámara Chilena de la Construcción (Chilean association of construction firms).

Table III.1
Investment list
(US\$ million)

Sector	1998	1999	2000(e)	2001(p)	2002(p)
Mining	2,129	770	568	908	2,484
Forestry	166	60	150	166	441
Manufacturing	562	324	99	196	411
Energy	1,827	1,160	278	408	920
Ports	110	79	56	83	135
Real estate	1,780	1,339	1,415	1,744	1,771
Public works	687	796	1,199	991	1,378
Telecommunications	845	729	631	157	38
Other	115	20	15	8	2
Total	8,221	5,275	4,411	4,662	7,579

(1) Updated through September 2001.

(e) Estimate.

(p) Projection.

Source: Corporación de Desarrollo Tecnológico de Bienes de Capital.

The investment rate is expected to reach about 27% of GDP in 2001 and 2002.

Fiscal policy

Accumulated spending of the national budget from January to September 2001 posted a surplus, equal to 0.5% of annual GDP, the result of a surplus during the first quarter that was not reverted in the following quarters. The third quarter posted a deficit of almost -0.1% of annual GDP, with the structural surplus for 2001 estimated to be around 0.9% of GDP.

The increase in total revenue during the third quarter of 2001 was noteworthy, with real 12-month growth reaching 14.2%, due to the rise in current revenues (14.1% real), especially taxes (14% real), and copper (91% real).² Finance ministry authorities attribute this rise in revenues to reduced tax evasion, but other phenomena may also be present, such as the strong tendency to sell off inventories, which reduces VAT refunds. Similarly the difference between the domestic demand deflator and CPI (about 4%) and its impact on revenues may also mean these figures are somewhat inflated due to the difference over relative prices. This could indicate, in practice, that the supposed contractive effect in revenues is nothing of the kind (Figure III.9).

Spending with macroeconomic impact rose 5.3% in the July-September quarter over the same quarter of the previous year, in line with projections in the September Report (Figure III.10).

On the expenditure side, during the third quarter spending rose 1.1% over the same period in 2000, the result of a 3.5% increase in personal expenditure and a 5.2% reduction in spending on consumer goods and services. Thus, during the third quarter, both current saving and the general surplus (as moving annual averages) showed a slight tendency to rise (Figure III.11).

² US\$134 million were withdrawn from the Fondo de Compensación del Cobre (copper price compensation fund) during this period.

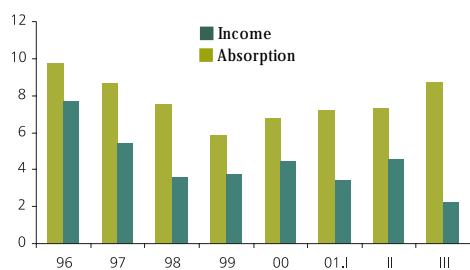
Figure III.8
Building permits, new works (1)
(thousands of square meters)



(1) Moving six-month average.

Source: National Statistics Bureau.

Figure III.9
Current income (1) and public absorption
(percentage change over the previous year) (2)

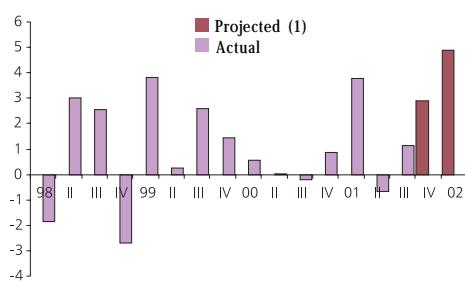


(1) Includes income from privatizations for 2000.

(2) Quarterly figures represent moving annual averages.

Source: Dirección de Presupuestos (national budget office).

Figure III.10
Quarterly public expenditure with
macroeconomic impact
(seasonally adjusted quarterly growth rate)



(1) Projected based on budget.

Source: Dirección de Presupuestos (national budget office).

Estimates for the fourth quarter of 2001 suggest a deficit in public finance, due to the positive seasonal effect of public expenditure, the negative effect on governmental revenues of weaker private expenditure and the depressed copper price.³ This will generate a deficit that will more than absorb the surplus accumulated through September, to close the year with a fiscal deficit of 0.5% of GDP, at the most, more than contemplated in the national budget law for 2001 (-0.1% of GDP). Public expenditure with macroeconomic impact should rise somewhat more than 7% during the last quarter of 2001.

In general terms, for 2002, fiscal policy is expected to be mildly expansive. According to the alternative scenario presented by the finance ministry in September, assuming a copper price of 71 cents per pound and 3.5% growth in GDP, the deficit would reach 0.6% of GDP, retaining the projection of a structural surplus of 1.0% of GDP. According to the national budget approved for 2002, growth in expenditure with macroeconomic impact should reach 4.9% over 2001. In terms of its components, the 2002 budget provides for a significant increase in public investment, composed of real investment, with sectoral investment of regional allocations and capital transfers reaching 11%. Part of this investment growth will be financed with an increase in public saving (3.7% of GDP) in 2002.

External sector and current account

The balance of trade and current account projections

The balance of trade for the fourth quarter of 2001 posted a surplus, mainly due to the low level of imports, which reached the lowest point for the year. With this result, the annual balance reached US\$1.55 billion, slightly more than 2000, but based on lower exports and imports. The balance of trade was more favorable than forecast in the September Report, due to fewer purchases abroad. Similarly, exports came in under forecasts, mainly due to the sharp fall in prices. At the close of 2001, the current account deficit had reached US\$1.025 billion, 1.6% of GDP.

For 2002, this deficit in the current account is expected to fall, mainly due to lower net outflows in interest and profits. Moreover, net outflows of non-financial services are also expected to decline, the balance of transfers should improve, and the balance of trade should be slightly lower than last year (Table III.2).

Table III.2
Current account
(US\$ million)

	2000	2001			2002 (p)	2003 (p)
		I Half	II Half	Total (e)		
CURRENT ACCOUNT		-988	-154	-871	-1,025	-675
Balance of trade	1,436	1,235	315	1,550	1,500	2,050
Exports	18,158	9,541	7,909	17,450	18,300	21,025
Imports	-16,722	-8,306	-7,594	-15,900	-16,800	-18,975
Non-financial services	-558	-194	-181	-375	-325	-325
Financial services	-2,404	-1,438	-1,237	-2,675	-2,425	-3,000
Unilateral transfers	538	243	232	475	575	600

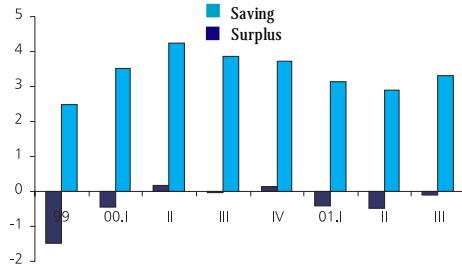
(e) Estimates.

(p) Projections.

Source: Central Bank of Chile.

³ These factors, which throughout 2001 were offset by a higher exchange rate, may lose this counterbalance to the degree that the peso remains more solid, as it has in the foreign exchange market since mid-November.

Figure III.11
Current saving and central government general surplus (1) (2)
(percentage of GDP)



(1) Without correcting for FCC and including income from privatizations in 2000.

(2) Quarterly figures represent moving annual averages.

Source: Dirección de Presupuestos (national budget office).

Exports

During the fourth quarter, already deteriorated export prices got even worse, the result of weakened demand abroad. Thus, prices fell 18.9% during the fourth quarter, 10.7% for the year. This drop was offset, to a significant degree, by an increase in export volumes: 7.6% in the fourth quarter, 7.5% for the year. Growth in volumes was due to traditional, non-copper goods (6.9% for the year), and, very importantly, because growth in untraditional exports rose above expectations (13.4% for the year). This last type of exports is more sensitive to peso depreciation (Table III.3 and Table III.4).

Table III.3
Exports by product category
(percentage change in quantity, price and value, by category)

Specification	2000.I	2000.II	2000.III	2000.IV	2000.Year	2001.I	2001.II	2001.III	2001.IV	2001.Year
Percentage change by volume										
Copper	14.5	-8.0	13.8	2.4	4.9	-0.9	9.1	2.9	0.3	2.7
Non-copper	6.9	9.3	6.3	7.5	6.9	8.1	16.9	8.1	13.1	10.8
Main	5.5	0.5	0.4	5.9	2.9	-1.1	13.2	4.3	14.8	6.9
Other	8.0	16.4	9.2	8.3	9.5	16.1	19.6	10.1	12.3	13.4
Total	9.3	2.7	9.3	5.4	6.1	4.7	13.9	5.9	7.6	7.5
Percentage change by price										
Copper	29.0	23.1	13.5	11.1	19.0	0.2	-3.0	-16.4	-22.6	-10.7
Non-copper	4.1	0.5	8.6	0.8	4.0	-5.8	-7.3	-16.1	-16.6	-10.7
Main	8.7	3.0	19.1	10.0	9.6	-0.9	-9.4	-23.7	-19.7	-11.9
Other	0.5	-1.2	3.9	-3.2	0.6	-9.5	-5.9	-12.3	-15.0	-10.0
Total	12.5	8.2	10.6	4.9	9.6	-3.6	-5.7	-16.2	-18.9	-10.7
Percentage change by value										
Copper	47.7	13.3	29.2	13.8	24.8	-0.7	5.9	-14.0	-22.4	-8.3
Non-copper	11.3	9.8	15.5	8.4	11.2	1.8	8.2	-9.3	-5.7	-1.0
Main	14.7	3.5	19.6	16.4	12.8	-2.0	2.5	-20.5	-7.8	-5.8
Other	8.5	15.0	13.4	4.8	10.1	5.1	12.4	-3.5	-4.6	2.0
Total	22.9	11.2	20.9	10.6	16.3	0.9	7.3	-11.3	-12.7	-4.0

Source: Central Bank of Chile.

Table III.4
Exports by product
(percentage change in quantity, price and value, by product)

Specification	2000.I	2000.II	2000.III	2000.IV	2000.Year	2001.I	2001.II	2001.III	2001.IV	2001.Year
Percentage change by volume										
Copper	14.5	-8.0	13.8	2.4	4.9	-0.9	9.1	2.9	0.3	2.7
Wood pulp	-8.4	3.9	-4.9	-3.4	-3.3	-11.3	23.5	9.1	26.9	12.0
Fishmeal	-1.9	-28.2	-6.7	17.1	-9.6	72.5	-29.4	-31.5	12.6	-2.3
Fresh fruit	-1.4	6.7	9.2	40.2	4.4	0.7	17.6	13.1	7.6	6.7
Methanol	73.5	25.8	8.7	-4.7	22.1	-17.7	19.2	-3.2	11.3	1.2
Total	9.3	2.7	9.3	5.4	6.1	4.7	13.9	5.9	7.6	7.5
Percentage change by price										
Copper	29.0	23.1	13.5	11.1	19.0	0.2	-3.0	-16.4	-22.6	-10.7
Wood pulp	57.2	60.6	51.5	27.0	48.7	-4.0	-34.3	-44.8	-43.5	-33.4
Fishmeal	-17.6	-4.5	-6.9	-5.3	-7.6	-3.1	19.7	30.8	22.3	17.1
Fresh fruit	6.4	-21.7	0.8	1.7	-4.0	-17.2	-7.1	-12.8	17.0	-4.5
Methanol	16.6	60.5	94.1	163.1	79.6	149.2	95.0	-22.8	-50.9	19.3
Total	12.5	8.2	10.6	4.9	9.6	-3.6	-5.7	-16.2	-18.9	-10.7
Percentage change by value										
Copper	47.7	13.3	29.2	13.8	24.8	-0.7	5.9	-14.0	-22.4	-8.3
Wood pulp	44.0	66.8	44.1	22.8	43.8	-14.8	-18.8	-39.8	-28.3	-25.5
Fishmeal	-19.2	-31.4	-13.1	10.9	-16.4	67.1	-15.5	-10.4	37.6	14.5
Fresh fruit	4.9	-16.4	10.0	42.5	0.1	-16.6	9.2	-1.5	25.9	1.9
Methanol	102.3	102.0	111.0	150.9	119.3	105.2	132.4	-25.2	-45.3	20.7
Total	22.9	11.2	20.9	10.6	16.3	0.9	7.3	-11.3	-12.7	-4.0

Source: Central Bank of Chile.

