MONETARY POLICY REPORT

JANUARY 2001

CENTRAL BANK OF CHILE

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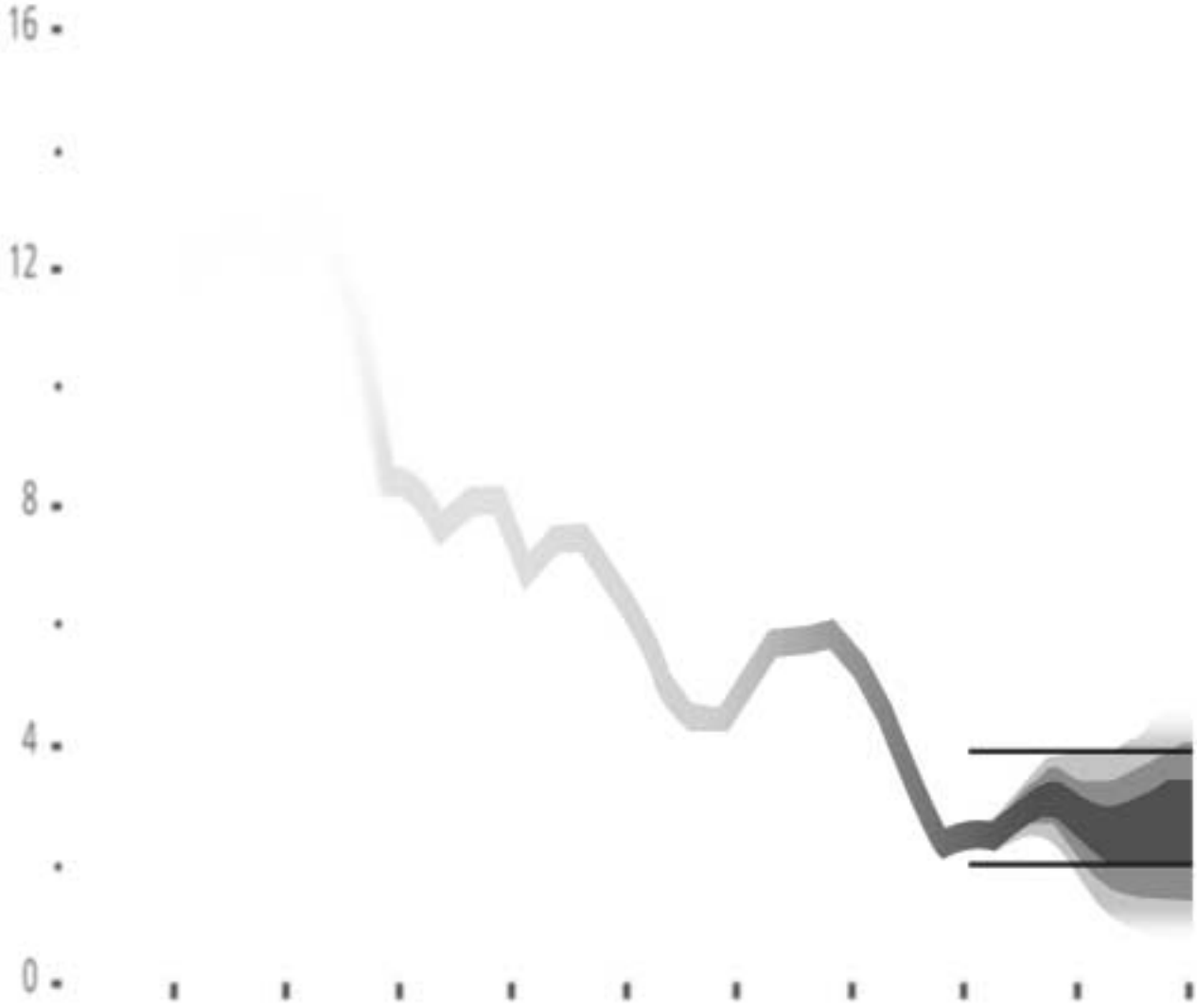

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PREFACE

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. Controlling inflation is the means by which monetary policy contributes to the population's welfare. Low, stable inflation promotes improved 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 Report on Monetary Policy 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 analytical framework used by the Board of Governors 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. The first section of this report focuses on recent developments in inflation in Chile, imported prices and specific price trends that temporarily affect the pace of inflation. The report then examines the main factors that will influence inflation's future behavior, including the international environment, financial conditions, and supply and demand conditions. Finally, the last section 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 includes several boxes that provide more detailed information on issues relevant to evaluating inflation and monetary policy.

This Report was approved at the 18 January 2001 meeting of the Board of Governors of the Central Bank of Chile.

The Board of Governors

Recent developments in the world economy, inflation, domestic demand and employment suggest a moderation of inflationary pressures over the medium term. In light of this new information, the Board of Governors of the Central Bank of Chile decided to reduce the monetary policy rate by 25 basis points, from UF + 5% to UF + 4.75% at its monetary policy meeting on 18 January.

Annual inflation through December reached 4.5%, despite the fact that both the exchange rate and the price of fuel continued to be higher than expected throughout the fourth quarter of 2000. High unemployment and the current pace of growth of consumption and sales have limited the pass-through to inflation of exchange rate increases and fuel prices' second round effects. Until recently, growth during 2001 and 2002 was expected to average 6% per annum, which was consistent with a deceleration of the world economy and a gradual expansion of consumption and employment in Chile. Although in qualitative terms the diagnosis has not varied, there has been a significant change in the magnitudes involved. The Federal Reserve took the world by surprise with the early initiation of a cycle of interest rate reductions that now is expected to be more pronounced. Apparently, the US economy is experiencing a harder landing than originally expected, financial asset prices and leading to a depreciation of the dollar on international markets. Nor have the current prospects for capital flows improved over those of a few months ago, as is apparent in the fact that emerging economies' sovereign premiums have remained at high levels, even above those registered around mid-2000. The real impact of this new international scenario on domestic activity is hard to quantify, but the sharper reduction of the cost of external financing is likely to only partially offset the effect of reduced world growth on export sectors.

Undoubtedly, unemployment and employment performed atypically during 2000. Traditionally, employment has lagged behind the business cycle, a tendency which was only observed during the second half of 1999. Throughout 2000, seasonally adjusted employment first stagnated and then fell in absolute terms, in spite of the growth in overall activity.

Identifying the specific factors responsible for this phenomenon is a difficult task. However, in general, poor job creation can be associated with imperfections in factor markets that prevent rapid changes in the allocation of labor and capital within the economy. Among them, the inflexibility of nominal and real wages in most sectors over the past two years stands out, which is primarily associated with automatic indexation clauses based on past inflation. Furthermore, high increases in the minimum wage implemented a little over two years ago coincided rather unfortunately with the fall in labor demand and the depreciation of the real exchange rate from 1998 to 2000. In any case, public sector wage increases for 2001, based on expected inflation, will contribute to

reducing national unemployment. Capital markets also suffer from imperfections, associated with the lack of liquidity in the stock market and segmentation of companies' access to credit.

These rigidities are particularly relevant today, given the significant slack in the housing market, which indicates that employment in construction will only rise very gradually in 2001 and 2002. Similarly, a significant rise in average labor productivity, especially in manufacturing, is an additional sign that growth in economic activity has not been very labor-intensive, particularly in terms of unskilled labor.

Moreover, prospects for growth in households' disposable income are more moderate today than during the nineties. In fact, projections for the Chilean economy's growth in the coming years are lower than the record averages achieved in the past decade, and will be compounded by less growth in public sector transfers as a result of today's efforts to achieve fiscal austerity.

Altogether, these considerations suggest that for the next eight quarters, aggregate demand will spur growth less than foreseen a few months ago. A less robust world economy will also negatively affect export growth, while recent trends affecting employment and household expectations will encourage moderation in private consumption growth this year and next.

Similarly, the reduction in the price of oil until a few days ago has been more pronounced than projected in the Bank's most recent Monetary Policy Report and during December's monetary policy meeting. Today, we expect that over the next year or two, Brent crude oil will reach prices one or two dollars below previous projections.

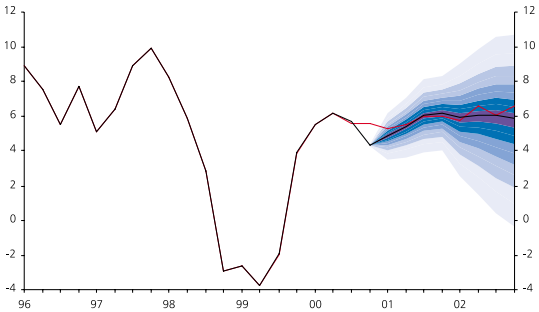
Finally, the new scenario, with international interest rates being reduced by more than originally projected, will tend to push the projected exchange rate toward appreciation, compared to values observed at the end of 2000.

In this environment, the Board decided that holding the monetary policy rate at UF + 5.0% would slow inflation more quickly than foreseen in previous months, pushing it beneath the center of the target range toward early 2002.

The new baseline scenario, assuming a monetary policy rate of UF + 4.75%, suggests that economic growth will average 5.8% over the next two years, reaching 5.6% in 2001 and 5.9% in 2002, while domestic expenditure will average 7% growth both years. At the same time, the current account deficit will reach an average of 1.8% of GDP in 2001 and 2002.

This information confirms the fact that, as the September Monetary Policy Report already suggested, macroeconomic conditions in Chile today are unlike those of the past. The main consequence of these developments is that for now domestic demand will expand more slowly

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



(1) The figure shows the base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The red line indicates the projection in September 2000.

Source: Central Bank of Chile.

that it did in the past decade. This situation will, in turn, affect the economy in other ways: (i) those sectors producing tradable goods will weigh more heavily in the composition of output; (ii) the external deficit will be lower; (iii) changes already observed in relative prices, such as the real exchange rate and real interest rates, will persist; and (iv) mark-ups will tend to be lower than historically.

Regarding the behavior of prices, over the next eight quarters, inflation as measured by total CPI is likely to converge towards the center of the target range. Thus, inflation during the first quarter of 2001 should average 4.4%, falling within the upper bound of the target rate toward mid-year. By late 2001, CPI inflation should reach 3.4%, falling to 2.9% in 2002, while CPIX (underlying inflation) should reach 3.2% and 3% respectively.

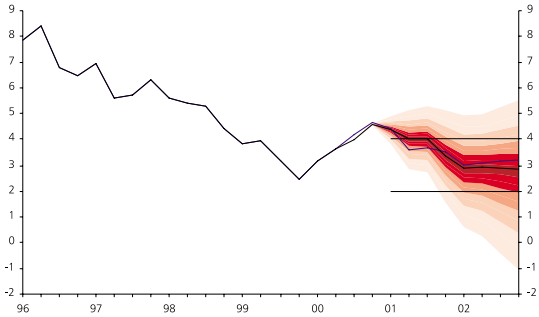
These inflation projections reflect the fact that the rise in total inflation in 2000 was basically a result of one-time pressures associated with fuels, which have not persistently affected underlying price trends. Similarly, market expectations are consistent with this trajectory for inflation: since November, financial asset prices and the results of the monthly survey of expectations suggest that a sustained reduction in inflation is expected for every timeframe.

This shows that, similarly to what has transpired in most economies using inflation targets and floating exchange rates, shifts in the exchange rate have had only a minor impact on inflation. Aside from cyclical factors, such as the persistence of unemployment and slow growth in consumption and sales, in Chile other permanent phenomena also contribute to this limited impact. These structural aspects include greater competition in goods markets, the credibility of monetary policy in achieving its inflation target, a transparent floating exchange rate regime, and domestic distributors' increased capacity for reassigning orders from more expensive international suppliers to those with lower relative costs.

The above projections are consistent with the events that the Board considers most likely to occur over the next eight quarters. It is possible, however, that over the next two years the economy will follow a different path than that foreseen in this baseline scenario, which would undoubtedly modify real and projected trends for both growth and inflation. Consideration of this set of elements constitutes the balance of risks, which are associated with the international environmental and trends in the domestic economy.

The former include a rougher landing for the United States' economy, which would have a significant impact on world growth and commodity prices. Although the flexibility shown by the Federal Reserve has limited the risk of recession, lower international interest rates would above all directly benefit emerging economies that are highly dependent on external financing. The Chilean economy is not among these, thanks to the reduced current account deficit, a relatively high level of domestic savings and the credibility of fiscal and monetary policies. Nonetheless, financially more stable conditions for the economies of Latin America

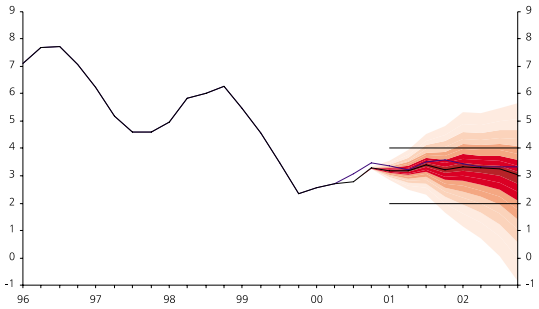
Inflation (CPI) projection (1)
(percentage change over the same quarter of the previous year)



(1) The figure shows the base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The blue line indicates the projection in September 2000.