Non-traditional products that should be mentioned include, firstly, a rise of over 50% in the volumes of salmon and trout exports, followed by fruit and wine, which coincide with important price reductions. The growth in untraditional non-salmon, trout and wine export volumes reached 7% for the year, although it slowed somewhat in the fourth quarter.

In terms of export destinations, exports by value to Asia fell significantly, particularly to Korea, Japan and Taiwan, due largely to the lower price for copper exports. In contrast, exports to the US, Europe and Latin America rose, with the first two regions receiving 38% more copper by volume, associated with the closure of high-cost plants that had become unprofitable to run at current prices (Table III.5).

Table III.5
Exports by category and area
Percentage change in quantity, price and value by category and geographic area
(period: to November 2001 / to November 2000)

Specification	Asia	(Japan)	Rest of world	(US)	(Argentina)	World total
Percentage change by volume						
Copper	-13.0	-6.3	19.4	37.8	-6.5	4.7
Non-copper	21.8	8.9	19.2	14.6	-4.5	12.1
Main	12.1	-17.3	6.3	16.6	-11.0	7.8
Other	32.4	21.4	26.5	13.2	-3.7	14.9
Total	2.1	1.9	19.3	19.0	-4.7	9.1
Percentage change by price						
Copper	-13.6	-13.8	-10.1	-12.0	-7.7	-10.9
Non-copper	-25.6	-18.0	-14.9	-10.6	-5.4	-11.7
Main	-20.5	-3.4	-10.6	-12.4	-11.1	-13.5
Other	-30.4	-22.7	-16.9	-9.3	-4.8	-10.6
Total	-19.8	-16.3	-13.3	-10.9	-5.6	-11.4
Percentage change by value						
Copper	-24.9	-19.3	7.3	21.2	-13.6	-6.7
Non-copper	-9.3	-10.7	1.5	2.5	-9.7	-1.0
Main	-10.8	-20.1	-5.0	2.1	-20.8	-6.7
Other	-7.9	-6.2	5.1	2.7	-8.3	2.8
Total	-18.1	-14.6	3.4	6.0	-10.0	-3.3

Source: Central Bank of Chile.

In 2002, exports are expected to rise primarily due to increased volumes, combined with a slight improvement in prices. Volume growth will be driven by non-copper traditional products (5.6%) and the continued strong performance of untraditional exports observed in recent years. However, these are expected to grow less than in 2001, given that the increase last year was exceptional, due to the enormous production of sea products. The drop in Chile's export prices has pushed producers to incorporate more value added and to seek out new markets to sell their goods.

In terms of traditional exports in 2002, copper export volumes will grow moderately, due to the absence of expansions and new projects until 2003 and planned production cuts.

Imports

A reflection of depressed domestic demand, import values fell (-14.6% in 12 months) during the fourth quarter of 2001, for a total annual decline of 4.7%. The decline in fuel and lubricant imports (31.2% in the

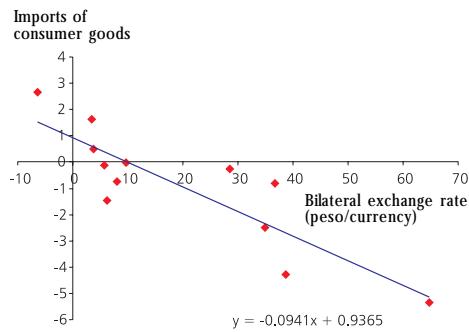
fourth quarter and 10.6% for the year), and consumer goods (12.5% for the quarter and 6.8% for the year) were particularly important. Capital goods imports, despite the reduction in the fourth quarter (20.7%), fell just 2.3% for the year (Table III.6).

Table III.6
Imports by product category
(annual percentage change in quantity, price and value by category)

Specification	2000.II	2000.III	2000.IV	2000.Year	2001.I	2001.II	2001.III	2001.IV	2001.Year
Percentage change by volume									
Consumer goods	31.2	35.3	17.7	1.1	19.9	5.8	-11.9	-0.4	-7.5
Capital goods	-8.7	3.4	15.3	25.4	8.5	19.1	3.5	0.8	-17.7
Intermediate goods	6.0	12.2	3.2	1.8	5.6	5.5	-2.2	-1.9	-2.6
Fuel	0.3	0.8	0.0	3.4	0.8	5.6	-1.9	-3.5	0.3
Other	7.0	15.3	4.1	1.4	6.8	5.5	-2.3	-1.3	-3.5
Total imports	7.0	14.1	8.4	6.9	9.0	8.2	-2.8	-1.1	-7.0
Percentage change by price									
Consumer goods	-2.8	0.4	-0.8	1.4	-0.5	-2.4	-0.9	-5.2	-5.4
Capital goods	4.3	3.7	4.4	1.9	3.5	-0.7	-2.5	-3.7	-3.7
Intermediate goods	19.7	16.9	14.1	12.0	15.7	0.8	-2.9	-5.7	-10.6
Fuel	98.6	62.0	51.2	36.7	59.4	5.2	-4.4	-12.5	-31.4
Other	5.7	5.9	4.5	5.5	5.4	-0.6	-2.3	-3.2	-3.2
Total imports	11.5	10.9	9.0	7.2	9.7	-0.1	-2.5	-5.2	-8.2
Percentage change by value									
Consumer goods	27.5	35.8	16.8	2.5	19.3	3.2	-12.7	-5.6	-12.5
Capital goods	-4.8	7.2	20.3	27.8	12.3	18.3	0.9	-2.9	-20.7
Intermediate goods	26.8	31.1	17.7	14.1	22.2	6.4	-5.0	-7.5	-12.9
Fuel	99.2	63.3	51.2	41.4	60.6	11.1	-6.2	-15.6	-31.2
Other	13.1	22.1	8.8	7.0	12.6	4.9	-4.6	-4.5	-6.6
Total imports	19.3	26.5	18.1	14.6	19.5	8.1	-5.3	-6.2	-14.6

Source: Central Bank of Chile.

Figure III.12
Change in countries' share of consumer goods imports and real bilateral depreciation (1)
(change 1998-2001, percent)



(1) The country sample includes: Canada, US, Mexico, Brazil, South Korea, Japan, Germany, Belgium, Spain, France, Holland and Italy.

Source: Central Bank of Chile.

In terms of import origins, the drop in imports from the US, particularly consumer goods, stood out. To a large degree, however, this was offset by an increase in imports from Europe and Latin America. These last rose mainly thanks to larger volumes of oil imported from Argentina, and intermediate capital goods from Brazil. Purchases from Asia held steady, with increases in goods from China and a decline in goods from Japan.

Real depreciation in recent years of Chile's peso against the currencies of its trading partners has influenced which countries Chile trades with. In the case of consumer goods imports in particular, there is an inverse relationship between share of imports and the bilateral exchange rate, with a clear switch toward economies of origin whose currencies have depreciated more than the Chilean peso (Figure III.12).

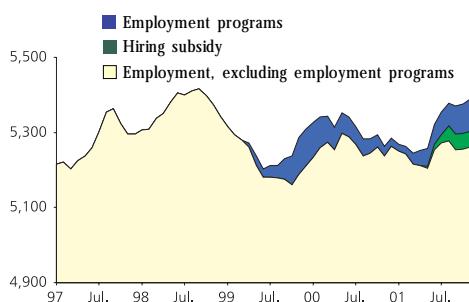
For next year, the recovery in domestic demand is expected to be reflected in larger import volumes of around 8.1% for non-fuels.

Employment and unemployment

After rising during the second quarter of 2001, employment stagnated in the following periods, a situation that also affected participation rates in recent months. Despite this, employment was higher than it was during the same period in 2000.

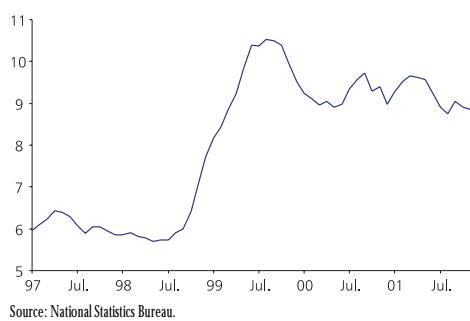
In fact, during the fourth moving quarter that ended in November, occupation rose by more than 127,000 jobs (2.4%) over the same period in 2000. The private sector generated over 60,000 new jobs, both in annual terms and compared to the previous quarter. In seasonally

Figure III.13
Seasonally adjusted national employment
(thousands of people)



Sources: National Statistics Bureau, Ministry of Labor.

Figure III.14
Seasonally adjusted national unemployment
(percent of the work force)



Source: National Statistics Bureau.

Figure III.15
Seasonally adjusted national participation rate
(percent of the population 15 years and over)



Source: National Statistics Bureau.

adjusted terms, the quarter to quarter change reached around 6000 people (0.1%).

Government employment plans saw occupation rise by over 7000 people during the September-November period, compared to the previous moving quarter, accounting for less than 10% of total employment for the period. In annual terms, government programs represented an increase in employment of over 100,000 people (Figure III.13).

The unemployment rate reflected these trends. During the moving quarters ending in October and November 2001, national unemployment fell, ending November at 8.9%. This was due to a 2.5% increase in those occupied (over 130,000 people) and an 11% decline in those unoccupied (over 67,000 people) compared to the moving quarter ending in September. At the same time, for the September-November quarter, unemployment fell by 0.5 percentage points over the same period of the previous year.

Correcting for seasonal factors, the unemployment rate for the moving quarter ending in November remained the same as for the previous period, although lower than the same quarter in 2000 (9.4%). This improvement over the previous year was the result of a 2.4% increase in those occupied in seasonally adjusted terms and a 4.1% decline in those unoccupied (Figure III.14).

The strong increase in the participation rate during the second quarter of 2001 tended to stagnate toward year's end, especially for men (Figure III.15).

At the sectoral level, despite the fact that the agriculture, hunting and fishing sector performed most strongly during the last months of 2001, due to seasonal effects, this declined 4.4% over the previous year. In any case, important economic sectors sustained higher occupation rates than in 2000. In fact, construction employment rose 1.6% over the previous quarter and 2.9% over the same period in 2000, a situation associated with the expansion in building permits that began in the second quarter of 2001. Manufacturing and retail performed flatly in recent months, although in annual terms employment in retail rose significantly (6%) (Figure III.16).