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 base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The blue line indicates the projection in September 2000.

Source: Central Bank of Chile.

would lead to somewhat lower external financial costs for Chile. Overall, it is difficult to assert that these benefits would fully offset a less robust external scenario in the case of the Chilean economy.

The most recent trends in oil prices also indicate risks associated with inflation and growth. The main scenario assumes that the price for crude oil will be less than that expected a few months ago, but the possibility of different trends from those assumed in the main scenario cannot be excluded, as a result of the real effectiveness of production cuts ordered by OPEC. A different scenario for oil would directly influence inflation, via the domestic price of fuels, as well as generating a series of additional effects on the terms of trade and disposable income.

On the other hand, it is possible that certain developments in the domestic economy could modify inflationary pressures during the projection horizon. In this sense, changes to the minimum wage and wages in general must remain coherent with general conditions in the job market, so that they do not become barriers to job creation.

The pace of deceleration of the world economy and its subsequent effect on the size of and opportunity for future cuts to world interest rates could influence risks associated with the real exchange rate.

Should any of these alternative scenarios occur, they could push inflation and growth projections up or down. The Board estimates that, in light of the information available to date, lower growth scenarios and less inflationary pressure are more likely than the other alternative scenarios. In fact, the main risks are associated with a more drastic than expected deceleration of the world economy, which would bring with it lower international interest rates. Both effects would tend to reduce domestic inflationary pressure, to which must be added the possibility that unemployment will remain at high levels. The Board's judgement is that the probability of these situations occurring, as well as their impact on medium-term inflation, is higher than in the alternative scenarios, for example those associated with higher oil prices or a surprising recovery of employment and consumption in 2001 and 2002.

In any case, it is necessary to clarify that monetary policy has a limited effect on economic activity and prices, being just one of many factors influencing the business climate within the country. At any given moment, there are multiple sources of uncertainty that can play a decisive role in determining the confidence for companies to develop new investment projects or households to increase consumption spending. Today, this uncertainty is greater, due to a particularly complex external environment in a constant state of flux. Moreover, despite significant progress toward defining fiscal policies with clear rules, the future course of other public policies remains uncertain. In this sense, the degree of flexibility shown by both labor and capital factor markets in the future is particularly important, as they will influence the economy's ability to adapt to changes in the scenario abroad and in the field of technology.

Although there has been progress toward clarifying some of these elements, it is important to remember that a decline in this flexibility could negatively affect the rate of investment and the pace of the Chilean economy's productivity growth in the medium term. Faced with a situation of this nature, there is little that monetary policy could do to revert potentially negative effects on expenditure and activity.

In any case, the Central Bank will take a flexible approach if any of the alternative scenarios mentioned above should actually occur, to avoid compromising the achievement of its inflation target.

BOX: **PROJECTIONS AND MONETARY POLICY**

The purpose of monetary policy is to keep inflation stable, in the center of a range of 2% to 4% per annum on a permanent basis. Within this framework, inflation projections over a two-year period play an important role. In effect, because changes in the monetary policy interest rate affect inflation with a lag that may last from six to 24 months, the authorities cannot base monetary policy decisions solely on what is occurring with inflation today. To the contrary, inflation projections must be considered an intermediate target in and of themselves: they reflect today what economic agents estimate could happen with inflation tomorrow, which in turn informs monetary policy. Because of this, the Central Bank has made an enormous effort to develop projection tools for inflation and short-term economic growth that permit a prognosis that is both efficient and at the same time faithfully represents the Board's view. The relationship between inflation projections and changes in monetary policy, however, is far from mechanical and linear. This box deals with some of the main aspects of that relationship.

The projection process

Inflation and economic growth projections are based on an iterative and interactive process. About six weeks before the monetary policy meeting, at which the corresponding Monetary Policy Report is approved, the Board and others participating in the meeting receive a questionnaire exploring their opinions about the most likely future course of variables that influence inflation and growth in economic activity. Rather than precise values for each variable, respondents are asked to emphasize changing trends and the pace of these changes as compared to predictions in the previous Report and in light of information accumulated since then. Similarly, the questionnaire asks for an analysis of the risks that could cause the variable in question to behave very differently from its most probable trajectory. On this basis, and with the extensive use of statistical models developed by the Central Bank, a process of feedback then begins between Board members, others participating in monetary policy meetings, and the technical team, all of which combine to generate the central or baseline scenario containing inflation and growth projections for the next eight quarters. The risk analysis also involves considering one or more alternative scenarios that, although they appear less likely, are important enough to be worth considering and monitoring.

The central or baseline scenario

The fan charts used to present inflation and growth in the Monetary Policy Report offer a visual summary of this projection process. In the first place, these graphs provide the baseline scenario, which, in the opinion of the Board, represents the *most likely* behavior of inflation and growth over the next eight quarters, assuming that the policy interest rate remains constant throughout this period. Given that the purpose of monetary policy is to keep inflation stable at the center of the 2-4% annual range on a permanent basis, the policy rate must be coherent with an inflation projection within the central scenario that will converge on 3% during the projection horizon. If this were not the case, today's monetary policy rate (MPR) would not be suited to meet the Bank's inflation target. In this sense, the main projection for inflation during the eight-quarter period is similar to an intermediate target for monetary policy.

The above is precisely the result of the methodological assumption underlying projection development, which is that the MPR will remain constant over the next two years. In fact, the Board considers this methodological assumption to

be appropriate, given that, in general, it is neither possible nor prudent to treat the future direction of monetary policy as a *certainty*.

The balance of risks

In the second place, the fan shape around the main projection represents the uncertainty that accompanies a projection of this type, which increases to the degree that the projection distances itself from the present. It is important to underline that this representation of uncertainty, using a fan, is based on two components: variance in the distribution of probabilities, associated with the breadth of the fan, and the balance of risks, which appears as the distribution bias. The dispersion considered in these projections is estimated based on errors in prognosis in recent years, but can be adjusted when the volatility of fundamental variables influencing inflation and growth are perceived as more or less than in the past. When the balance of risk around the central or modal projection slopes upward (positive bias), values above the modal projection are considered more likely to occur than the values below it. Graphically speaking, the fan swells more above the main projection than below it. The opposite occurs when the bias is negative.

In other words, and by way of example, a positive bias in the balance of risks for inflation indicates that the economy is more likely to evolve toward a situation that generates more inflationary pressure than in the central scenario, than it will toward a situation generating less inflationary pressure.

Despite this, there is no simple, mechanical relationship between inflation projections and shifts (real or foreseeable) in monetary policy. Other circumstances make this relationship more complex. For example, the balance of risks may reach a state where it is balanced with regard to the occurrence of contrasting scenarios, but biased in terms of the cost of a mistake in either direction. That is, scenarios can be equally probable, but if a decision is taken and the wrong scenario occurs, the costs (mainly in terms of inflation) may be greater than if the opposite decision had been made and the scenario had developed in the opposite direction.

Moreover, the purpose of monetary policy is to keep inflation low and stable, around 3%, and ranging from 2% to 4% per annum, all the time, and not just over the next 24 months. Because of this, while the eight-quarter horizon is the main focus for monetary policy action, prospects for inflation before and after this period must also be taken into consideration. For example, if the main projection for inflation remains within the target range within the horizon of the next eight quarters, but threatens to go over this limit once this period is over, the Board may decide to tighten monetary policy immediately, as a preventive measure, given the at times very lengthy delays before the policy interest rate finally affects inflation. For similar reasons, there are moments when inflation projections for a horizon of less than eight quarters (for example, a one-year period) may also influence Board decisions. After all, if inflation is constantly on the rise over a lengthy period, this may create doubts about the efficiency of inflation projections or the Board's real commitment to its goal of keeping inflation low and stable. In other words, it is fundamental that the 12- to 24-month trend remain within the target or converge upon it. The very existence of delays in the effects of monetary policy, however, makes a reaction over shorter horizons less advisable, given that it increases the risk of high levels of real and financial instability.

Conclusion

This box has emphasized that the purpose of monetary policy is to keep inflation low and stable, around 3% and between 2% and 4% per annum, permanently, and not just over a 24-month period. Because of this, the Board considers the eight-quarter horizon, the projection assuming a constant MPR, and the inflation rate in the center of the target range at the end of the projection horizon to be appropriate methodological ingredients in order to meet its commitment to price stability. To build these projections, statistical models are not the only method applied. Nor are they used mechanically, given that they provide a view of the macroeconomic environment that is useful but incomplete, and based on past experience. Projections are enriched with a risk analysis in which the Board can incorporate considerations and elements of judgment relevant to making appropriate monetary policy decisions, which are consistent with its goal of maintaining price stability.

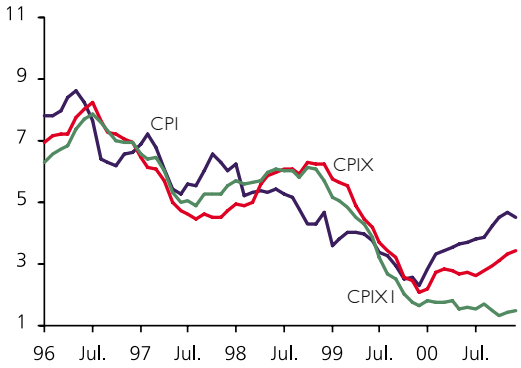
This section reviews recent price trends, examining and interpreting the behavior of different inflation indicators, their trends and main components.

Recent trends in inflation

As of December 2000, CPI-measured inflation reached 4.5%, in line with the previous report's projection, despite the fact that during the last third of 2000 some prices increased more than foreseen in September. The price of oil, which was expected to remain at around US$30 per barrel, temporarily rose above this figure, while the exchange rate also increased more than originally expected. Underlying inflation indicators remained stable during the last four months of the year. The annual CPIX, which excludes inflation affecting the prices of perishables and fuels, totaled 3.4% by year's end (Figure I.1 and Table I.1).

The final inflation rate for 2000 was the result of exogenous shocks, the effects of which should dissipate during 2001.

Figure I.1
CPI, CPIX and CPIX1 inflation
(percentage change over the same period of the previous year)



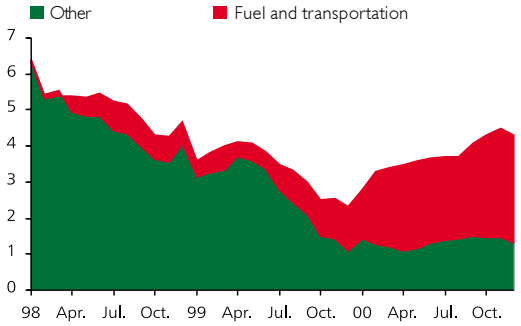
Source: National Statistics Bureau, Central Bank of Chile.

Table I.1
Annualized quarterly inflation

		CPI	CPIX	CPIX1
1998	I	3.9	6.3	9.1
	II	3.7	7.8	7.2
	III	5.3	4.5	4.1
	IV	5.7	6.3	4.1
1999	I	1.5	3.5	2.8
	II	2.6	2.4	2.4
	III	2.0	0.6	-0.1
	IV	3.2	1.8	1.5
2000	I	6.0	6.7	3.4
	II	3.8	2.0	1.6
	III	4.1	1.5	-0.5
	IV	4.3	3.7	1.6

Sources: National Statistics Bureau, Central Bank of Chile.

Figure I.2
Fuel and transportation, and other inflation
(total contribution to inflation; %)



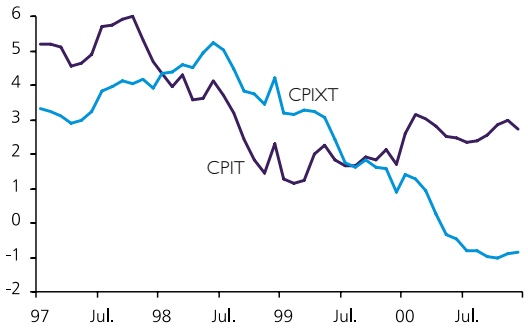
Source: Central Bank of Chile.

Already repeated on several occasions, the behavior of CPI-measured inflation can be explained, to a large degree, by trends in the international oil price in 2000. Fluctuations in the price of oil directly affected domestic fuel prices, once the Oil Price Stabilization Fund (*Fondo de Estabilización de Precios del Petróleo, FEPP*) exhausted its resources. Public transportation fares rose almost 16% during the second half of 2000, as a result of the higher diesel oil price on the domestic market and nominal peso depreciation. This last factor also influenced regulated service charges, such as telephones and electricity (Figure I.2).

Notwithstanding these increases, no major increase in domestic inflation was detected, thanks to the behavior of retail margins, which responded in part to the fact that growth in sales and consumption limited the impact of cost pressures on consumer prices. The retail sector's productivity gains and changes to the sector's competitive structure over the past two years must also be considered. In any case, the baseline scenario for this report assumes margins will enjoy moderate recovery during the projection horizon.