Unemployment for men from 35 to 54 years of age, which is the labor force benchmark that is least distorted by cyclical economic effects, reached 6.2% during the moving quarter ending in November, a slight increase over previous periods.

Upon breaking down occupational groups, employment of unskilled labor⁴ continued the recovery that began last June, but more slowly than in previous periods (4.1% per year). Employment of skilled labor⁵ reverted the recovery that characterized the first half of 2001 (Figure III.17).

Prospects for the labor market indicate unemployment during the last quarter of 2001 was the lowest for the year, because the negative seasonal effect usually present during the winter disappeared completely.

⁴ Farmers, ranchers, fishing people, drivers of transport vehicles, crafts people, operators, workers, day workers, and personal service workers.

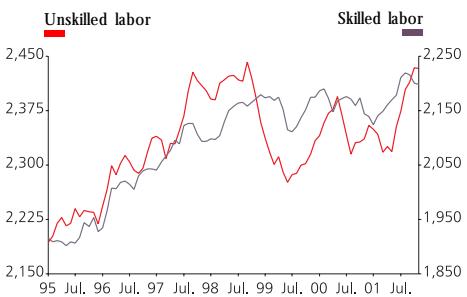
⁵ Professionals, sales people, employees and managers.

Figure III.16
Seasonally adjusted employment by sector
(January 1997 = 100)



Source: National Statistics Bureau.

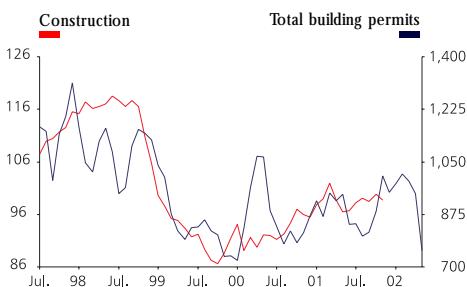
Figure III.17
Seasonally adjusted employment by occupation group (1)
(thousands of people)



(1) Occupations considered skilled labor are: professionals, technicians, management, administrators, directors, office workers and sales staff. Unskilled occupations (excluding farmers, cattle ranchers and fishing people): drivers, crafts people, machine operators, workers, day-workers and personal service workers.

Source: National Statistics Bureau.

Figure III.18
Employment in construction and total building permits
(January 1997 = 100; permits include 6-month lag)



Source: National Statistics Bureau.

Taking advantage of seasonal conditions favorable to employment, toward the end of the summer of 2002, unemployment should decline steadily. Nonetheless, the outlook for employment remains one of moderate growth. The reduction in unemployment will also depend on the application of new labor legislation not removing flexibility from the market, discouraging hiring. In any case, employment trends remain in line with controlled inflationary pressures. One risk factor is the recent drop in building permits, which historically has preceded movements in employment in construction (Figure III.18).

Productivity and resource use

The strong productivity increases posted since mid-2000 tended to moderate during the second quarter of 2001, coinciding with a recovery in occupation, particularly in manufacturing (Figure III.19).

A breakdown of manufacturing trends reveals strong productivity increases in wood and food sectors since the middle of 2000 (Figure III.20). Several explanations exist for the increase in average manufacturing productivity in recent years. For example, the greater strength of less labor-intensive sectors associated with the tradable sector;⁶ increased efficiency or intensity of capital use at the level of each subsector⁷ (Figure III.21); the real increase in the cost of labor, and the drop in long-term interest rates (Figure III.22). While the substitution of labor by capital is slow and requires important adjustments to productive processes, the fact that labor has grown increasingly expensive is one element that is probably delaying growth in employment.

In any case, it is unlikely that changes in efficiency and relative prices of the magnitude observed since 1999 repeat themselves in the future, so in coming quarters productivity is unlikely to increase as it did in recent years.

The gap between output and employment continues to show that productive resources within the economy are significantly underused, essentially in some sectors of the labor market. In fact, unemployment of men from 35 to 54 years remains above averages for 2000 (Figure III.23).

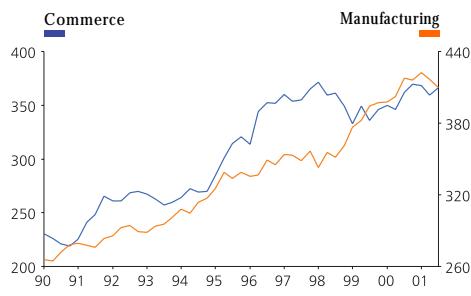
Significant idle capacity persists in the labor market, which is confirmed by the still high participation in city and contingency fund employment programs in recent periods. The persistence of this idle capacity has meant that inflationary prospects remain under control from the perspective of the labor market (Figure III.24). The economy's productive capacity is expected to rise from 4.5% to 5% in the next two years, given the high rate of unemployment and growth expected in investment expenditure.

In recent quarters the economy posted a significant drop in domestic expenditure, due to the contraction in investment in inventories and machinery. In any case, the more permanent components of expenditure posted more stable growth, thanks to monetary and credit conditions, and growth in occupation since the middle of last year. External accounts reflected the overall deterioration in domestic expenditure, with the current account of the balance of payments closing with a deficit of 1.6% of GDP, one point lower than projected in the last Report.

⁶ As per the Hernando (2001) classifications. This effect is captured by holding the value added to employment ratio constant.

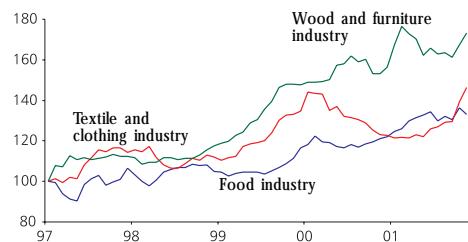
⁷ The impact of this phenomenon can be estimated by holding the value added to employment by branch of industry ratio (two digits) constant.

Figure III.19
Average productivity of work by sector
(thousands of 1986 pesos per person)



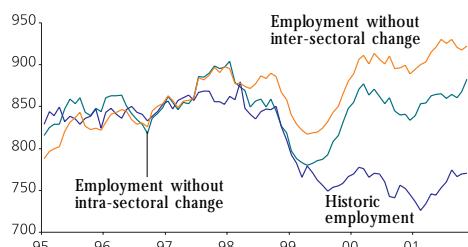
Source: National Statistics Bureau.

Figure III.20
Average labor productivity in manufacturing
(1997=100)



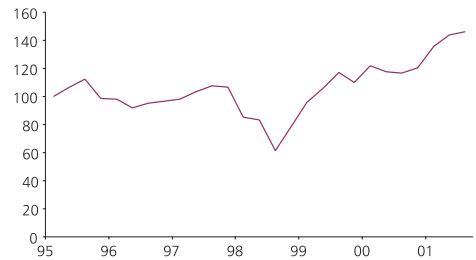
Source: SOFOFA (manufacturers lobby association).

Figure III.21
Industrial employment according to changing
intra-sectoral and inter-sectoral productivity
(thousands of people)



Source: Own calculations using figures from SOFOFA, MIP (1996) and National Statistics Bureau.

Figure III.22
**Ratio between real wage and the cost of capital
use
(1995:I = 100)**



Sources: Central Bank of Chile, National Statistics Bureau.

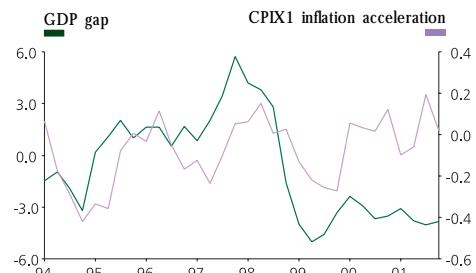
Figure III.23
**Output gap (1) and seasonally adjusted
employment
(percent)**



(1) Trend GDP calculated using the Hodrick-Prescott filter. Estimate for 2001.IV.

Sources: Central Bank of Chile, National Statistics Bureau.

Figure III.24
**Output gap (1) and inflationary acceleration (2)
(percent)**

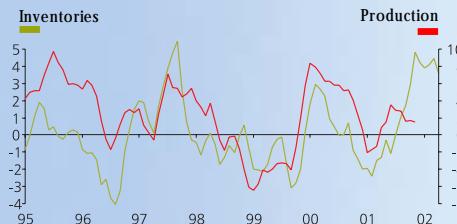


(1) Trend GDP calculated using the Hodrick-Prescott filter. GDP estimate for 2001.IV.

Sources: Central Bank of Chile, National Statistics Bureau.

BOX III.1: INVENTORIES THROUGHOUT THE CYCLE

Figure III.25
Manufacturing production (1) and inventories (2)
(% real change over the same period the
previous year, seasonally adjusted series)



(1) Moving quarterly average.
(2) Moving average for five months of gap between sales and manufacturing production from the INE.

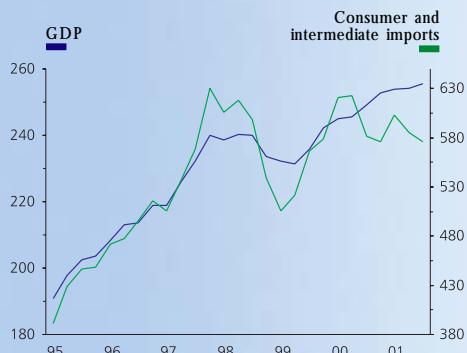
Sources: National Statistics Bureau and Central Bank of Chile.

Investment in stocks or inventories is, in general, the most volatile component of aggregate demand. Moreover, it tends to behave in the most pro-cyclic manner, so an indicator for this component is a very useful instrument. Because Chile has no direct figures for trends in inventories, for example regular surveys of establishments, we must resort to indirect methods that allow a glimpse of sectoral or local accumulation or disaccumulation of inventories within the economy. This box provides information on some such indicators, which provide information about the behavior of domestic expenditure last year, when the disaccumulation of inventories was particularly important.

A first indicator of inventories is afforded by the difference between manufacturing production and sales (Figure III.25). Since 1995, sales and production have performed relatively similarly, by volume, a trend that tended to break down in 2001, when manufacturing sales rose sharply, while production performed somewhat more moderately. This is partly the result of strong external demand, opening up the possibility of a recovery in manufacturing production in the future.

A second indicator comes from trends in imports, which constitute an important mechanism for accumulating or reducing inventories, particularly consumer and intermediate goods. Figure III.26 compares seasonally adjusted GDP to the volume of consumer and intermediate goods. The import series used does not include capital goods, since they tend to be reflected rather quickly in investment.

Figure III.26
GDP and consumer and intermediate imports (1)
(volume, Index base 1986 average = 100)



(1) Seasonally adjusted series.

Source: Central Bank of Chile.