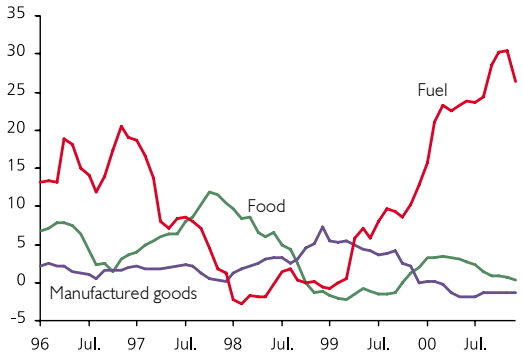
The performance of underlying inflation indicators, CPIX and CPIX1, reinforces the perception that, aside from temporary inflationary pressures resulting from the international oil price and the exchange rate, there appear to be no ongoing pressures on inflation. Annual inflation, as measured by CPIX, rose from 2.8% at the close of the previous report to 3.4% in December. CPIX1 inflation, which excludes regulated service charges (such as transportation) and prices linked to taxes, as well as fuel and perishable prices, reached 1.5%, down from 1.7% in August. Overall, inflation indicators are expected to return to around 3% during the projection period.

Figure I.3
CPIT and CPIXT inflation
(percentage change over the same period of the previous year)



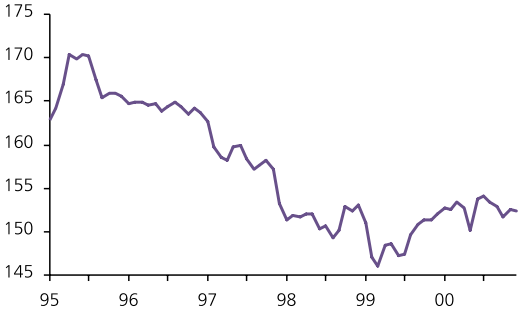
Source: National Statistics Bureau, Central Bank of Chile.

Figure I.4
Breakdown of tradable inflation
(percentage change over the same period of the previous year)



Source: Central Bank of Chile.

Figure I.5
Index of external prices relevant to Chile
(1986 index = 100)



Source: Central Bank of Chile.

Tradable goods inflation

Inflation affecting tradable goods,[1] that is, those goods most directly influenced by developments in international markets, rose slightly compared to last August. Thus, accumulated 12-month inflation for this group (CPIT) reached 2.7% in December, up from 2.3% in August, as a result of fuel price increases (Figure I.3).

Annual prices for the rest of the goods belonging to this group, however, fell despite nominal peso depreciation during the year (Figure I.4). Thus, the CPIXT, which excludes fuels and perishables associated with tradables, ended 2000 down 0.9% for the year.

The components of internationally tradable goods inflation displayed different trends. While fuel prices rose, durable goods prices remained depressed.

The CPIXT includes mainly articles of clothing and durable goods, such as household appliance. Its decline, therefore, contrasts with the rise in the exchange rate, indicating a reduced sales margin. Several factors explain this decline in margins. These include high unemployment and its impact on personal consumption, an increase in installed capacity in the retail sector in recent years, and the impact of both technological changes and productivity increases. In the case of the latter, increased investment in retail and distribution from 1996 to 1998 offers indirect evidence that margins remained attractive, thus foreshadowing an increase in competitive pressures at the final point of sale. Similarly, the contraction in sales that began in 1999 seems to have led to a more rational use of inputs, which affected productivity positively (See Box I.1).

Importable manufactured goods inflation

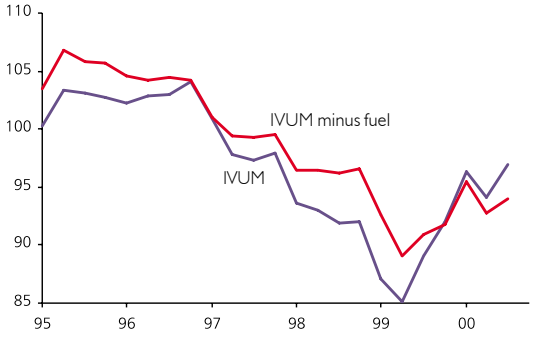
By November 2000, the external price index measured in dollars (*índice de precios externos medido en dólares, IPEX*) had risen 0.8% over November 1999. This was partly due to higher wholesale prices in different countries, which in turn were affected by the price of oil on external markets (Figure I.5). Notwithstanding, world inflation in dollars in 2000 was less than expected, as a result of dollar appreciation against the euro during the second half of last year. The baseline projection scenario incorporates the effect of recent dollar depreciation on world inflation in dollars and the prices of Chile's imports this year and next.

The baseline scenario assumes that external inflation (measured in dollars) affecting manufactured goods will rise over the next two years.

During the third quarter of 2000, import prices in dollars, measured by the Import Unit Value Index (*índice de valor unitario de las importaciones, IVUM*), rose 9.0% over the previous year, 3.4% if the fuel effect is

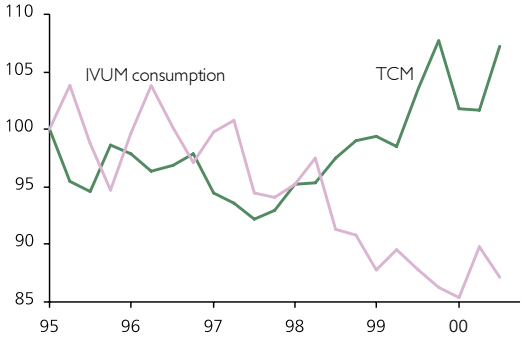
[1] Tradable goods, according to estimates by the National Statistics Bureau (*Instituto Nacional de Estadísticas, INE*), represent somewhat less than half of the CPI basket (47.7%). This index includes manufactured articles such as clothing, household furnishings and cars, as well as gasoline and other oil-based fuels, tobacco and others.

Figure I.6
Total IVUM and IVUM minus fuel
(1990 index = 100)



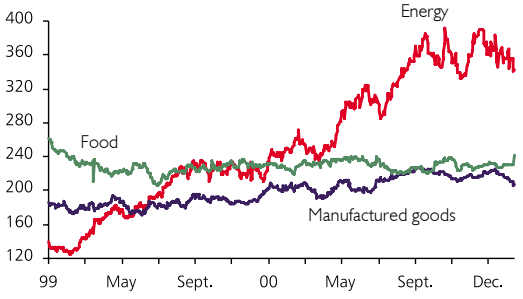
Source: Central Bank of Chile.

Figure I.7
IVUM consumption and multilateral exchange rate (TCM)
(1995.I index = 100)



Source: Central Bank of Chile.

Figure I.8
Breakdown of CRB index



Source: Bloomberg.

subtracted (Figure I.6). The prices of imported capital goods and non-oil intermediate goods rose 4.4% and 4.2% respectively. The prices of consumer goods purchased from abroad, which are more linked to inflation through durable goods, fell yet again during the third quarter, ending up 0.8% lower than they were for the same quarter in 1999. Thus, for the first nine months of 2000, imported consumer goods prices fell on average 1.1%. This helps to explain the absence of inflationary pressures on the behavior of tradable goods (Figure I.7).

Commodity and wholesale prices in Chile

Except for oil, commodity prices remained relatively stable during the last four months of 2000. The commodity price index prepared by the Commodities Research Bureau (CRB) rose 0.2% between August and December, and then fell toward the period's end due to the lower price of oil in December. This was reflected in the energy component, which had been rising by almost two digits and ended the period August-December with an increase of just 0.8%. At the same time, manufactured goods prices, which had risen during part of the second and third quarters of the year, fell by 5.0% during the mentioned period. Livestock prices posted the largest increase, rising 18.7% (Figure I.8).

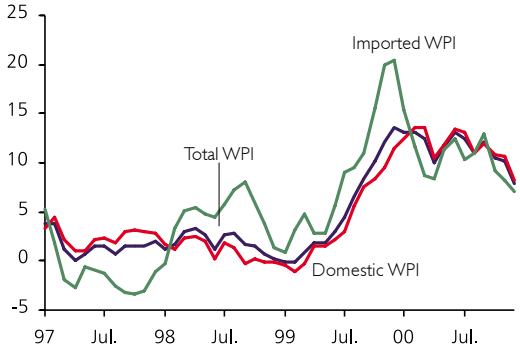
Commodity prices remained stable, and even dropped in the case of manufactured goods. Only livestock prices rose.

In 2000, the Wholesale Price Index (WPI) rose 7.9% over twelve months. A breakdown by category indicates that the WPI for domestic products rose 8.2% per annum and 7.0% per annum for imported products. The oil price and the exchange rate affected the final performance of these price indicators in the case of imported products, while fuel refinery and copper prices affected domestic products. In effect, for both groups, the mining products component, which combines these prices, posted an annual increase above the aggregate index, 13.9% in the case of domestic products, and 18.2% for imported products (Figure I.9).

Although the annual WPI posted an annual increase higher than the CPI, the link between them is weak. Increases in the WPI, therefore, responded to price movements that will not necessarily be transferred to general inflation trends within the economy.

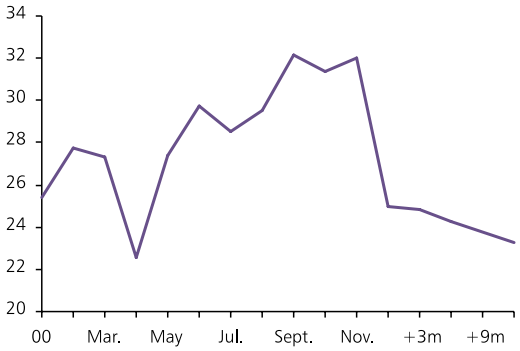
The fact that the annual increase in the WPI was higher than the CPI does not denote the existence of latent pressure on inflation. Prices pressuring the WPI upward do not necessarily have a direct counterpart in the CPI, as is the case with copper. In their transfer to the consumer, some of the higher wholesale prices are attenuated by the operation of stabilization mechanisms, as occurs with fuel prices, which are cushioned by the FEPP. It is important to emphasize that the link between the WPI and the CPI is weak and that aside from common factors affecting both indices, products common to both indices represent less than 50% of each, and these prices mainly tend to remain stable. An arithmetic exercise in which only WPI prices with counterparts in the CPI are considered yields an increase in wholesale prices that is similar to the CPIX. This indicates that increases in the WPI today respond to price movements that will not necessarily be passed on to inflation tomorrow.

Figure I.9
Total, domestic and imported wholesale price index (WPI)
(percentage change over the same period of the previous year)



Source: National Statistics Bureau.

Figure I.10
Futures oil prices
average over the past thirty days
(dollars per barrel)



Source: Bloomberg.

Another example of this is that, despite the fact that many prices common to both indices are affected by trends in the exchange rate, the associated pressures appear immediately and completely in the WPI for imports, but are not necessarily incorporated as promptly into the consumer prices. Thus, the WPI shows a very significant degree of volatility that does not find an equivalent reflection in the CPI.

In the baseline scenario, prospects for the performance of wholesale prices foresee moderate changes, to the degree that the exchange rate and the oil price remain stable at current levels, while dollar inflation will rise.

Fuel prices

Fuel prices, like those of other products including perishable foods, tend to be volatile and, in the short term, have a significant impact on CPI-measured inflation. At the aggregate level, almost 70% of accumulated inflation in 2000 was the direct result of higher prices for these products and their indirect effects on transportation costs.

Although the oil price has been highly volatile over the past year, affected by modifications in production, falling inventories, armed conflicts and numerous other events, it is expected to remain close to current levels in the future.

In the medium term, domestic fuel prices are expected to behave consistently with the performance of the international oil price.

The implementation of a new operating mechanism for the FEPP and the gradual exhaustion of its resources led to a rapid alignment of domestic fuel prices with those abroad. The future behavior of domestic fuel prices is hard to predict, because today more than before it is closely linked to the international price for crude oil. In any event, the prospects, already mentioned, suggest a gradual decline in the price per barrel of oil, which should average US$25 this year and US$23 in 2002 (Figure I.10).

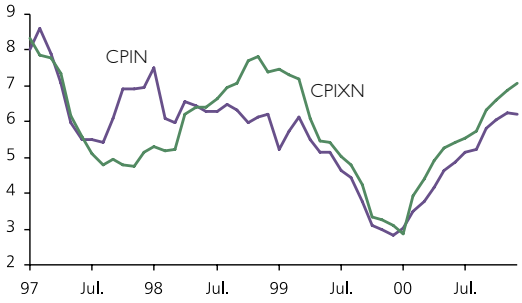
Indirect taxes

In terms of indirect taxes, as of 1 January of this year, the specific gasoline tax experienced a one time increase, of 0.8 UTM (*unidades tributarias mensuales*, an indexed tax unit) per cubic meter, or just over 20 pesos per liter. In contrast, as of the same date, the basic customs tariff was reduced by one percent to 8%. Both changes have been incorporated into projections for this and previous reports.

Non-tradable goods and services inflation

From the closing date of the previous Monetary Policy Report to the latest date for which information is available, annual inflation for this sector (CPIN) rose one percentage point, reaching 6.2% in December, up from 5.2% in August. Unlike tradable inflation, the adjusted indicator

Figure I.11
CPIN and CPIXN
(percentage change over the same period of the previous year)



Source: National Statistics Bureau, Central Bank of Chile.

for this group (CPIXN) shows an annual increase that is even higher, standing at 7.1% in December, up from 5.7% in August (Figure I.11).