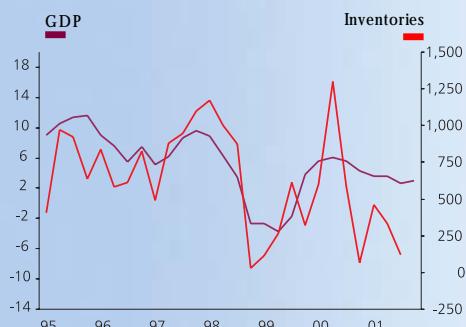
A similar association can be seen between GDP and the import index until the middle of 1997, at which point general activity starts to slow down but imports continue to post high volumes, which is consistent with a significant accumulation of inventories. Then imports tended to stabilize in mid-1998, falling sharply in the first half of 1999. Later, imports recovered quickly, probably due to growth prospects for 2000. As the pace of consumption growth slowed, imports slowed again. In 2001, something similar happened. After performing strongly early in the year, import volumes tended to fall, due both to lower growth prospects and turbulence in exchange markets. In short, inventory accumulation responds to changing prospects for expenditure, and are reflected in import fluctuations.

To measure in aggregate fashion the change in inventories using available information, we built a quarterly indicator of inventory changes, using the difference between the component, other, of domestic demand and quarterized⁸ private and public consumption.

This inventory series thus generated reflects a situation similar to that described in the case of imports, because since the end of 2000 the gap between inventories and GDP and expenditure has widened (Figures III.27 and III.28). It is worth noting that inventory levels in late 2001 were very similar to those at the lowest point in the recessive cycle during 1998-1999. This information suggests that this year should see significant inventory restocking, because the prospects for growth in expenditure's most permanent components, such as private consumption, remain stable. Secondly, more stability in financial markets has led to significant peso appreciation. Given imports' importance to inventory fluctuations, this is another factor that will contribute to restocking inventories this year.

⁸ Quarterization of annual private consumption figures involved using an approximate indicator based on information available for retail, supermarket and manufacturing sales.

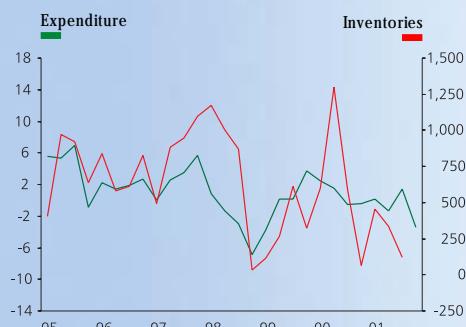
Figure III.27
GDP and inventory indicator (1)
(seasonally adjusted series; GDP: % change
(quarterly); inventories: base level index
1986=100)



(1) Indicator of residual inventories constructed using quarterization of private annual consumption (with a proxy indicator based on INE's figures for manufacturing sales indicators; INE and CNC supermarket sales and CNC retail sales).

Source: Central Bank of Chile.

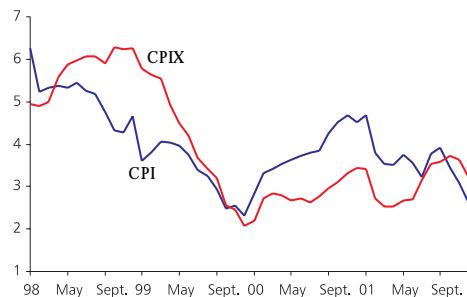
Figure III.28
Expenditure and inventory indicator (1)
(seasonally adjusted series; expenditure: %
change (quarterly); inventories: Index 1986 base
level = 100)



(1) Indicator of residual inventories constructed using quarterization of private annual consumption (with a proxy indicator based on INE's figures for manufacturing sales indicators; INE and CNC supermarket sales and CNC retail sales).

Source: Central Bank of Chile.

Figure IV.1
CPI and CPIX inflation
 (percentage change over the same period the previous year)



Source: National Statistics Bureau.

Table IV.1
CPI and CPIX
 (annual change)

		IPC	IPCX
2000	Jan.	2.8	2.2
	Feb.	3.3	2.7
	Mar.	3.4	2.8
	Apr.	3.5	2.8
	May	3.6	2.7
	Jun.	3.7	2.7
	Jul.	3.8	2.6
	Aug.	3.9	2.8
	Sept.	4.2	3.0
	Oct.	4.5	3.1
	Nov.	4.7	3.3
	Dec.	4.5	3.4
2001	Jan.	4.7	3.4
	Feb.	3.8	2.7
	Mar.	3.5	2.5
	Apr.	3.5	2.5
	May	3.7	2.7
	Jun.	3.6	2.7
	Jul.	3.2	3.1
	Aug.	3.8	3.5
	Sept.	3.9	3.6
	Oct.	3.4	3.7
	Nov.	3.1	3.6
	Dec.	2.6	3.2

Source: National Statistics Bureau.

This section analyzes recent and foreseeable short-term trends affecting prices and their determinants. The performance of different inflation indicators, their trends and main components such as international inflation, the exchange rate and wages are all examined and interpreted.

Recent trends in inflation

At the end of 2001, annual CPI inflation had reached 2.6%, less than anticipated in September and slightly under the center of the target range. Underlying inflation (CPIX), which excludes perishable and fuel prices, ended the year with annual growth of 3.2%, more than the CPI (Figure IV.1 and Table IV.1).

During the last four months of 2001, a series of factors combined to change the projections from the previous Report. The first was that after the terrorist attacks in September the price of a barrel of oil rose sharply to reach almost US\$30 in mid-month. Then, the increased likelihood of a worldwide recession and a decline in global demand for fuels caused the per-barrel price of crude oil to fall to almost US\$20, which is expected to last for some time.¹ Domestically, this led to a significant decline in fuel prices. In the case of gasoline for cars the price fell by somewhat more than 60 pesos per liter from mid-September to early January. Something similar occurred with other fuels included in the CPI. This element has been the main reason behind inflation falling more than originally projected.

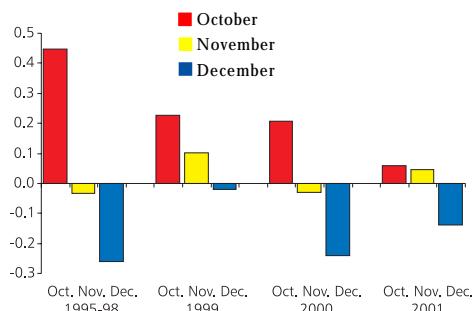
A second factor, which pushed inflation in the opposite direction, was the exchange rate. After measures announced by the Central Bank in mid-August, the nominal exchange rate backed down to between 660 and 670 pesos per dollar, which, after the attacks in the US and uncertainty regarding the performance of neighboring economies, soared to almost 720 pesos per dollar. In inflationary terms, the main effect of peso depreciation was felt in charges for regulated services (public translation, electric power, drinking water, and telephones). Altogether, these items accounted for some 0.4 percentage points of CPI from September and November, and more when calculating the CPIX. Peso appreciation since early November worked in the opposite direction, but its total effect on the costs of regulated services will not be observed until after Report closes.

Finally, this summer perishable goods have been marked by the absence of the usual positive seasonal effect on prices. Normally, perishable goods prices rise significantly in October, as the first crops of summer appear. This season, they have not behaved this way, with prices rising only slightly in October and November, offset in December (Figure IV.2). This factor also pushed inflation lower than forecast several months earlier.

The fact that the annual increase in CPIX during 2001 (3.2%) was more than measured during the year (2.7%) was the result of specific factors not associated with the decline in fuel prices and lower perishable inflation, elements not included in the CPIX. Apart from the effect of the higher exchange rate on regulated service prices, peso depreciation was

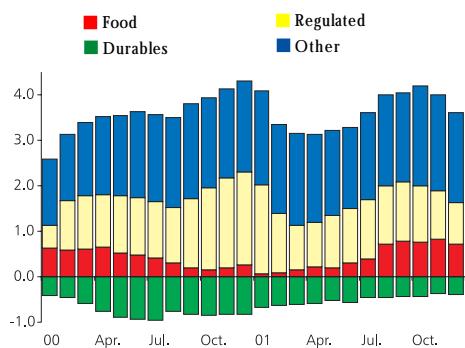
¹ Information available from oil futures suggests the Brent per barrel oil price will be around US\$20 for the next three months.

Figure IV.2
Perishables' impact on CPI
(percentage points)



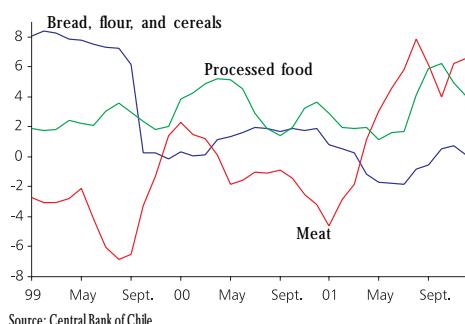
Sources: National Statistics Bureau and Central Bank of Chile.

Figure IV.3
Effect on CPIX by group
(percentage points)



Source: Central Bank of Chile.

Figure IV.4
Food prices included in the CPIX
(percentage change over the same period the previous year)



Source: Central Bank of Chile.

an inflationary pressure affecting the rest of prices and the CPIX. This has been apparent in the prices of some foods and durable goods whose contribution to CPIX inflation increased during the second half of 2001 (Figure IV.3).

In the case of food, increases have focused on several items, such as meat, milk products and sugar (Figure IV.4). Thus, the contribution that this type of price makes to the CPIX practically doubled during the second half of 2001 over the first half. Other product groups that could be affected by depreciation, such as durable goods prices, have showed a slight inflationary passthrough. This, nonetheless, has not translated into higher prices, but rather smaller reductions. So while the first half of 2001 averaged an annual increase of -1.8%, in the second this figure rose to -0.9% (Figure IV.5).

In more recent months, the effect of lower pressure on the exchange side has become apparent, as has the relatively weak performance of domestic demand. After posting high monthly increases comparatively speaking during the third quarter (0.4% on average), in the last quarter of 2001 CPIX inflation fell (0.2% on average), and posted no change in December. One example of this behavior was the price of new cars included in the CPI; by late October, this had risen 14% over the end of 2000, coinciding with more peso depreciation. From November-December, in contrast, the price of cars fell almost 8%, reflecting the reduced pressure from the exchange rate and weak demand.

Annual inflation ended 2001 slightly under the center of the Central Bank's target range.

Tradable goods inflation

The drop in fuel prices had more impact on tradable goods and services inflation (CPIT), which ended 2001 at 1.4%. After climbing 3.4% in September, the result of higher food and fuel prices, in the last quarter of the year the CPIT accumulated a decline of one percentage point (Figure IV.6 and Table IV.2).

The annual CPIXT continued to rise, ending the year higher than the CPIT for the first time since mid-1999. Two factors mentioned above influenced this behavior of the CPIXT: (1) the increase in food prices, and (2) the slowing of the decline in the price of durable goods (Figure IV.7).

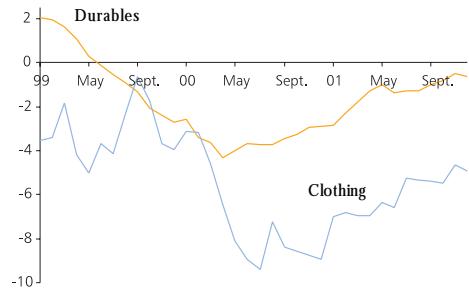
In terms of the inflationary effect of peso depreciation, which should be seen affecting CPIT inflation more strongly, as discussed above some passthrough, although slight, is apparent from the higher exchange rate to prices. Moreover, and despite substantial changes in expectations about depreciation in recent months, there's no sign of this kind of effect on private sector inflation expectations, which have remained in line with the Central Bank target. This has meant that rising costs have not generated constant price increases that end up taking the form of persistent general inflation² (Figure IV.8).