The explanation for this lies with the impact that the higher oil price and the higher exchange rate had on several regulated prices, among them transportation fares and indexing mechanisms applied to telephone service and electric power.

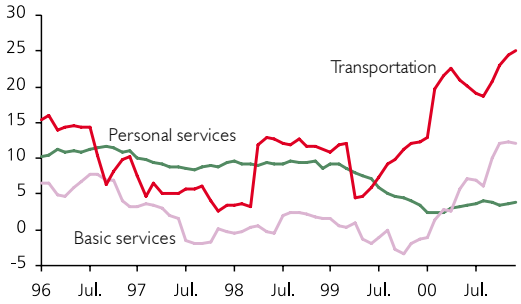
Services with regulated fees

As already mentioned, an important part of the rise in total inflation and non-tradable inflation stemmed from higher prices for regulated services. In fact, annual inflation for this group, which stood at 2.7% in late April, had reached 12.1% in December.

The regulated service with the largest increase in 2000 was public transportation. The readjustment mechanism for this fare takes four expenses into consideration. Equipment replacement, which depends almost completely on the exchange rate, weighs the most heavily (37%), followed by the labor cost index (33%), as prepared by the INE, diesel oil (26%) and tires (4%).

Trends affecting these factors, along with the implementation of automatic fare machines and agreements between associations and the government, translated into a 70-peso increase in bus fares during the year, an increase of somewhat more than 30%. As an exercise, it is generally considered that an 8% shift in replacement costs (exchange rate) or diesel fuel lead to 10-peso increase in fares. This is equal to a one-time increase of about 45 pesos in the exchange rate or almost 20 pesos in the cost of diesel. For now, further increases that could affect fares are not expected, because the international oil price should be lower than the average for 2000, thus bringing down domestic fuel prices. Moreover, the baseline scenario assumes that the exchange rate should remain stable over the projection horizon.

Figure I.12
Breakdown of non-tradable CPI
(percentage change over the same period of the previous year)



Source: Central Bank of Chile.

In September, energy charges were readjusted by 4.7%, while node prices were increased by 4.3% in November. This increase was more than offset by a decline in distribution prices, which caused residential charges to fall 2.1% in November. Overall, energy charges rose just over 5% on average during the year. For now, the most important event affecting the cost of electric power will be the new review of generation prices set to take place during May (Figure I.12).

The performance of the exchange rate and the oil price caused charges for utilities and public transportation to rise above general inflation during 2000.

Personal services

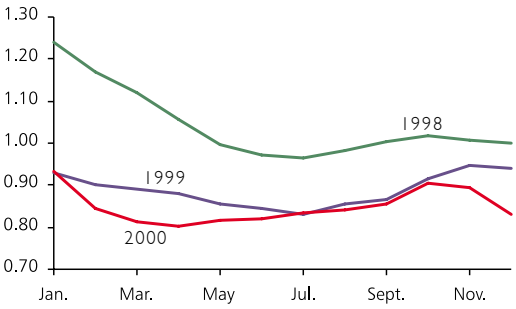
The cost of personal services posted an annual increase of 3.8% during 2000, rising slightly more quickly toward year's end, and in line with nominal wage trends. Despite unemployment rates observed last year, nominal wages nonetheless rose, due to indexation mechanisms. Overall,

greater inflationary pressure is not expected to arise from this situation, because the unit labor cost has not increased, thanks to a significant rise in mean labor productivity

Perishable goods

Perishable goods prices showed a drop beyond the usual seasonal tendency, common toward year's end, particularly in December (Figure I.13). For the first quarter of 2001, no significant shift in this trend is expected, with perishables projected to perform as usual this season.

Figure I.13
Relative perishable price and CPI



Source: National Statistics Bureau.

Prospects for the first four months of 2001

CPI-measured inflation is expected to fall during the first four months of 2001, due in part to the weakening or disappearance of the price increase effects that occurred during the same period of 2000. This effect, resulting from the changing basis for comparison, will contribute to a drop of about 0.4 percentage points in annual inflation.

Service prices that are adjusted based on past inflation will work in the opposite direction. Education is one example, since in March primary, secondary and post-secondary institutions typically raise their fees, based on the previous year's inflation. Because inflation was higher in 2000 than in 1999, prices will rise more this year than last, pushing up annual inflation for March 2001 over March 2000, although it is assumed that this will be temporary. In this sense, it would be better if indexing mechanisms for these and other service charges and fares moved toward formulas based on expected, rather than past inflation. The current scenario of price stability, which includes inflation targets for a broad time horizon, along with a commitment from the economic authorities to give priority to meeting these goals, allows institutions to move toward calculations based on future estimates for inflation.

It would be desirable if, in general, the various mechanisms that determine service charges and regulated fares were linked to expected inflation rates.

In the short term, significant inflationary pressures are not expected to affect the current stable performance of underlying inflation.

CPI-measured inflation has performed in line with expectations for the past four months, despite the impact of higher fuel prices, nominal peso depreciation, and the transfer of both factors to regulated service charges. Inflationary trends show no significant shifts that would reveal incubating inflationary pressures that could emerge in the future. Thus, inflation should begin to slow during the first quarter of 2001 and continue this trend for the rest of the year.

BOX I.1: **RETAIL MARGINS**

One of the most widespread hypotheses about price formulation in markets that are not perfectly competitive is that producers and vendors set prices by adding a margin (mark-up) m to their marginal costs (cm): $p = m + cm$. The margin hypothesis is a simple and useful idea for examining the behavior of a significant number of prices within the economy, given that shifts in margins can be an important component in changing prices.

Margins are influenced by a firm's market share and the degree of concentration within a sector. The more concentration, the more control the company will have over its price and therefore its margin. Margins are also associated with the price elasticity of demand for a product. If price elasticity is high, margins will be lower.

Furthermore, margins can change as a result of economic fluctuations. Thus, understanding margins' behavior throughout a cycle is key to forecasting price trends in the short and medium term. Rising demand can affect margins because marginal costs increase by a proportion that is different from end prices, as margins either expand or are compressed. Similarly, a rise in productivity can reduce either marginal costs or end prices. In this case, margins will rise or fall depending on which of the two variables falls proportionately more.

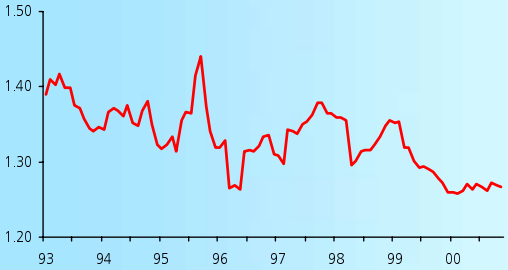
In general, the theory about how margins change during a cycle is ambiguous.[2] Some models predict that they are pro-cyclical, that is larger when the economy is in an expansive phase of the cycle and smaller when there is a recession.[3] Others, in contrast, predict that margins are countercyclical.[4] As a result, the best approach is to examine the problem empirically and reach a conclusion based on an analysis of the facts.

The above considerations have been key to recent debate, with some analysts suggesting that retail margins have fallen during the past year or 18 months due to peso depreciation and ongoing high unemployment. As a result, once demand becomes stronger, margins should rise, pressuring inflation upward. The baseline scenario takes this behavior into consideration, but the uncertainty surrounding the magnitude of this phenomenon and its effects on monetary policy should be kept in mind.

An analysis of what has happened to margins and their expected future performance forms part of the Central Bank's ongoing monitoring of price trends. The next section provides a simple and illustrative analysis of what has happened to the margins of five durable consumer goods included in both the CPI and the WPI. Within the CPI, durable goods account for slightly more than 2% of the index. The five goods under consideration represent 52% of durable goods' weighting within the CPI. Other durable goods within the CPI do not have an equivalent price within the WPI and their dollar import price does not offer a homogeneous series that can be used.

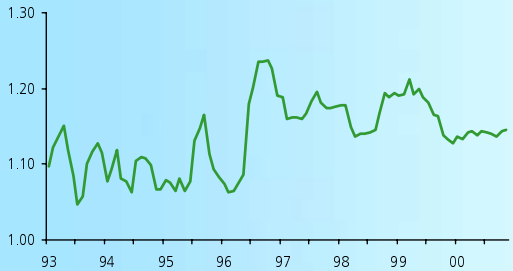
Of these goods, the WPI treats two (refrigerators and washing machines) as both domestic and imported products. An examination of their price trends and those of the CPI suggests that the prices included in the CPI are those for

Figure I.14
CPI/WPI price margin for stoves



Source: National Statistics Bureau.

Figure I.15
CPI/WPI price margin for refrigerators



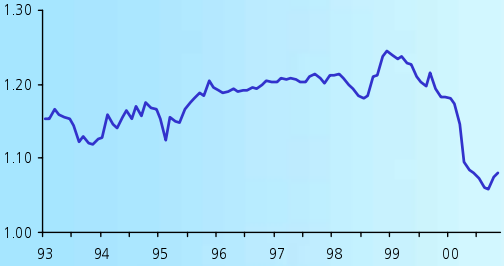
Source: National Statistics Bureau.

[2] See Small (1997).

[3] Kreps and Scheinkman (1983) predict pro-cyclic margins.

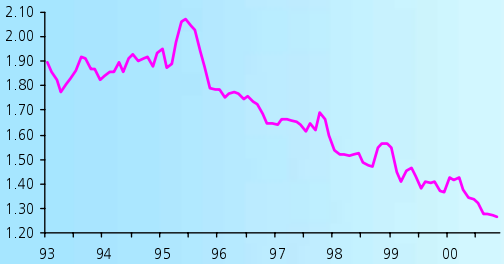
[4] The Rotemberg and Saloner model (1986) predicts they are countercyclical.

Figure I.16
CPI/WPI price margin for washing machines



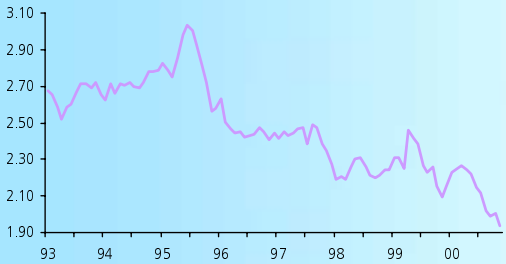
Source: National Statistics Bureau.

Figure I.17
CPI/WPI price margin for television sets



Source: National Statistics Bureau.

Figure I.18
CPI/WPI price margin for radios



Source: National Statistics Bureau.

products produced domestically. Figures I.14, I.15 and I.16 provide CPI/WPI margin trends for stoves, refrigerators, and washing machines, using WPI prices for domestic products. As can be seen, in 1999, margins fell by different amounts according to the product. Then, in 2000, these margins tended to stabilize or, in one case, even to post an increase toward year's end.

In the case of these products, there is some disagreement about what can be expected in terms of future margins. On one hand, margins on washing machines clearly fell during 1999, and despite the fact that during the second half of 2000 they recovered somewhat, remain lower than they averages observed in 1993 and 1994.[5] On the other hand, while refrigerator margins have declined, they are larger today than they were from 1993-1996, that is, prior to the consumption boom, and have remained stable since late 1999. Refrigerators prices, therefore, do not reflect pressures to rise in the short and medium term. Margins on stoves have fallen steadily since 1993, with some exceptions, but seem to suggest that the fall in margins is a more structural or permanent phenomenon related to the market structure. In short, for domestic products, only washing machines could potentially suffer pressure from margins on prices in the future.

The two remaining products, television sets and radios, are only present in the WPI for imported products. Figures I.17 and I.18 provide trends in CPI/WPI margins for these goods. Clearly they fell in both 1999 and 2000, but it is important to note that this is also part of a long-term trend. In fact, margins for these products have been falling since 1995, even during the period of greatest growth in expenditure. This suggests that beyond developments in demand and the higher exchange rate, margins for these products have fallen as a result of structural conditions, particularly taking into consideration the fact that they start at levels above 100% of the wholesale price.

In conclusion, for the five products examined here, which represent 52% of durable goods included in the CPI, it is not possible to conclude that significant latent pressure exists to increase margins. For domestically produced durable goods, trends for just one product suggest that margins could recover significantly in the future, while evidence for the rest suggests that they will remain stable. For imported goods, margins have been falling as part of a longer-term process, which is probably the result of structural changes in the composition of the retail sector. Altogether, this evidence is incomplete, since it does not examine what could happen to margins and prices in several other sectors of the economy, for which there is no readily available information. Because of this, the main scenario for this report assumes that for the projection horizon retail margins will grow moderately at the most aggregate level.

[5] Another factor that may be present in this case is the change in the definition of the CPI basket implemented in December 1998. This could mean that the washing machine included in the previous basket is not totally compatible with what is currently included. This problem, which may affect all products, seems to appear with more strength in the case of this good for technical reasons.

This section examines recent trends and prospects for the world economy over the next two years, outlining the external scenario that the Chilean economy will face. World economic activity, international inflation, terms of trade and international financial conditions that will affect Chile are analyzed in this context.

The prospects for world activity evident today are somewhat less favorable than those foreseen in the September report. This is because the United States' economy appears to be decelerating more quickly than originally foreseen. This will have an adverse effect on its trading partners and the country's terms of trade. In the financial area, capital flows into Latin America and Chile could rise as US economic authorities continue to reduce interest rates more quickly and more deeply than expected. This effect, however, and compared to expectations in September, will be offset or weakened by the greater volatility of international financial markets, as well as increased political and economic uncertainty throughout the region.

The Federal Reserve's decision to lower their policy rate by 5% basis point on 3 January was a warning signal the market of the risk that higher interest rates, high energy costs, weak stock markets and restrictions on credit markets could be generating an over-adjustment. Although these factors began to subside after the Fed's decision, uncertainty remains high about the future of the US economy and is reflected in the wide range of growth projections for 2001. In any case, the slowdown of the US economy should occur primarily in the first half of the year, followed by stronger growth during the second half, leading to a gradual return to past levels.

World growth

Estimates indicate that world economic growth during 2000 reached 4.9%, measured as purchasing power parity (PPP) prices. This result is just 0.1% higher than that foreseen in September. Growth was led by the United States, which grew 5.1%, the highest rate registered by that economy over the past 15 years.

For 2001, economic growth is expected to slow more than initially projected, reaching 3.8%, measured the same way. This, nonetheless, is almost an entire percentage point above the average for the nineties. The United States is the country expected to slow the most: according to Consensus Forecast, it should grow 2.6% in 2001, 0.8% less than expected a few months ago. Considerable divergence exists, however, among the different investment banks, whose growth projections for the United States range from 1.7% to 3.2%. This reveals the uncertainty in this area, which is typical of moments when trends are changing, as is occurring today in the United States. Moreover, some investment banks have continued to reduce their projections, which could mean that growth in the United States will approach the floor of the projection range mentioned above. In any case, the surprise 50-basis-point cut to the policy rate, decreed by monetary authorities last 3 January, which will probably be cut again, should contribute to revitalizing growth in the United States during the second half of the year.

Figure II.1
World growth
(percent)

(1) Weighted growth by share of world GDP (PPP adjusted).
(2) Weighted growth by share of Chile's total exports (1998).
(f) Projections.

Sources:
Consensus Forecasts (January 2001 and December 2000).
International Monetary Fund, World Economic Outlook (September 2000).
Central Bank of Chile.

In 2002, world growth should recover, reaching 4.2% according to Consensus Forecast, with the United States growing 3.5%, close to its potential. The world's main regions are expected to post similar results (Figure II.1).

In Europe, last year's interest rate increase and the contractive effect of the higher oil price contributed to a slowdown during the second half of 2000. Additionally, the euro, has partly turned around its slide, and should continue to recover throughout the year. The fall in unemployment and tax reductions have improved business and consumer confidence, permitting growth projections of 2.9% for this year and 2.8% for 2002, down from 3.2% in 2000.

In Japan, although recovery has been slow, projections remain similar to those of the previous report, with growth projected to rise 1.8% in 2001 and 1.9% in 2002. Private investment and the external sector have led recovery and public investment is expected to provide extra drive this year, with the announcement last October of a new government package worth US$100 billion (2.2% GDP). More recent figures, however, suggest exports and investment have weakened, while private consumption remains weak, due to high unemployment. This last figure shows no signs of prompt recovery, because apparently companies still have room for additional restructuring.

The emerging economies of Asia should move toward average growth of 7% in 2002, driven by the performance of the Chinese economy, which has significant weight within the region. Korea's economic authorities have taken measures to reinforce their decision to continue to restore its main financial conglomerates to health. Political uncertainty in Indonesia and the Philippines remains, and continues to generate noise regarding the future of these economies. Unlike the situation in 1997, however, today the emerging economies of Asia have a more solid external position, favored by the devaluation of their currencies, the current flexibility of exchange regimes in most countries, and banking systems that are somewhat more solid after the financial restructuring programs applied in recent years.

Table II.1
World growth
(percent)

	Average 1990-1998	1999 (e)	2000 (f)	2001 (f)	2002 (f)
World (1)	3.2	3.6	4.9	3.8	4.2
United States	2.9	4.2	5.1	2.6	3.5
Europe	2.0	2.4	3.2	2.9	2.8
Japan	1.8	0.8	1.9	1.8	1.9
Rest of Asia (2)	8.0	6.3	7.5	6.5	6.9
Latin America (3)	3.1	0.0	4.0	3.7	4.1
Trading Partners (4)	3.1	2.3	3.9	3.1	3.5

(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.
(f) Projections.

Sources:
Consensus Forecasts (January 2001 and December 2000).
International Monetary Fund, World Economic Outlook (September 2000).
Central Bank of Chile.

In Latin America, growth in 2000 is estimated to have reached 4%, up slightly from the projection of 3.7% included in the previous report. This is because Mexico and Brazil grew more than expected, offsetting the virtually zero growth in Argentina. In the future, Consensus Forecast projections suggest that the region should grow 3.7% in 2001 and 4.1% in 2002. This year, Mexico should grow less than half of last year's rate, mainly due to the slowdown of the US economy, the lower oil price, and the probability of changes to its monetary and fiscal policies, after strong growth in domestic demand, particularly during the second half of 2000 (Table II.1).

The projection for world growth at constant parity prices has fallen to 3.8% for 2001 and remains at 4.2% for 2002, almost a whole percentage point more than average growth during the nineties.

In this environment of world economic activity, the prospects for demand for Chilean exports are less optimistic than in September, mainly due to the greater slowdown of the US economy. In effect, the economic activity of our main trading partners, which is estimated to have risen 3.9% in 2000, should reach 2.1% in 2001 and 3.5% in 2002[1] (Figure II.1)

Figure II.2
Commodity price index (1)
(1967=100)

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

Source: Bloomberg.

Figure II.3
Copper price (1)
(cents per pound)

(1) Daily prices London Metal Exchange.

Source: Bloomberg.

Sources of risk for the world economy have changed since September. While the smooth landing hypothesis for the United States' economy appears to be the most likely, there is more uncertainty regarding the magnitude of the drop in growth in the United States. Perceptions that excessive tightening could be in the works will weaken the more the Federal Reserve continues with its policy of interest rate drops, which begun unexpectedly in the early days of January. According to US monetary authorities, risks are tending more toward a weaker economy than to the inflationary pressures viewed as a central concern in the previous report. Similarly, with regard to the Japanese economy there is uncertainty about the recovery in domestic demand and the impact that a slowdown of the US economy will have on the external sector.

Commodity prices and terms of trade

In 2000, the noteworthy strength of world activity was gradually reflected in greater demand for commodities, allowing prices to recover. In fact, after falling 20% between 1998 and 1999, the CRB[2] commodity price index rose 13% on average in 2000 (Figure II.2). Chile's export prices were also favored by this situation, and a more significant recovery is expected to start this year.

Projections for the price of copper in 2001 are around 86 cents per pound, one cent lower than forecast in the previous report. This drop is based on the fact that world growth will be lower than was estimated some months ago, notwithstanding the fact that stocks have declined

[1] World growth weighted by purchasing power parity prices (PPP) differs (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 in 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, while its economy is growing substantially less.

[2] *Commodity Research Bureau*.

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

	2000	2001	2002
Central Bank	82.3	86.0	95.0
World Bank	82.8	89.6	93.0
Cochilco	81-86	88-93	94-99
Goldman Sachs	82.9	91.3	-
Futures (1)	82.3	85.0	83.5

(1) Average over the 30 days prior to 15 January 2001.

Sources:
Bloomberg.
World Bank, Development Economics, Development Prospects Group (October 2000).
Chilean Copper Corporation.
Goldman Sachs. The International Economics Analyst (December 2000).
Central Bank of Chile.

significantly, as expected. Once copper peaked at an average 89 cents per pound during September, prices fell, in line with the slower pace of inventory reduction. Thus, the average price for 2000 was 82.3 cents per pound, as projected by the previous report (Figure II.3). For 2002, the copper price should reach a medium- to long-term trend level of around 95 cents per pound (Table II.2).

Prospects for the prices of other export commodities are less optimistic than in the previous report. In 2000 the average price of wood pulp rose 48% over the previous year, to reach US$627 per metric ton. This increase was based on low inventories, due to reduced world supply, and more robust economies in Europe and emerging Asia, which are the destination for 40% and 30% of pulp shipments, respectively. Since the end of last year, however, futures pulp prices have fallen, bringing the average price in 2001 to around US$570 per metric ton. Fishmeal prices fell in 2000, recovering slightly toward year's end. Prices are projected to remain at current levels for 2001-2002, considering that the Japanese economy, which is the main destination for this product, should grow around 2% over the next two years, similar to growth experienced in 2000.

The price of copper is projected to reach 86 cents per pound in 2001 and around 95 cents per pound during 2002.

Figure II.4
Oil price (1)
(dollars per barrel)

(1) Daily Brent oil prices.

Source: Bloomberg.

Projections for the oil price in 2001 have fallen slightly, but uncertainty remains high, reflecting the considerable volatility shown by this market. In effect, the oil price rose to over US$30 per barrel until the early days of December, ending 2000 at about US$22 per barrel. Factors leading to the higher oil price during most of last year were rooted in OPEC's lack of clarity about its price policy and production, the possibility of an early and harsher winter in the northern hemisphere, historically low inventories, and uncertainty about OPEC's real capacity for increasing production. In late December, however, it was announced that oil inventories in the United States had risen. This, combined with perceptions that world growth for 2001 would be less than initially forecast, a milder winter in the northern hemisphere, and the resumption of exports from Iraq, brought the price to US$22 per barrel (Figure II.4), with futures prices for 2001 also falling. These conditions should be evaluated with some caution, however, given that OPEC has announced it will cut production by 1.5 million barrels per day starting in February. Moreover, due to the fact that oil inventories remain low, any unexpected factor influencing current conditions could lead the price to increase as it did in January. Projections for 2001, therefore, indicate the oil price should reach US$25 per barrel, which is the same as average futures values in the past 30 days for this same period and, furthermore, is consistent with OPEC's statements in the sense that the oil price will remain around the average reference band defined by its members. Toward 2002, the average price should fall to around US$23 per barrel (Table II.3).

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

	2000	2001	2002
Central Bank	28.5	25.0	23.0
World Bank	28.0	25.0	21.0
JP Morgan	28.8	25.8	20.3
Goldman Sachs	28.5	26.8	-
Economist Intelligence Unit	28.8	23.4	19.1
Futures (1)	28.6	24.6	22.2

(1) Average over the 30 days prior to 15 January 2001.

Sources:
Bloomberg.
World Bank. Development Economics, Development Prospects Group (October 2000).
JP Morgan. Energy Research (January 2001).
Goldman Sachs. The International Economics Analyst (December 2000).
Economic Intelligence Unit. Global Outlook (January 2001).
Central Bank of Chile.

The baseline scenario assumes an average oil price for 2001 of US$25 per barrel, which would then fall to an average of US$23 per barrel in 2002.

Overall, the terms of trade for goods produced by the Chilean economy remained stable in 2000, undoubtedly a more negative scenario than originally forecast. The projection for 2001 assumes the terms of trade will rise by 2%, somewhat less than estimated in September, and then increase by 3.6% in 2002.

International inflation

Figure II.5
Yen/US$ exchange rate

Source: Bloomberg.

Figure II.6
US$/euro exchange rate (1)

(1) US$/ecu through 31 December 1998.

Source: Bloomberg.

Underlying inflation should reach around 2% for the euro zone, 2.5% for the United States, and virtually zero for Japan. Inflation in Latin America should continue to fall, as a result of more stable exchange rates and a greater commitment on the part of the region's main economies to meeting lower inflation targets over time.

These projections for international inflation do not differ significantly from those in the previous report. This is because the impact of the future price of oil on this variable had already been incorporated into estimates for 2001. In the future, changes will be measured against a relatively high oil price, so that in the case of the United States and the Euro zone, inflation should fall compared to 2000. In the case of the United States, the convergence shown between domestic demand and potential output should also influence this variable, while in Europe's case a slight recovery in the currency will have a similar effect.

Estimates for international inflation affecting Chile's trading partners during 2000, measured in dollars, indicate that, at 0.5%, it was lower than forecast in the previous report. Similarly, the projection for 2001 has been reduced to 1.5%, 3.7% for 2002. The results for 2000 were basically due to the fact that expected dollar depreciation against the main currencies did not occur. The weakening of the dollar foreseen for this year, particularly against the Euro, has already begun, and explains the higher inflation, measured in dollars, estimated for the coming two years (Figures II.5 and II.6 and Table II.4).

Table II.4
World inflation
(percent)

	Average 1990-1998	1999 (e)	2000 (f)	2001 (f)	2002 (f)
	(average monthly change in local currency)				
United States	3.1	2.2	3.4	2.7	2.4
Europe	3.5	1.4	2.3	2.1	1.9
Japan	1.4	-0.3	-0.7	-0.3	0.0
Rest of Asia (1)	8.3	1.2	1.0	2.3	2.9
Latin America (2)	421.9	9.8	9.0	7.2	6.9

(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 (January 2001 and December 2000).
International Monetary Fund, World Economic Outlook (September 2000).
Central Bank of Chile.