Related to this, retail margins continue to fall. The ratio of retail to wholesale prices (CPI/WPI) in the last quarter of 2001 continued to fall, as it did in recent months, similar to what is observed in the theoretical relation to prices³ (Figure IV.9).

² A more in-depth discussion of these factors is included in the September 2001 Report.

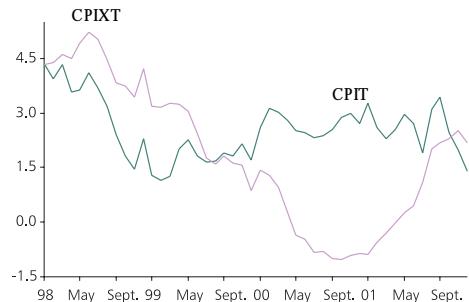
³ This relationship is constructed based on an equation examining cost structure, which distinguishes differentials between wages and production, and the impact of imported inflation in pesos.

Figure IV.5
Prices of durable goods and clothing included in
the CPIX
(percentage change over the same period the
previous year)



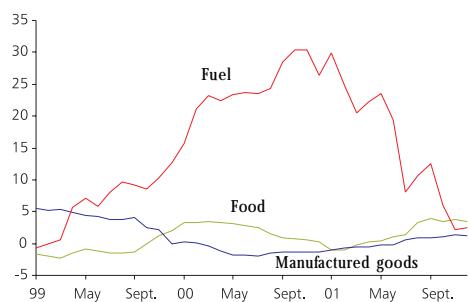
Source: Central Bank of Chile.

Figure IV.6
CPI_T and CPI_{XT}
(percentage change over the same period of
the previous year)



Sources: National Statistics Bureau and Central Bank of Chile.

Figure IV.7
Tradable inflation by group
(percentage change over the same period the previous year)



Source: Central Bank of Chile.

Table IV.2
CPIT, CPIXT, CPIN, and CPIXN
(annual change)

		CPIT	CPIXT	CPIN	CPIXN
2000	Jan.	2.6	1.4	3.0	2.9
	Feb.	3.1	1.3	3.5	3.9
	Mar.	3.0	0.9	3.8	4.4
	Apr.	2.8	0.3	4.2	4.9
	May	2.5	-0.4	4.6	5.2
	Jun.	2.4	-0.5	4.9	5.4
	Jul.	2.3	-0.8	5.2	5.6
	Aug.	2.4	-0.8	5.2	5.7
	Sept.	2.6	-1.0	5.8	6.3
	Oct.	2.9	-1.0	6.0	6.6
	Nov.	3.0	-0.9	6.3	6.9
	Dec.	2.7	-0.9	6.2	7.1
2001	Jan.	3.3	-0.9	6.0	7.0
	Feb.	2.6	-0.5	4.9	5.4
	Mar.	2.3	-0.3	4.7	4.8
	Apr.	2.6	0.0	4.4	4.6
	May	3.0	0.3	4.5	4.6
	Jun.	2.7	0.4	4.4	4.5
	Jul.	1.9	1.1	4.5	4.8
	Aug.	3.1	2.0	4.4	4.7
	Sept.	3.4	2.2	4.4	4.7
	Oct.	2.5	2.3	4.3	4.9
	Nov.	2.0	2.5	4.1	4.5
	Dec.	1.4	2.2	3.8	4.0

Sources: National Statistics Bureau and Central Bank of Chile.

It is not yet possible to identify inflationary pressures from higher margins or a greater passthrough from the exchange rate to durable consumer goods prices.

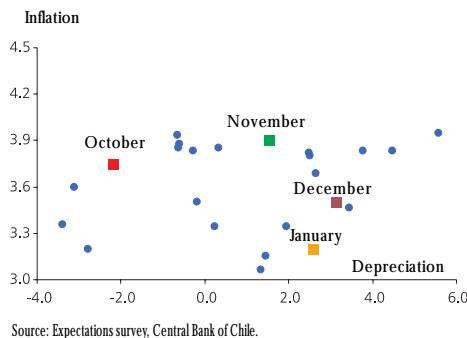
Inflation on importable manufactured goods

The performance of the US dollar on international markets has been another factor limiting the inflationary impact of peso depreciation. The baseline scenario for this report incorporates the effect of the recent performance of the dollar in international markets on world inflation measured in dollars and the prices of Chilean imports over the next eight quarters. Through November, the external price index measured in dollars rose 0.3% over the same month in 2000, and future trends will be determined by assumptions about the dollar's behavior (Figure IV.10). In particular, for 2002 and 2003 inflation will be positive at slightly over 1%.

The baseline scenario assumes external deflation in dollars for 2001, with inflation reaching slightly over 1% in the next two years.

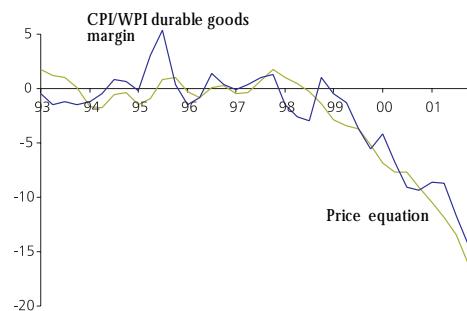
Consumer import prices fell during the third quarter of 2001, reaching levels similar to the beginning of the year (Figure IV.11). Total import prices also fell, although less than consumer prices, due to the impact of an increase in intermediate good imports. These last were affected by the higher average oil price during the third quarter, which turned around during the last quarter, but definitive figures were not yet available when this Report closed (Figure IV.12).

Figure IV.8
Expected depreciation and inflation to one year
(percent)



Source: Expectations survey, Central Bank of Chile.

Figure IV.9
Deviations at the margin compared to trend
1993-1998
(moving quarterly average, %)



Source: Central Bank of Chile.

Figure IV.10
Index of external prices relevant to Chile
(index 1986 = 100, in US dollars)



Source: Central Bank of Chile.

Wholesale prices (WPI)

Wholesale price inflation fell between September and December, pressured by a decline in annual inflation for both domestic goods and import prices. The lower cost of refining fuels pushed the WPI for domestic products down below levels for the end of the third quarter. At the same time, inflation on imports followed the exchange rate closely during this period, passing through to this sub-group of the WPI⁴ almost entirely (Figure IV.13 and Table IV.3).

Table IV.3
Imported, domestic and total WPI
(annual change)

		Total WPI	Domestic WPI	Imported WPI
2000	Jan.	13.1	12.4	15.4
	Feb.	13.1	13.7	11.6
	Mar.	12.4	13.6	8.7
	Apr.	9.9	10.5	8.3
	May	11.7	11.8	11.3
	Jun.	13.1	13.3	12.5
	Jul.	12.5	13.2	10.4
	Aug.	11.0	11.0	11.0
	Sept.	12.1	11.9	13.0
	Oct.	10.5	10.9	9.2
	Nov.	10.1	10.7	8.3
	Dec.	7.9	8.2	7.0
2001	Jan.	8.3	8.5	7.7
	Feb.	8.1	8.0	8.3
	Mar.	7.7	6.4	11.9
	Apr.	10.7	8.7	17.0
	May	10.9	9.0	16.7
	Jun.	8.5	6.6	14.4
	Jul.	7.4	5.1	14.6
	Aug.	9.9	7.3	17.6
	Sept.	8.0	5.9	14.6
	Oct.	7.0	3.5	17.6
	Nov.	4.6	1.3	14.7
	Dec.	3.1	0.8	10.2

Source: National Statistics Bureau.

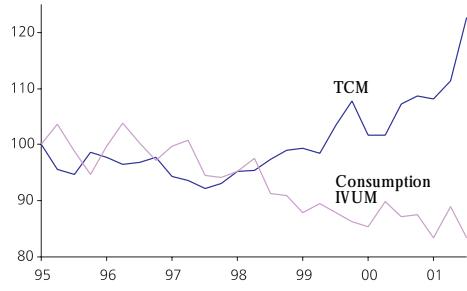
Annual WPI inflation fell during the fourth quarter.

Fuel prices

International fuel prices fell significantly in the second half of 2001. Toward mid-July, the international gasoline price fell by almost 50% (over levels in April) due to lower world demand. It then recovered slightly,

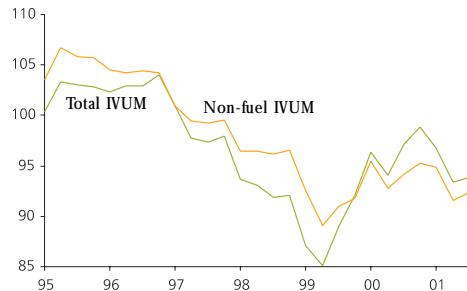
⁴ The use of a wholesale price indicator that considers the corresponding products included in the CPIX (47% of the original WPI basket) shows annual prices rising less than the aggregate index and consumer prices too.

Figure IV.11
Consumption IVUM and TCM
(index 1990 = 100)



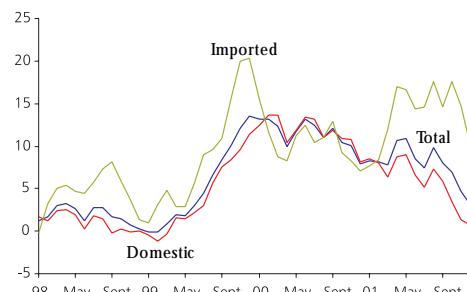
Source: Central Bank of Chile.

Figure IV.12
Total and non-fuel IVUM
(index 1990=100)



Source: Central Bank of Chile.

Figure IV.13
Imported, domestic, and total WPI
(percentage change over the same period the previous year)



Source: National Statistics Bureau.

bringing the gasoline price to almost US\$200 per cubic meter through mid-July, and then to US\$270 in September. After a drop in the per barrel oil price in late September and early October, price parity in the FEPP is currently standing at around US\$180.

Domestically, from October to December this led to a decline of around 60 pesos per liter in the gasoline price, affecting the CPI by around 0.5 percentage points, which offset the increase in August and September. This drop in the oil price also affected other fuels. In fact, in the fourth quarter of 2001, kerosene fell 15%, liquefied gas 75%, and diesel oil 16%.

Because of this situation, several sub-funds within the FEPP started to accumulate resources through fuel taxes. This factor has brought fuel prices under control, making further drops of importance unlikely (Figures IV.14 and IV.15).

Inflation on non-tradable goods and services

Inflation on non-tradable goods, measured by both the CPIN and the CPIXN, also went down, with annual rates reaching 4.0% in December. A change in the basis for comparing public transportation fares during the same period in 2000 and a decline in the same in 2001 contributed to this. In contrast, rising charges for other regulated services, the result of peso depreciation between August and October pushed non-tradable inflation higher (Figures IV.16 and IV.17 and Table IV.2).

Toward late 2001, non-tradable goods inflation fell to around 4.0%.