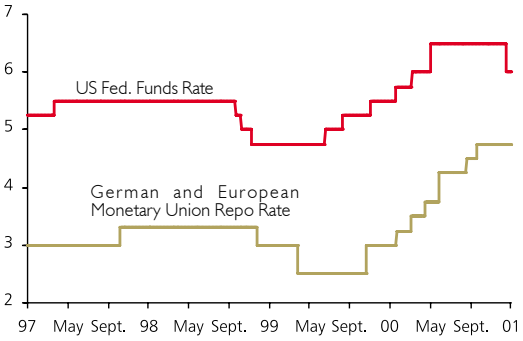
Average inflation over the next two years is projected to be 2.5% for the United States, 2% for the Euro zone, and several tenths over zero for Japan.

International interest rates

The more moderate growth rate in the United States and the convergence of domestic demand and potential output have tilted risk toward less economic activity than is desirable. This has led to interest rate cuts for every maturity, reflecting economic agents' assumption that a period of interest rate cuts has begun. The process began in early January, when US monetary authorities surprised the market with a reduction of 50 basis points in the policy interest rate, almost a month before the scheduled meeting of the Monetary Policy Committee. Moreover, the Federal Reserve kept its expansive bias, which suggests that future meetings will introduce more cuts. The decision to begin a more expansive phase in monetary policy was based on consumption and production indicators, which clearly fell during the fourth quarter, plus the decline in consumer confidence indicators and the narrowness apparent in some financial indicators. All this has occurred in a context in which inflationary pressures appear to be under control and there is scant evidence that productivity gains associated with technological progress are decreasing. Interest rate futures suggest that the policy rate should reach 5% by the end of the first quarter, and there could be an additional cut of 25 basis points during the second half of the year.

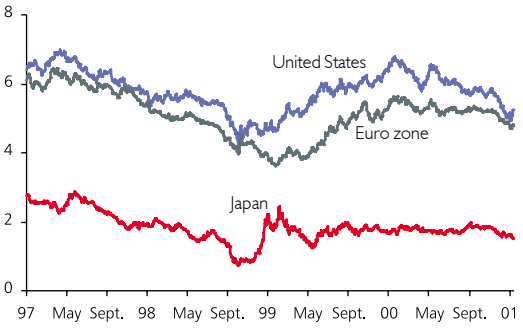
With early January's cut of 50 basis points in the policy rate, the market forecasts a new expansive stance on the part of US monetary authorities.

Figure II.7
Policy interest rates
(percent)



Source: Bloomberg.

Figure II.8
10-Year government bond yields
(percent)



Source: Bloomberg.

Figure II.9
Sovereign spreads
(basis points)

Source: JP Morgan, Merrill Lynch.

In the Euro zone, interest rates rose to 4.75% as forecast in the previous report. In the future, to the degree that inflationary prices linked to the oil price decline, the Euro appreciates against the dollar, and economic growth stabilizes, agents are forecasting cuts of 50 to 75 basis points in the policy rate. This suggests behavior considerably less restrictive than that foreseen in the previous report (Figure II.7).

In line with lower inflationary pressures and economic slowdown, the rate on US ten-year treasury bonds has fallen since September to its current level of about 5%. After rising in September and October, given the imminent rise in the policy rate, the ten-year rate for the Euro zone also stabilized at around 5%. In recent weeks, however, the yield on euro bonds has begun to fall and currently stands at about 4.8%. In the case of longer-term instruments in yens, their yield has remained at about 1.6%, after the 25 basis point rise in the policy rate that occurred in September. Overall, compared to the close of the previous report, yields on longer-term instruments in most currencies have fallen (Figure II.8).

Emerging financial markets

The surcharge on credit costs for emerging countries has worsened since September, turning around the improvement experienced in the previous two months. Highly volatile international financial markets in late 2000, along with instability in some of the region's countries, pushed sovereign premiums paid by emerging economies upward from October on. Indeed, after averaging 672 basis points in September, the EMBI index for Latin America has now reached 748 basis points. In Chile's case, the premium on sovereign bonds rose from 195 basis points in September to 210 basis points as this report closed (Figure II.9).

Sovereign premiums paid by emerging economies, including Chilean bonds, have risen, because international financial markets have grown more volatile and some of the region's countries have experienced political and/or economic instability.

For most emerging economies, particularly Latin America, capital flows into shares and bonds have grown scarce. In fact, capital flows into all emerging economies fell by almost 20% in 2000, compared to the 4% increase forecast in the September report. For 2001, investment bank projections show a downward correction, despite the fact flows should rise by almost 18% over 2000 figures, influenced by the lower base of comparison. In the specific case of Latin America, the fall in 2000 was around 18%, considerably worse than the 4% fall expected in September. Toward 2001, a more favorable scenario is expected for international interest rates, which will fall more quickly and sharply than originally expected. Greater political and economic risk is perceived in the region, however, which, combined with more volatile international financial markets, will tend to weaken this effect.

In conclusion, the international outlook is less favorable than it was in the September report, because growth has slowed even further in the United States. Although projections for the price of oil are more optimistic than those published in September, they are subject to the uncertainty and volatility apparent in this market. Finally, capital flows into Latin America look more positive now, in light of the fact that interest rates in the United States are being cut more rapidly and more deeply than originally expected. This effect, however, has been weakened by increased political and economic uncertainty throughout the region and the fact that international financial markets have become less stable.

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.

Interest rates and monetary policy

Monetary policy

The Central Bank of Chile implements monetary policy by setting a target level for the daily interbank interest rate. The target rate corresponds to the monetary policy rate (TPM), and is achieved by maintaining appropriate monetary reserves in the interbank market. Thus, in normal liquidity conditions, the interbank interest rate should line up with the TPM, as has occurred recently.

The TPM was reduced by 25 basis points at the Monetary Policy Meeting held on 18 January of this year, the result of the accumulation of domestic and external factors all indicating reduced inflationary pressures in the medium term, tilting the balance of risk for inflation downward. The market anticipated this measure, as could be seen in the steady decline in rates on instruments with all maturities from September to early January, a trend that grew even stronger after the Federal Reserve's surprise reduction in rates.

Similarly, private expectations regarding medium-term inflation, which can be deduced from both the structure of nominal and real rates and a monthly survey of expectations, showed declines since November. This reinforces the impression that higher inflation in 2000 did not influence underlying price behavior. Chapter V provides details of inflation projections and the balance of risks associated with this new level of the TPM.

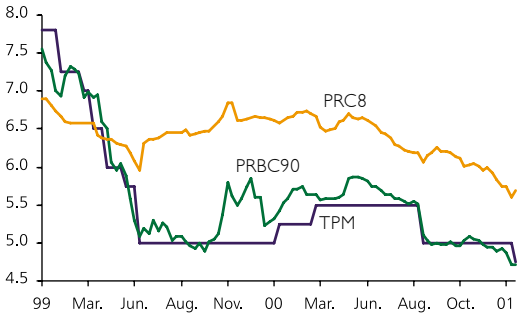
The monetary policy interest rate (TPM) was reduced to 4.75% at the monetary policy meeting held on 18 January 2001.

Yield curve

The monetary policy interest rate (TPM) corresponds to the cost of very short-term liquidity, but it affects the general level of interest rates and trends in domestic demand, because of its impact on financial agents' expectations and the yield curve.

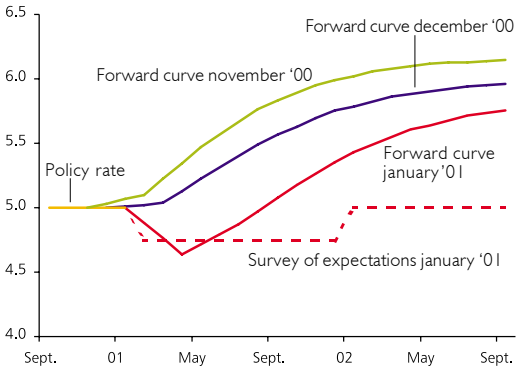
Between September and November 2000, interest rates on the shortest-term instruments remained stable around the TPM. In December they began to fall, accentuating this trend towards the beginning of this year, after the recent reduction in the Federal Reserve's reference rate. Thus, the current interest rate on Central Bank 90-day indexed promissory notes (PRBC90) is 4.75%, that is, about 70 basis points lower than at the close of the September report.

Figure III.1
Monetary policy rate (TPM) and interest rates on Central Bank of Chile notes
(weekly average, percent)



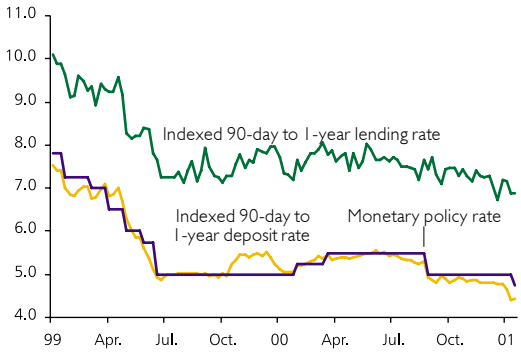
Source: Central Bank of Chile.

Figure III.2
Policy rate, expected TPM and forward interest rates curve
(percentage)



Source: Central Bank of Chile.

Figure III.3
Monetary policy, 90-day to 1-year deposit and lending rates
(weekly average; percentage)



Source: Central Bank of Chile.

Similarly, long-term interest rates (8-year PRC) have shown a tendency to fall from an average of 6.2% in September 2000 to 5.7% during the first auctions in January of this year (Figure III.1). Interest on twenty-year PRCs has behaved similarly and is currently at about 5.8%. Thus, long-term rates remain lower than the 6.7% average for the nineties.

Real market rates have fallen for every maturity, compared to figures included in last September's report.

The decline in domestic rates began in a climate in which external financing conditions had become slightly more unfavorable, as a result of the rise in the sovereign premium between September and November and the relatively stable performance of the real external long-term rate.[1] As of December, Chile's sovereign risk premium stopped rising, and as of 18 January was slightly under 210 basis points. US Treasury rates (nominal and indexed), however, also declined during the same period, in line with the increased risk of a hard landing for the US economy and, more recently, the reduction in the policy rate (FED Funds). The decline in international oil prices can be added to this scenario, as it has contributed to reducing future inflationary risk.

Market expectations also moved in the direction of anticipating a reduction in the TPM in the short term. The survey of expectations for January yielded an expected TPM of 4.75% (UF +) through April 2001, remaining at this level throughout the first half, then rising 25 basis points during the second half of the year. Finally, in 2002 the market expects the TPM to rise another 50 basis points. Overall, for late 2001, these figures are 100 basis points below expectations in August 2000, and 50 basis points lower than expectations for the end of 2002 (Figure III.2).

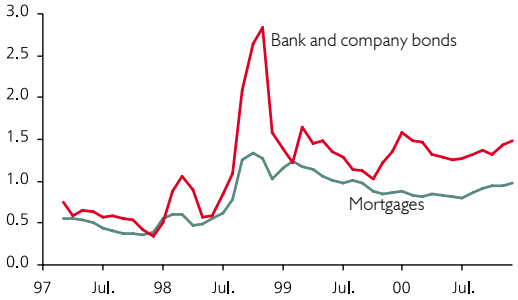
Financial system interest rates

The gentler slope of the yield curve has meant lower interest rates in the financial sector. Thus, short-term (90-day to one-year) deposit rates today are slightly below the new monetary policy rate, consistent with the cost of funds. Similarly, short-term lending rates (90 days to one year) have fallen systematically since September, and today are around 6.9%, the lowest level for the nineties. Thus, the spread between deposit and lending rate is currently around 2.4%, similar to that observed during the nineties (Figure III.3).

The impact of these events has been partially reflected in interest rates reductions on long-term fixed yield instruments issued by private firms. Thus, in September 2000, interest on mortgages (*letras hipotecarias*) was around 7.1%, while during the first two weeks of January of this year it had fallen to around 6.7%. Nonetheless, the premium that mortgages pay over Central Bank securities is currently around 100 basis points, that is, 55 basis points more than the average observed in 1997. Similarly, the average internal rate of return (*tasa interna de retorno*) on company and bank bonds averaged 7.5% in September 2000, while by the first two weeks of January it had reached about 7.05%. Thus, the premium on Central Bank securities is still higher for company and bank bonds, reaching 135 basis points today, that is 80 basis points more than the average observed in 1997 (Figure III.4).

[1] This refers to the rate on US Treasury ten-year, indexed bonds.

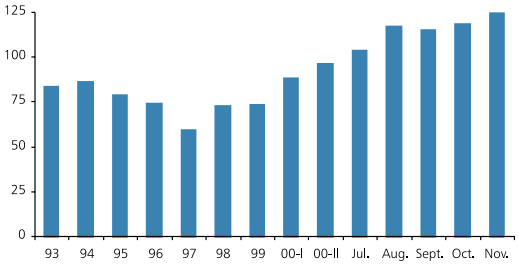
Figure III.4
Interest differential for fixed income instruments and Central Bank papers
MIRR* secondary markets (moving quarterly average; percent)



*Monthly Internal Rate of Return.