Regulated tariff services

As indicated above, the higher exchange rate affected charges for regulated services more directly. This was especially visible in the case of electric power, telephones, and drinking water. In the case of the first, the normal November increase in the charge for distribution service was affected by an additional 5.0% increase in September, the direct result of the higher exchange rate. Telephone service, meanwhile, rose by 4.0% from August to October due to the indirect impact of the higher dollar on items included in calculating fees. This increase will be partly offset once peso appreciation in recent months is computed. Drinking water also saw tariffs rise due to depreciation between August and October, although this was also the result of increases agreed upon with water treatment companies because of the start-up of new sewage treatment plants in Greater Santiago.

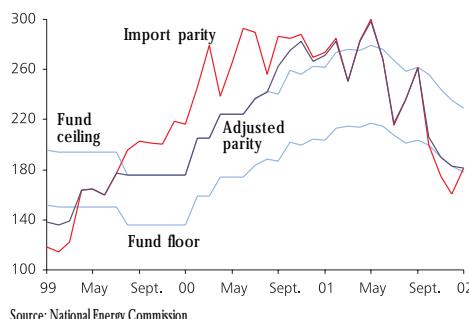
In the case of bus transportation, after raising fares ten pesos in July and September, the drop in the price of diesel and bus replacement value caused fares to fall ten pesos in November. Inclusion in the adjustment polynomial of new declines in diesel prices and the lower value for the dollar led to an additional 10-peso drop in fares as of 15 January 2002.

Peso depreciation caused regulated fees to rise, but this will be partially reversed in coming months.

Unit labor costs and wages

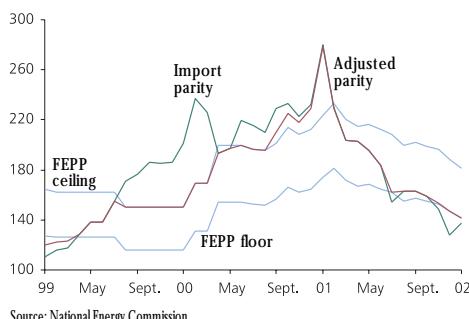
In November, annual growth in the nominal wage index (Índice Nominal de Remuneraciones) reached its lowest point since January 2000 (4.7%).

Figure IV.14
FEPP band for gasoline
(US\$ per cubic meter)



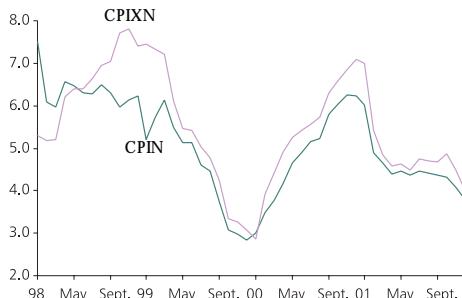
Source: National Energy Commission.

Figure IV.15
FEPP band for liquefied gas
(US\$ per cubic meter)



Source: National Energy Commission.

Figure IV.16
CPIN and CPIXN
(percentage change over the same period of
the previous year)



Sources: National Statistics Bureau and Central Bank of Chile.

At the same time, the nominal labor cost index (Indice Nominal del Costo Mano de Obra) rose by 5.0% in 12 months, which brought a larger increase than that of previous months, due to automatic indexing to inflation clauses, which started to incorporate higher inflation from the second quarter of 2001. High annual growth (6.1%) in public sector nominal wages contrasted with 4.1% growth in private sector wages, the lowest for the year (Figure IV.18).

Personal service costs included in the CPI rose in the last months of 2001, ending the year with a 12-month increase of 3.6% in December, after rising 3.2% in August.

With regard to real wages, during November annual labor costs rose 1.9%, while hourly wages rose 1.6%, more than in previous months, the result of the lower basis for comparison for fourth quarter inflation over the previous quarter. Nonetheless, real wage levels for the September-November quarter fell over the third quarter of 2001 (Figure IV.19). In addition to the drop in inflation during the fourth quarter, some economic sectors posted wage increases during this period, as is the case with construction (Figure IV.20). When corrected using the implicit GDP deflator, labor costs grew an annual 0.9% in the third quarter, reflecting an increase over previous quarters.

Nominal labor unit costs rose from mid-2001 on, because the growth in employment during the early months of the year occurred with no additional increase in productivity (Figure IV.21). Especially important was the increase in the manufacturing sector late in the year, a response to the same factors as the aggregate for the economy as a whole.

Prospects for the first four months of 2002

During the first four months of 2002, with some highs and lows inflation will generally remain lower than late 2001. The inclusion of a lower exchange rate late in the year in indexing clauses for services with regulated charges, the usual negative seasonal effect of perishables, and lower indexing rates for educational services are the main elements forecast for this panorama.

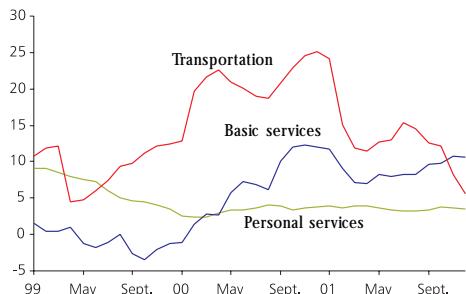
Private sector inflation expectations confirm this prognosis. Judging from the expectations survey carried out by the Central Bank, estimates for changes in the CPI over one year have fallen from 3.9% in November to 3.2% in January. Similarly, estimates for the CPIX have fallen from 3.6% to 3.1% between November and January.

Recent auctions of Central Bank note auctions also indicate expectations that inflation will drop: the spread between the PDBC-360 and the PRBC-360 show inflation under the center of the target range of 3% (Table IV.4 and Figure IV.22).

The drop in fuel prices and a lower than usual increase in perishable prices caused annual inflation in 2001 to close below forecasts from September, although still in line with the Central Bank's inflation target. During the first four months of 2002, inflation is expected to remain lower than in 2001. This trend is consistent with cost pressures within the economy, from both the demand and the labor market points of view.

In 2001, inflation closed the year at half a point less than projections included in the previous Report. Although this was partly the result of the fall in fuel prices, the slowdown in underlying inflation was also

Figure IV.17
Breakdown of non-tradable inflation by group
(percentage change over the same period of
the previous year)



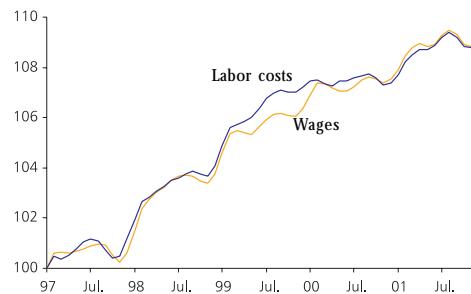
Source: Central Bank of Chile.

Figure IV.18
Hourly wages, labor costs, and inflation
(percentage change over the same period the
previous year)



Source: National Statistics Bureau.

Figure IV.19
Real labor costs and hourly wage index
(January 1997=100, moving quarterly average)



Source: National Statistics Bureau.

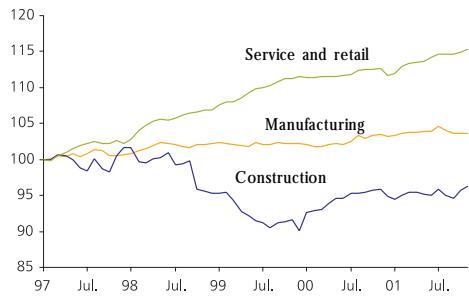
influential. Trends in wages and productivity, as well as the more stable exchange rate, indicate the absence of inflationary pressures, providing a break to those sectors that saw their margins contract significantly last year.

Table IV.4
Interest on nominal Central Bank of Chile instruments and inflation
premium
(monthly average; percent)

	2001	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	2002	Jan.
PDBC															
to 90 days	8.30	8.06	6.14	8.62	8.69	6.74	6.44	7.07	7.18	6.61	6.44	6.51	-		
to 360 days	9.02	8.37	7.54	7.85	8.01	7.79	7.44	7.86	8.17	7.66	7.25	7.03	-		
Premium of PDBC 360 over Zero coupon to one year	4.09	3.83	3.47	3.40	3.74	3.69	3.59	3.24	4.06	4.06	3.76	2.91	2.62	2.56	
Survey of inflation expectations															
December 2001	3.7	3.5	3.2	3.1	3.5	3.4	3.3	3.0	-	-	-	-	-	-	
December 2002	3.5	3.3	3.0	3.0	3.2	3.3	3.4	3.3	3.5	3.7	3.9	3.5	3.2	3.2	
December 2003									3.2	3.0	3.2	3.4	3.5	3.2	

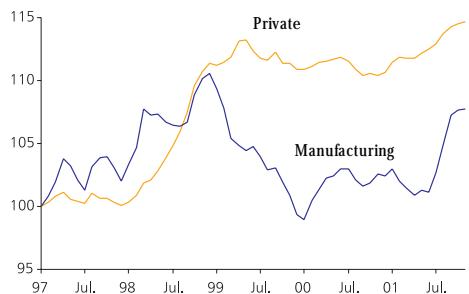
Source: Central Bank of Chile.

Figure IV.20
Real wage index by sector
(January 1997=100)



Source: National Statistics Bureau.

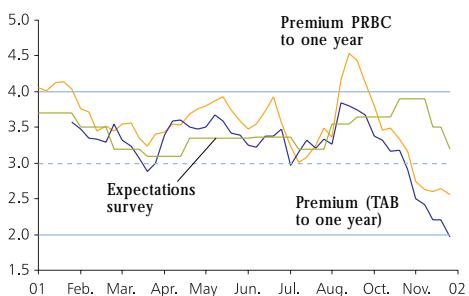
Figure IV.21
Unit labor costs (1)
(moving quarterly average, January 1997=100)



(1) Ratio between the nominal cost of labor for the private sector and manufacturing, and seasonally adjusted average labor productivity (IMACEC/Employment).

Sources: National Statistics Bureau and Central Bank of Chile.

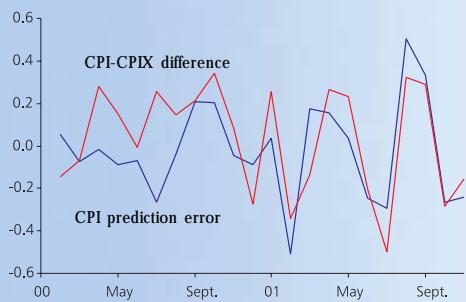
Figure IV.22
Premium paid on nominal versus real
instruments to one year and expectations survey
(percent, weekly average)



Sources: Central Bank of Chile and Association of Banks.

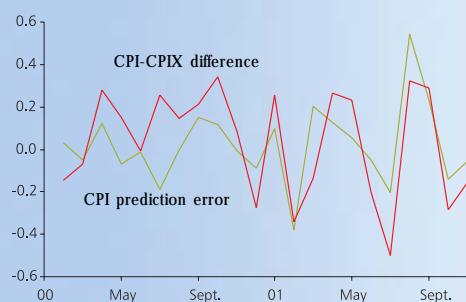
BOX IV.1: PRIVATE SECTOR INFLATION EXPECTATIONS

Figure IV.23
CPI prediction error and CPI-CPIX difference in one month
(percentage points)



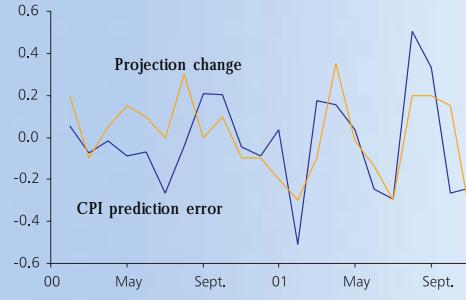
Source: Central Bank of Chile.