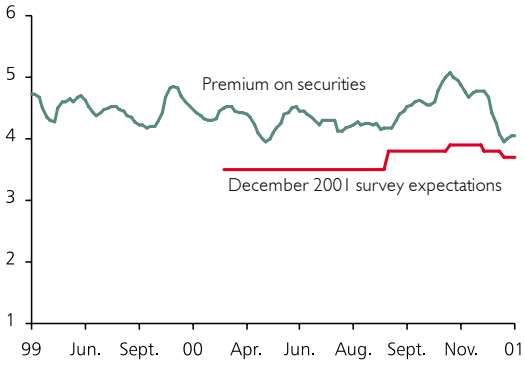
Source: Santiago Stock Exchange.

Figure III.5
Outstanding private non-financial sector bonds
(UF millions)



Source: Superintendent of Securities and Insurance.

Figure III.6
Premium paid on 1-year nominal vs. indexed papers and December 2001 survey expectations (1) and (2)
(percent, two-week moving average)



(1) Since August 2000, this is the different between the cutoff rate for PDBC-360s and one-year zero coupon indexed bonds (CEROs). Prior to the creation of CEROs, the 360-day Active Bank Rate (tasa activa bancaria, TAB) published by the Banks' Association was used.
(2) Includes risk premium.

Source: Central Bank of Chile, Association of Banks.

Notwithstanding the above, the current level of interest on mortgages is down slightly from that observed when the real estate market was thriving. This is not the case with interest on bonds, for which interest during the same periods was significantly lower than it is today. Partly, this is because of supply factors. In effect, the balance of private bonds placed has risen consistently since 1998, reaching UF 125 million in November 2000, that is, twice the balance at the beginning of this period (Figure III.5). This indicates that the private sector has tended to resort to domestic sources rather than external ones to cover its financing needs.

In summary, the drop in real market rates for every maturity, as compared to last September's report, is the result of more moderate expectations of growth in economic activity, expenditure and inflation over the next two years, reflecting both domestic and external factors.

Nominal interest rates and expectations of inflation

Despite the decline in real interest rates, nominal short-term interest rates rose during September and October due to larger increases in the UF. Since November, however, nominal rates declined along with real rates and lower indices for monthly inflation. This is reflected in the auction rate for the Central Bank's short-term nominal promissory notes (PDBC90), which today is around 8.15%.

Expectations of inflation are consistent with the target range established by the Central Bank of Chile.

The differential between nominal and indexed interest rates over one year provides a reference point regarding inflationary expectations over the same time horizon, although one must keep in mind that this differential also includes a risk premium. In particular, the differential between PDBC360 and a zero coupon indexed bond over one year had reached 4.2% by December, very similar to where it stood when last September's report was prepared (Figure III.6). In January, this differential fell to almost 4%. Meanwhile, the Central Bank's monthly survey of expectations for January found that expectations of inflation, after rising in October and November, receded in December, reaching 3.7% towards the end of 2001 and 3.5% towards the end of 2002. Expectations of CPIX inflation, meanwhile, reached 3.2% and 3% for the same periods.

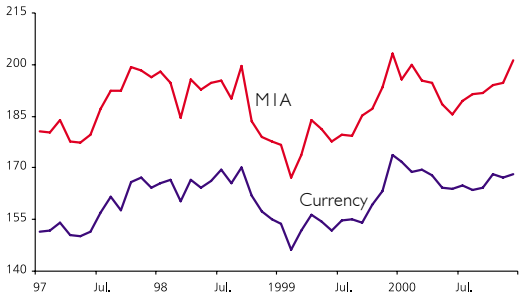
Monetary agregates and credit

An examination of the trends affecting monetary aggregates and credit offers relevant information on the economy's performance and monetary policy's impact thereon, even though the Central Bank does not have explicit or implicit objectives regarding the behavior of these aggregates.

The level of more liquid monetary aggregates, currency and private money (M1A), once they have been adjusted for seasonal and interest rate effects,[2] is linked to the operating needs of consumers and

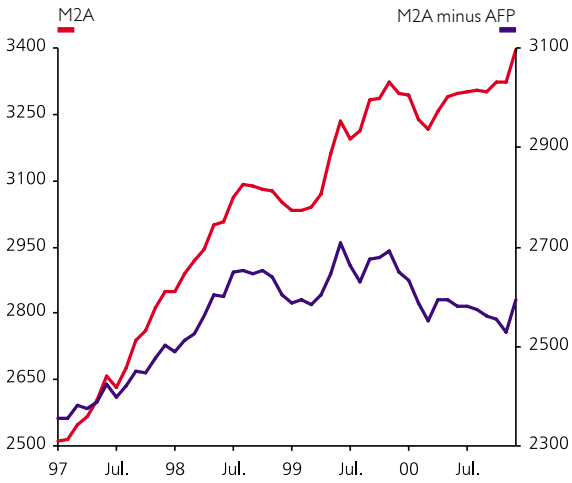
[2] Checking account and demand deposits do not accrue interest unlike other financial instruments that are considered less liquid, for historic reasons, but which have actually become more liquid.

Figure III.7
Seasonally adjusted transaction demand for currency and money
(january 1990=100)



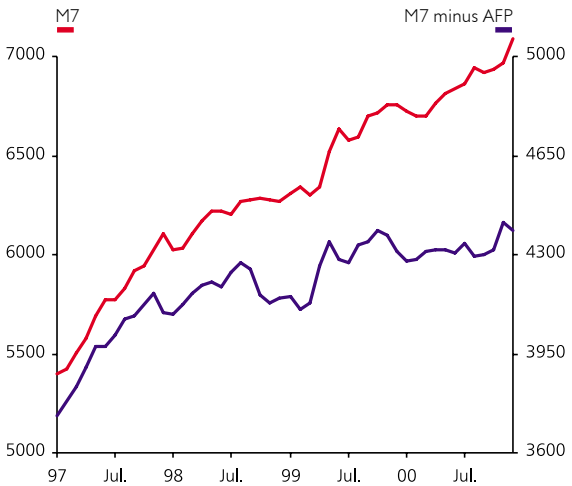
Source: Central Bank of Chile.

Figure III.8
Real seasonally adjusted M2A and M2A minus AFP
(millions of 1986 pesos)



Source: Central Bank of Chile.

Figure III.9
Real seasonally adjusted M7 and M7 minus AFP
(millions of 1986 pesos)



Source: Central Bank of Chile.

companies. Signs of growth for both currency and M1A reported in September's Monetary Policy Report have continued in the following months, with private money showing the most robust behavior. It is necessary to note that in any case, monthly figures still remain rather volatile (Figure III.7).

The tendency for the broader monetary aggregates, M2A and M7, to grow, also appears to be growing stronger. If a measure is used that deals with only those private sector financial assets most closely tied to the economy's level of expenditure, which can be obtained by excluding from the above aggregates the contribution of the private pension fund managers (these represent about 23% of M2A and 38% of M7), M2A shows a slightly negative tendency starting in the second quarter of 2000, and then grows significantly in December and January. Meanwhile, M7, after accelerating strongly from September to November, grows more moderately in December and January (Figure III.8 and III.9).

If currency and Central Bank securities are subtracted from M7 and then public sector time and demand deposits are added, one obtains a measure that reflects the supply of domestic financing of the banking system (M7B). The ratio between total loans and M7B has traditionally been almost one, and there is also a high correlation between their growth rates. In 1999-2000, however, the ratio between total loans and M7B was less than its historic average, reaching about 0.9 (Figure III.10).

Monetary aggregates and private sector credit continue to expand.

The tendency for credit to the private sector to rise, which began in May, has continued. Thus, on a monthly basis, actual loans in domestic currency and mortgages show a recovery. Given trends affecting market interest rates, this suggests that the supply of loanable funds has grown faster than the demand.

In disaggregated terms, loans to individuals have grown steadily, due to the sustained rise in credits for buying homes and the more volatile behavior of consumer credits (Figure III.11). Loans to companies have become more robust, driven by retail credits, while foreign trade loans have been very volatile, a condition associated with uncertainty about the future performance of the exchange rate[3] (Figure III.12).

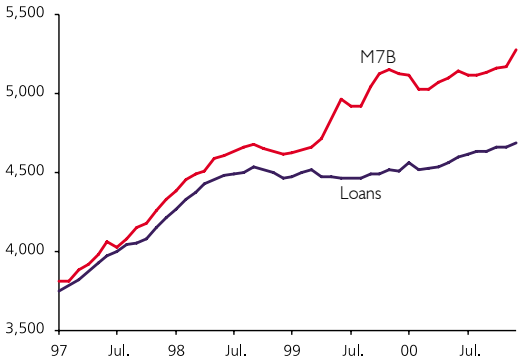
In summary, both monetary aggregates and credit to the private sector reveal a tendency to expand. In the case of the private sector, this appears to be due to greater availability of loanable funds.

The exchange rate

Since the publication of the last Monetary Policy Report, the nominal exchange rate has depreciated more than expected in September. Thus, in August, the Chilean peso traded at an average of 550 pesos per

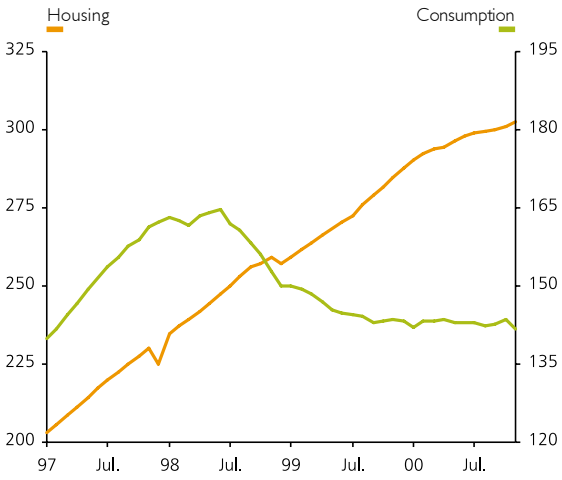
[3] According to a study by the Superintendent of Banks and Financial Institutions (Monthly Bulletin — Boletín Mensual, June 2000) the exchange rate accounts for about 30% of the volatile behavior of this type of loan.

Figure III.10
Real seasonally adjusted M7B and total loans
(millions of 1986 pesos)



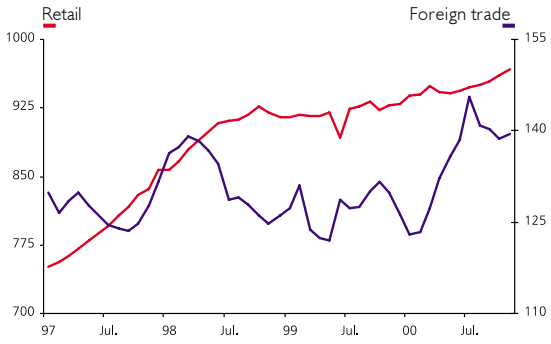
Source: Central Bank of Chile.

Figure III.11
Real seasonally adjusted credit to individuals
(UF thousands; monthly balance)



Source: Superintendent of Banks and Financial Institutions.

Figure III.12
Seasonally real adjusted credit to companies
(UF thousands; monthly balance)



Source: Superintendent of Banks and Financial Institutions.

dollar, while today it is trading between 571 and 575 pesos per dollar. This means depreciation has reached somewhat more than 4.0%, compared to the September report's projection of real depreciation reaching 2% over the two-year horizon.

Depreciation has been more limited against the multilateral exchange rate (TCM), about 2.5%, and similar to that of the dollar against the TCM5 (the currencies of the United States, Japan, the United Kingdom, Canada and the Euro area), the two multilateral exchange indicators (Figure III.13). The TCM's lower depreciation compared to the TCM5 and the bilateral exchange rate with the US is due to Chilean peso appreciation against the Brazilian real, which reached about 4%, and the Korean won, which reached about 10%. Similarly, the real exchange rate (*índice del tipo de cambio real, TCR*) rose 4.0% from August to November 2000, and is currently very close to averages for the 1994-1995 period (Figure III.14).

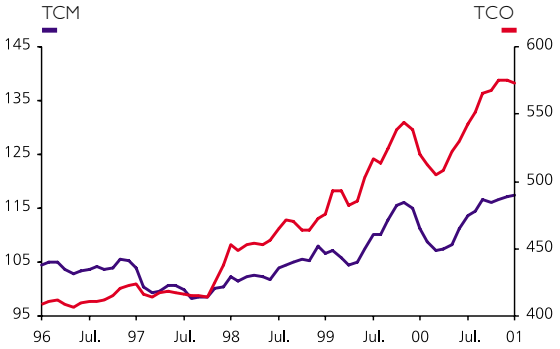
According to the Central Bank's January survey, agents expected the nominal exchange rate to reach about 585 pesos per dollar by the end of 2001, 600 pesos per dollar at the end of 2002. These figures compared to expectations of 560 and 575 pesos per dollar respectively from the August survey, reflecting the information available for the Monetary Policy Report last September. This indicates that implicit expectations of depreciation have grown slightly more moderate over the two-year horizon, but have increased for the shorter, one-year horizon.