Figure IV.24
CPI prediction error and CPI-CPIX difference in one month
(percentage points)



Source: Central Bank of Chile.

Figure IV.25
CPI prediction error and expected change in inflation to 12 months the next month
(percentage points)



Source: Central Bank of Chile.

In recent months, private sector inflation expectations have changed constantly and significantly. While there is public debate about the effect that depreciation and later appreciation of the peso have had on corrections to inflation projections, evidence reveals that private sector error in prognosis is closely linked to the most volatile components of the CPI, such as fuels and perishables.

These two sets of prices have undergone the most changes recently, whether due to sharp corrections in the international oil price (in the case of fuels) or phenomena that were not foreseen (in the case of perishables).

An initial exercise consists of comparing prognosis error apparent from results of the Central Bank's monthly expectations survey carried out among economic analysts for inflation during the month of the survey. The value predicted by the survey is compared to the actual value and contrasted with the difference between the actual change for the month in CPI and CPIX. This last difference corresponds to the joint variation in perishables and fuels (Figure IV.23).

As can be seen, prediction error affects virtually all changes in fuel and perishable prices. No elements independent from these are seen to alter private sector inflation expectations. This suggests that the private sector correctly forecasts the underlying component in inflation but not the rest, an error associated with the volatility typical of this kind of price.

Similar errors are apparent in other indicators of private sector inflation expectations. Figure IV.24 shows the same exercise, this time using results from the daily survey of over-the-counter money operators as the indicator. The main difference from the previous indicator is the ability to correct expectations that this indicator involves, since it is constantly updated throughout the month. Results, however, are not substantially different from before.

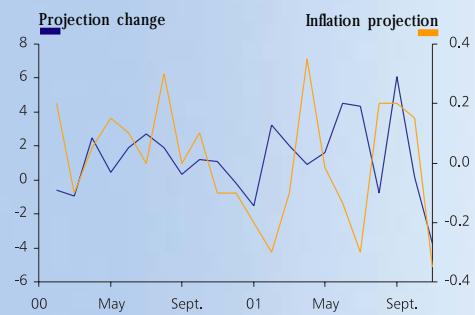
Perhaps the most significant aspect of these prediction errors for inflation, more than anything else, is that they have led to changes in expectations for inflation over 12 months. Using annual inflation expectations from the same analyst⁵ survey as a base, we compared this projection with the prediction error for monthly inflation (Figure IV.25). Moreover, if changes in exchange rate projections are also considered, there is no relationship with changes in annual inflation, except for the last observation (Figure IV.26).

In summary, changes to expected inflation over one year in the survey of private analysts reveal that there is a general reaction to inflation prediction errors month to month, which in turn are related to trends in perishable and fuel prices. It should also be taken into account that changes in these prices are not assumed to be permanent or necessarily repeatable. In fact, the evidence demonstrates that these produce one-time effects and that in the case of perishables these tend to be offset over time.

Thus, the importance of using underlying inflation as the medium-term trend indicator is reaffirmed, because according to these observations it should be free of the fluctuations affecting total inflation. In the case of the expectations survey, for the 24-month projection horizon involved in monetary policy decisions, CPIX inflation remains in line with the center of the target range.

⁵ From February to August 2000, the estimated value for December 2000 is used, from September 2000 to August 2001 the expected value for December 2001, and from September 2001 on the expected value within 11 months.

Figure IV.26
Change in exchange rate projection and expected
inflation to 12 months
(percentage points)



Source: Central Bank of Chile.

This section presents the Board's evaluation of the prospects for the Chilean economy over the next two years, as analyzed during the Monetary Policy meeting on 10 January 2002. It provides projections for inflation and economic growth and examines the most significant risks. These projections assume that the monetary policy rate will remain at 6.0% over the next eight quarters (as set at the meeting). Moreover, projections depend on the series of events that together make up the baseline or most probable scenario. New information will modify this scenario and associated projections. Forecasts are presented in the form of confidence intervals in order to reflect future sources of risk to monetary policy.

Baseline scenario: main assumptions

International outlook

The main doubts about world growth in the last Report centered on the possibility of a global recession occurring. To a large degree this uncertainty has cleared: the US economy is officially in recession since March 2000, while the main economies in the euro zone are also experiencing negative growth. Japan shows no sign of changes in the prevailing conditions of profound stagnation in expenditure and economic activity. Average economic growth for Chile's main trading partners last year, based on Consensus Forecasts, was 1.0%, half a percentage point lower than forecast some months back. Estimates for world growth in 2001, measured in purchasing power parity (PPP),¹ have reached 2.2%. For this year, the world economy is expected to reflect the impact of the combination of expansive macroeconomic policies in most of the globe. This should ensure that trading partners grow similarly to last year, 0.9%. For 2003, meanwhile, the world economy should resume closer to potential growth rates.

An additional decline in the price of copper is not expected. After closing at an average of almost 72 cents per pound last year, it is expected to average around the same this year, then gradually recover toward 2003. Other product prices, such as wood pulp, have stabilized, after falling significantly, mainly due to supply factors. An important change in prospects is expected to affect the oil price. OPEC's difficulties coordinating the recent production cuts, along with weak world growth, lead to expectations that the price will be around US\$21 per barrel this year, recovering gradually in 2003 to reach US\$23 per barrel that year. This situation suggests the oil price will be more than 10% lower than previously estimated for 2002.

Overall, prospects for the terms of trade remain the same. After falling by almost 7% last year, for this year and next they are expected to rise gradually, to around 3% per year on average.

Chile's trading partners are expected to grow 0.9% this year.

¹ World growth weighted by purchasing power parity (PPP) exceeds the weighted figure for Chile's main trading partners, because of the difference in Asia's share. This is because China, with high growth rates, accounts for a much larger share of world GDP at PPP than it does within Chile's exports. Meanwhile, Japan's share of Chilean exports is almost double its share of world GDP at PPP.

The prospects for net capital flows into emerging economies for 2002 remain similar to 2001. This projection is consistent with a scenario characterized by reduced availability of funds for investment, due to asset price corrections in the main industrialized economies. Similarly, on the demand side, less need for capital is expected in 2002, given low growth expectations in emerging countries.

The trend suggesting that most of the region's economies were managing to dissociate themselves from events in Argentina has consolidated. Although the main scenario does not assume significant capital inflows, the sovereign spread is expected to remain the same over coming quarters, at almost 150 basis points (for the 2009 bond). The cycle of more relaxed monetary policy worldwide will probably reach an end, in line with the acceleration expected in world economic activity during the course of the second half.

As with previous Reports, after international deflation in dollars last year, the Chilean economy faces positive but modest rates of external inflation.

After falling by almost 7% last year, the terms of trade are expected to rise by almost 3% this year and next.

Interest rates and the exchange rate

The baseline scenario assumes that the monetary policy rate will remain stable at 6.0% over the next 24 months. This is not a projection, but rather a methodological assumption that allows us to evaluate the consistency of current monetary policy with the medium-term inflation target that serves as its guide.

Turbulence in financial markets, along with specific inflation peaks during the third quarter, generated expectations among some analysts that inflation would be higher and the monetary policy rate would rise. This, however, was not reflected in financial asset prices, which showed stable expectations regarding the monetary policy rate, at least until the first half of the year. Since Chile's and Brazil's economies managed to stay free of contagion, along with reductions in inflation especially for underlying inflation indicators, in the fourth quarter expectations changed, with the market foreseeing a reduction in the monetary policy rate.

The baseline scenario assumes that the monetary policy rate will remain stable at 6.0% over the next 24 months.

With regard to the exchange rate, undoubtedly it is difficult to predict movements in one direction or another in the floating regime in effect today in Chile. The working assumption incorporates nominal depreciation of about 2% for the projection horizon, over the average exchange rate observed during December.

Fiscal policy

Projections incorporate information contained in the budget approved this year, in particular those extrapolated from the alternative scenario presented by the finance ministry last September. These contemplate a pace of growth in activity and a copper price similar to assumptions in this Report and maintain their projection that the structural surplus will reach 1% of GDP. In 2002, fiscal accounts are expected to show a deficit of around 0.6% of GDP, with growth in public expenditure with

macroeconomic impact reaching 4.9% more than the 2001 budget, the result of a significant rise (11%) in public investment.

Potential output

Changes in the gap between demand and potential output play an important role in judging future inflationary pressures. The evaluation of the behavior of productivity and potential output is based on historical trends, corrected by elements that could produce modifications, such as changes in the investment rate.

Current levels of fixed investment, as well as its likely performance over the next two years, suggest moderate growth in capital stock within the economy. Total factor productivity, on the other hand, which fell during 1998 and 1999, is expected to grow 1% to 2% in the coming years.

This suggests that the economy's productive capacity will expand at from 4.5% to 5% this year and next. This growth in supply does not constitute an immediate restriction to growth in demand and control over inflation and, in fact, implies some increase in idle capacity.

Transitory price factors

In the final months of 2001, several factors combined to alter previous inflation projections, mainly due to trends in fuel prices, the exchange rate, and perishable prices. Thus, in 2001 inflation closed the year half a point lower than projections from the previous Report, although still in line with the Central Bank's inflationary target (2.6%).

For the first four months of 2002, inflation is expected to fluctuate somewhat but remain under levels from late 2001. This is because of the effect of the lower exchange rate on regulated services; the usual seasonal drop in perishable prices; and lower price indexing for educational services. This favorable price trend will be joined by tendencies in wages and productivity, and a more stable exchange rate, all of which reveal the absence of inflationary pressures during the early months of 2002.

Inflation and economic growth in the baseline scenario

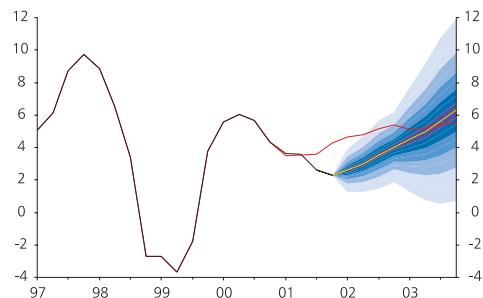
Economic growth

During the second half of last year the most volatile components of aggregate demand, which, moreover, are also sensitive to fluctuations in the exchange rate, slowed significantly. The accumulation of inventories worsened the fall already apparent in the second quarter, while investment in machinery behaved particularly weakly during the fourth quarter of last year.

In any case, other expenditure components performed more strongly. Private consumption, particularly of domestically produced non-durable goods, tended to grow steadily. This was supported by an increase in employment levels toward mid-year, in part due to government employment programs but also thanks to private job creation, especially in manufacturing and retail. Investment in construction continued to enjoy the benefits of favorable credit conditions, and fiscal policy on the expenditure side offered a modest expansive push. Overall, the economy grew 3.0% in 2001, with domestic expenditure falling 0.5%.

The central scenario assumes that the most persistent expenditure components will continue this same behavior, sustained by a gradual

Figure V.1
Quarterly GDP growth scenarios (1)
(percentage change over the same quarter of
the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future economic growth, on the assumption that the monetary policy rate will remain at a nominal 6.0% for the next two years. The red line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

acceleration in investment in inventories and machinery. This will be supported moreover by a more stable foreign exchange market and lower interest rates for every maturity. This stronger performance by domestic expenditure will offset the probable slowdown in export volumes, which will occur mainly due to the normalization of growth in untraditional exports and the delayed impact of recessive conditions around the world.

These elements add up to a projection for economic growth in the baseline scenario of around 4% to 4.5% over the next eight quarters, that is, from the first quarter of this year until the fourth quarter of 2003. In the short term, the economy is expected to grow 3.3% in 2002, reaching 5.3% in 2003 (Figure V.1). Domestic demand will grow more than GDP in 2002 and 2003, averaging annual growth of 5%. The current account deficit is expected to reach 1.0% of GDP in 2002 and 2003. More moderate prospects for domestic growth, along with lower international interest rates, are behind these lower figures for the current account deficit.

As usual, the above only forms part of the central or baseline projection scenario, that is, the scenario that can be constructed based on the assumptions considered most likely by the Board. Alternative events may cause economic growth to vary from this central projection, a possibility analyzed in more depth in the balance of risks.

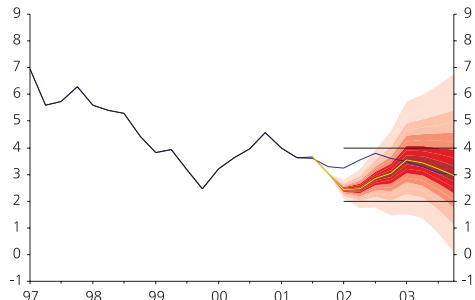
Inflation

The monetary policy stance determines inflation's behavior in the medium and long term, but the relationship is more uncertain and variable in the short term, reflecting the influence of a wide range of factors. These include underlying price trends, the behavior of the exchange rate, labor cost pressures, trends in sales margins, competitive conditions in final markets, regulated service charges, as well as the probable behavior of output and demand pressures.

Annual growth rates for money during most of last year reached two digits, a situation that some analysts interpreted as a signal of imminent inflationary pressure. Beyond the interpretation that should be attributed to the behavior of monetary aggregates in the context of the current monetary policy regime in Chile, most of this growth reflected the poor basis for comparison from 2000. In terms of cost pressures, nominal wages, measured by the INE (National Statistics Bureau), have reflected above all the impact of automatic indexing clauses based on past inflation, which can be seen primarily in the performance of private wages. In recent months, wage increases stabilized at under 5%, which along with moderate growth in labor productivity reveals the absence, for now, of inflationary pressures on this side.

Food and durable price trends revealed some passthrough of depreciation during the third quarter. In any case, strong peso appreciation since November has undoubtedly given those sectors that saw their margins compress substantially a breather. In fact, some prices, above all for durables, have risen less or even fallen since the peso began to strengthen again. In the coming quarters it is likely that some additional decompression of margins will occur, to the degree that demand for durable goods responds to the environment of less uncertainty prevailing today. Finally, inflation expectations, after rising due to strong regional instability have now fallen to very close to the center of the target range. The spread between nominal and real rates over one year indicates inflation expectations of around 2.0% to 2.5% over 12 months, while

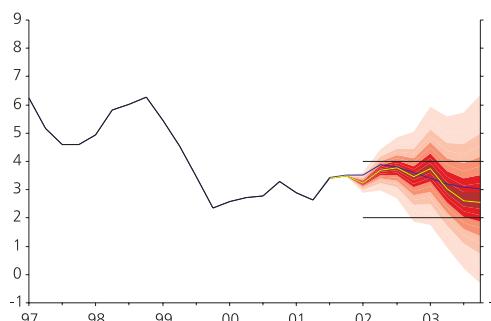
Figure V.2
CPI inflation projection (1)
 (percentage change over the same quarter of the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future inflation, on the assumption that the monetary policy rate will remain at a nominal 6.0% for the next two years. The blue line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

Figure V.3
Underlying (CPIX) inflation projection (1)
 (percentage change over the same quarter of the previous year)



(1) The figure shows the baseline projection (yellow line) and the confidence interval for the respective forecast horizon (colored zone). Confidence intervals of 10%, 30%, 50%, 70% and 90% are used. These confidence intervals summarize the Central Bank's risk assessment for future inflation, on the assumption that the monetary policy rate will remain at a nominal 6.0% for the next two years. The blue line indicates the projection in September 2001. Differences between this projection and the current one are consistent with the balance of risks developed in the September Report.

Source: Central Bank of Chile.

the January survey found analysts predicting inflation will reach 3.2% by the end of this year and 3.1% for the end of 2003.

Although the objective of price stability is defined in terms of CPI inflation, the Board also pays attention to changes in CPIX inflation, in order to evaluate more precisely demand pressures' impact on prices. Combining the above elements permits the construction of 12-month CPI and CPIX inflation, always assuming that the monetary policy rate remains constant at 6.0%. Projections are presented in the form of distribution of probabilities for changes in annual inflation over the projection period, that is the first quarter of 2002 until the fourth quarter of 2003. These refer to changes in the average price index for each quarter over the same period of the previous year (Figures V.2 and V.3).

Underlying inflation is expected to remain at around 3.5% during the first half and then fall to somewhere between 2.5% and 3.0% next year. Maintaining substantial idle capacity will play a key role in this sense, particularly in the labor market, which helps to rein in price increases. The tendency for the oil price to rise, which still remains below estimates from recent months, produces a negative gap between annual CPI and CPIX inflation. Thus annual CPI inflation is estimated to reach 3.0% at the end of this year and next. Over the next eight quarters, annual CPI and CPIX inflation should also hover around 3.0%.

Balance of risks

The baseline scenario described above corresponds to the most probable trajectory for inflation and economic growth, conditional on the working assumption that the monetary policy rate will remain constant, as will the other financial and economic developments mentioned above. As emphasized above, however, risk factors exist that could alter this scenario and the future performance of inflation and growth. This subsection examines some of the alternative scenarios that could be relevant to the future performance of monetary policy.

In the external sphere, although today the degree of uncertainty has declined, the main risk continues to be associated with exactly when the world economy will recover and resume trend growth rates. Although the US economy could resume faster growth sooner than expected, there is still no firm evidence that the economic situation there has touched bottom. From the perspective of emerging markets, these are more stable after a very turbulent 2001. In any case, one can never forget that new events could occur that push Chile's foreign exchange market in one direction or another.

Domestically, a gradual acceleration in economic activity is expected for coming quarters, based on accumulated inventories and machinery investment. The considerable instability that has affected the foreign exchange rate recently undoubtedly led to the postponement of spending decisions in these components.

The probability of these alternative scenarios occurring may indicate bias in both inflation and growth projections. The Board believes that, in light of all available information, both factors suggest that the scenario of lower future growth in Chile is equally as probable as the other scenarios. As a reference point, the confidence interval with a 50% probability of occurring suggests ranges of from 2.5% to 4.0% for average growth in 2002, and from 3.5% to 7.2% for growth in 2003.

The probability distribution for the annual inflation rate over the next one to two years, assuming the same monetary policy rate, appears in

Table V.1. The table contains the same information as Figures V.2 and V.3, and reveals variability around the inflation projection as a result of volatility affecting specific prices and the exchange rate, as well as uncertainty over growth projections and the oil price. On this last point, an alternative scenario of prices higher than the baseline scenario for this year and next is considered somewhat more likely than a plunge in the crude oil price. With these factors in mind, the Board believes that risks affecting inflation are evenly balanced.

In the case of the 12-month inflation projection measured by the CPI, the 50% confidence interval suggests it will range from 2.4% to 3.7% for the fourth quarter of 2002, and from 1.8% to 4.5% for the next 12 months. For underlying inflation measured by the CPIX, confidence intervals range from 2.8% to 4.1% in the next four quarters, and from 1.4% to 4.1% for the following 12 months. Values outside these ranges are possible but less likely as they move away in either direction.

The working hypothesis of the fixed monetary policy rate is essential to correctly interpret these probability distributions and the risks facing baseline projections for inflation and growth. This distribution reflects the probability of changes in *inflation projections*, not actual inflation, since it does not take into account the monetary policy response to the latter. In fact, if the revisions to projections proved substantial, they would require adjustments to monetary policy to keep inflation stable and in line with the medium-term target. These probabilities do not therefore reflect the real behavior of inflation but rather evaluate risks relevant to the course of future monetary policy.

TABLE V.1
Inflation scenarios

		Inflation ranges			
		2% or less (percent)	2% to 3%	3% to 4%	4% or more
Inflation	2002.IV	14	34	36	16
	2003.IV	29	22	17	32
Underlying CPIX inflation	2002.IV	7	25	40	29
	2003.IV	37	22	14	26

(1) Average inflation represents average annual change in CPI.

Source: Central Bank of Chile.

The Board considers risks to growth and inflation are balanced within the baseline scenario.

Conclusion

In summary, the Board believes the current direction of monetary policy is consistent with the aim of keeping inflation within the target range. Projections within the main scenario show that, despite a temporary increase in mid-2002, inflation as measured by the CPI will be close to 3% at the end of this year and next. Economic growth will reach 3.3% in 2002 and 5.3% in 2003.

It is important to stress the conditional nature of these projections. Currently some risk factors could change the future path of inflation, but it is hard to weigh their impact using available information. This means that during upcoming meetings the Board will pay special

attention to evaluating three main areas: first, conditions in world financial markets, particularly emerging economies; second, developments in the world economy and the price of Chile's main exports; third, trends in the domestic economy, in particular, domestic expenditure and employment, all factors that make it possible to evaluate domestic expenditure growth and inflationary pressures. As always, the Board will react flexibly to any event that could threaten meeting its inflation target, which is monetary policy's fundamental contribution to economic and social progress.

REFERENCES

- Aspectos Macroeconómicos del Proyecto de Ley de Presupuesto del Año 2002 (Macroeconomic Aspects of the National Budget for 2002).
- Blix, M, Joachim Wadefjord, Ulrika Wienecke y Martin Adahl (2001): "How Good is The Forecasting Performance of Major Institutions," Economic Review 3/2001, Central Bank of Sweden.
- Consensus Forecast, "A Digest of International Economic Forecast," several issues.
- Consensus Forecast, "Global Economic Outlook: 2000-2010," October 2001.
- Economist Intelligence Unit, "Global Outlook Update," January 2002.
- Economist Intelligence Unit, "Global Outlook," December 2001.
- International Monetary Fund, "World Economic Outlook," December 2001.
- Goldman Sachs, "The International Economics Analyst," November-December 2001.
- Informe sobre la Ejecución del Presupuesto del Gobierno Central durante el tercer trimestre de 2001. (Report on execution of the central government budget during the third quarter of 2001)
- JPMorgan, "Global Metals & Mining Weekly," December 2001.
- JPMorgan, "Oil Market," January 2002.
- Rigobon, R., "Contagion: How to Measure It?" NBER Working Paper, N° 8118, February 2001.
- Rojas, Patricio: "El dinero como un objetivo intermedio de política monetaria en Chile, un análisis empírico" (Money as an intermediate objective of Chile's monetary policy: an empirical analysis), Cuadernos de Economía N°90, PUC (August 1993).