Futures prices for currencies reflect nominal interest rate differentials among countries and, as a result, serve as another point of reference for expectations regarding nominal depreciation. Their recent behavior indicates that by the end of 2001, the exchange rate could reach almost 592 pesos per dollar, and by the end of 2002 somewhere under 612 pesos per dollar. This is slightly higher than survey results, probable due to risk and liquidity premiums in futures operations. The peso is expected to depreciate more against the TCM5 than the dollar (due to expectations that both the euro and the yen will appreciate against the dollar), and less against the TCM than against the dollar, given that the market expects other emerging countries' currencies to depreciate more. Thus, the TCM5 is expected to depreciate 3.4% and the TCM 1.5% over the one-year horizon and 3.8% and 3.3%, respectively, over the one to two-year horizon.

Similarly, the differential between real interest rates serves as an indicator regarding expectations about changes in the real exchange rate. Thus, the premium for an eight-year PRC and an indexed, 10-year US Treasury bond is currently almost zero, which is compatible with a stable real exchange rate or a slight appreciation, if the existence of a premium for exchange rate risk is taken into consideration (Figures III.15 and III.16).

Given that the inflation differential between Chile and its main trading partners is about 1%, average nominal depreciation that can be deduced from the expectations survey and futures markets is too high to be compatible with the real stability deduced from the differential in real rates. This fact reinforces the importance of careful consideration of which are the fundamental variables that determine the equilibrium real exchange rate and of how the current situation and future prospects for these fundamental variables affect the real exchange rate's actual value

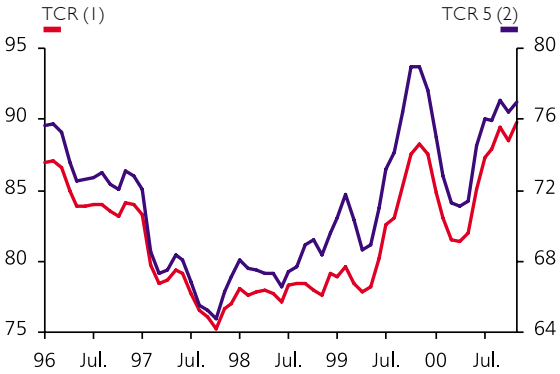
Figure III.13
Multilateral exchange rate index (TCM) (1) and observed exchange rate (TCO)



(1) Calculation based on parities of Chile's main trading partners. These are (ordered by weight): United States, Japan, Argentina, Brazil, Mexico, Germany, Spain, Italy, France, United Kingdom, Korea, Canada, Peru, Holland, Belgium, Colombia, Taiwan, Venezuela and Ecuador.

Source: Central Bank of Chile

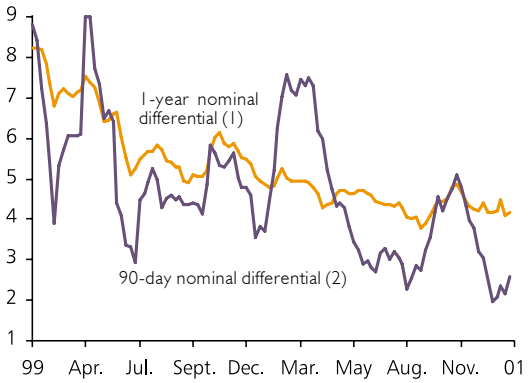
Figure III.14
Real exchange rate (TCR) index



(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 and Ecuador.
(2) Includes USA, Japan, Canada, United Kingdom, Euro.

Source: Central Bank of Chile

Figure III.15
Domestic vs. external interest rate differential (percent)



(1) 1-year US treasury bond vs. 360-day PDBC.
(2) Differential 90-day LIBOR and 90-day PDBC.

Sources: Bloomberg, Central Bank of Chile.

and performance. Given the importance of this analysis, we have included a Box on this subject (See Box III.1).

The main scenario assumes a stable real exchange rate for the next two years, and the balance of risks is also considered to have reached equilibrium.

The main conclusion is that movements of certain fundamental variables explain the nominal and real depreciation observed since the last report. Given this fact and the prospects for interest rates, it seems reasonable to sustain that the balance of risks for the exchange rate has reached equilibrium.

To bring this into line with expectations regarding nominal depreciation based on both the survey and futures markets, the central scenario assumes that nominal depreciation is less than deduced from the average of both (survey and futures) and compatible with a stable exchange rate (the result of the inflation differential). Chapter V discusses the implications of the main scenario and the balance of risks for growth and inflation.

Prices of other financial assets

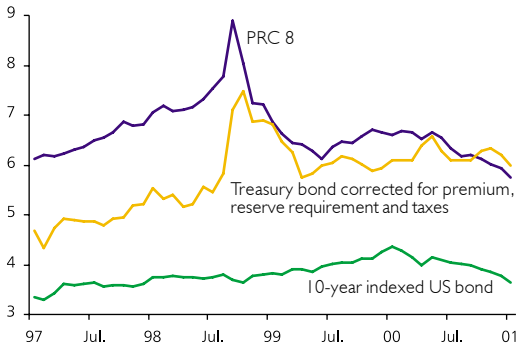
In 2000, the IPSA (selected stock index) fell 3.6%, while the IGPA (general stock index) fell 5.8%. During the first two weeks of January 2001, the IPSA had risen almost 3% and the IGPA just over 1.7%. Compared to last September's Monetary Policy Report, both the IPSA and the IGPA are at similar levels. The price-earnings ratio closed 2000 at around 17, similar to 1999. This is more than the 15.5 registered at the close of the last report. Prices fell less than earnings, which can be interpreted as a sign of confidence in the future of the economy.

Despite the weak performance of Chile's stock market during 2000, its results are not as poor when compared to the performance of external stock indices. The fall in the IPSA, measured in dollars, was about 10% during 2000, 4% more than the Dow Jones, but far less than the 40% fall experienced by the Nasdaq, associated with technological shares, and the 21% drop in the index for Latin American ADRs (Figures III.17 and Figure III.18). Since January of this year, Nasdaq and the index for Latin American ADRs have risen 8.5% and 9.0% respectively, while the Dow Jones has fallen 2%. Meanwhile, the IPSA, measured in dollars, rose 3% during the same period.

External stock indices, in particular the Nasdaq and the index for Latin American ADRs, performed more poorly during 2000 than indices for domestic stocks trading on the Chilean stock market.

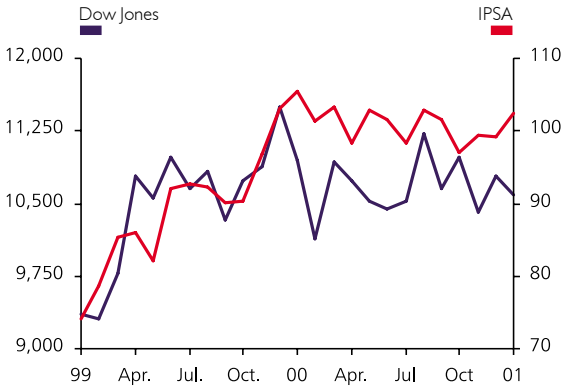
During the second half, average amounts traded were lower compared to the first half of the year. This was largely due to the sharp fall in share flows to emerging economies and due to portfolio reassignments that diverted funds away from variable income portfolio investment and into portfolio investment in external instruments and fixed income instruments.

Figure III.16
Real domestic and external interest
(percentage)



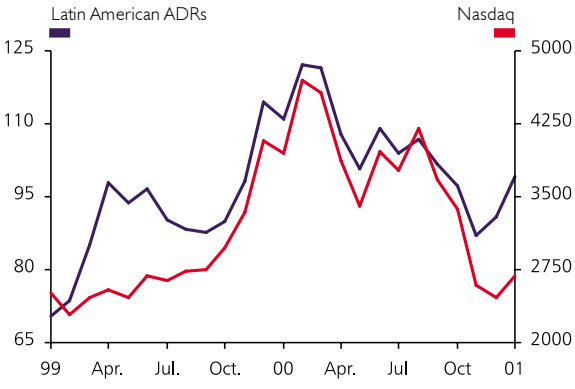
Sources: Bloomberg, Central Bank of Chile.

Figure III.17
IPSA and Dow Jones Stock indexes



Sources: Bloomberg, Santiago Stock Exchange.

Figure III.18
Latin American ADRs and Nasdaq Stock indexes



Source: Bloomberg.

By sector, share prices in 2000 were, generally speaking, consistent with the poor performance of aggregate indices. In effect, prices fell for every sector, without exception. Agriculture and Forestry fell the most, followed by Banking and Finances, Mining, Varied Services, and Manufacturing.

The fall in the Agriculture and Forestry sector was due to the decline in the international price of wood pulp, which, after reaching an average of US$667 per ton in September, fell back to about US$650 per ton. Poor results in the Banking and Financial sector, mainly during the first eight months of 2000, were primarily due to the higher provisions made to guarantee the sector's portfolios. In the last four months of 2000, with credit gradually recovering, at least the banking sector did not fall any further.

Manufacturing experienced a recovery during the last four months of 2000, driven by the impressive turnaround in the fishing sector toward year's end, as it grew 68% over August, thanks to an 11% increase in the price of fishmeal during that same period. At the same time, the construction sector grew 12% over August, and chemical products grew 8.5%.

The rise in share prices for construction companies during the last part of the year coincided with a significant recovery in employment that occurred between September and November, the decline in interest rates on mortgages, and the robust performance of housing credits. The housing market remains weak, however, as can be seen in the number of months it would take to sell off the stock of houses and apartments, as well as the decline in share prices for real estate investment firms. Viewed as a whole, conditions suggest that the recent drive in this sector was primarily the result of public sector projects.

External financing of the chilean economy

A review of the recent and projected performance of the capital account of the balance of payments and a comparative analysis using international solvency and liquidity indicators are useful for evaluating the soundness of the Chilean economy's external financial position and prospects for external financing. These variables directly influence the risk premium assigned to the Chilean economy, the peso's strength or weakness, and, less directly but still significantly, interest rates and other asset prices. Moreover, modifications in the composition of economic agents' portfolios, which include both domestic and external financial instruments, also help to understand certain shifts in monetary aggregates.

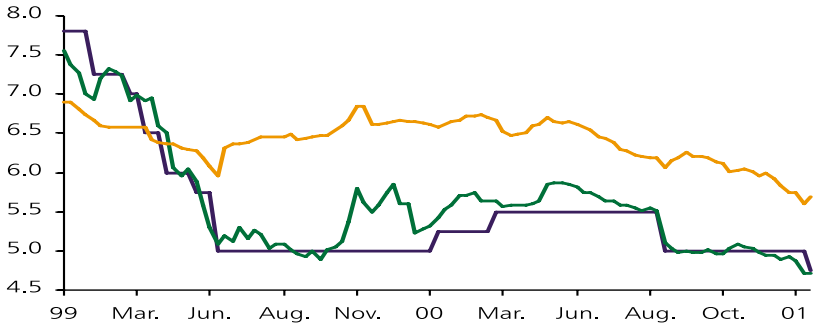
Capital account

In 2000, as a counterpart to the current account deficit, the capital account posted a surplus. Net flows of medium- and long-term credits were positive, due to disbursements of external credits during the first and fourth quarters, while net foreign direct investment was negative, due to a sharp decline in foreign investment flowing into the country, compared to 1999 figures. Moreover, a change in the source of financing for foreign investment also stands out, as external credits have taken the lead over capital contributions. Similarly, Chilean investment abroad has remained high.

Net portfolio investment was slightly negative, as a result of net outflows during the first half of the year, offset by net inflows during the second half, mainly due to bond issues. This contrasted with levels posted in 1999. After strong outflows in 1998 and the first half of 1999, portfolio investment abroad began to contribute net flows into the country, the result of returns on pension funds' investments. This situation continued during the first half of 2000, and then slowed to a trickle during the second half, as net outflows again occurred.

Short-term capital flows, which were negative during the first quarter, turned around during the second half of the year, so the total result for the year was positive (Table III.1). Some companies resorted to short-term financial credits to finance medium-term investments. This could lead to a situation where, in 2001, significant medium-term financing enters the country to replace these credits.

Table III.1
Capital account
(US$ million)



(e) Estimates.

Source: Central Bank of Chile.

According to some investment banks, however, the prospects for capital flows into Chile during 2001 do not look particularly promising. Net capital inflows are expected to fall 10%, which would still be 10% more than levels posted in 1999. This scenario, however, contradicts information on international financing for 2001 provided by several Chilean firms, who today estimate it at US$2.4 billion, compared to US$1.76 billion reached by the same date last year. The country's financing costs should fall gradually from current levels in 2001.

Nor does a substantial recovery in capital flows into emerging economies as a whole, or Latin America in particular, look likely.

External vulnerability indicators

Indicators of external vulnerability for emerging countries reveal a slight improvement in the case of Asian economies, whose external debt levels over exports fell, as did short-term foreign debt plus amortizations over foreign currency reserves. In Indonesia's case this led Standard & Poor's to upgrade the risk rating of its foreign debt to B-.

The Chilean economy continues to show a solid financial position, although some indicators, particularly quotients regarding short-term commitments are somewhat less robust at present.

In Latin America's case, external solvency has turned in a mixed performance for several months. In effect, the Brazilian and Mexican economies have improved significantly, while the Argentine economy is relatively stable. In Chile's case, foreign debt over exports has fallen, but it has risen over output. Similarly, short-term foreign debt and amortizations over foreign currency reserves has increased significantly, the result of a certain concentration of financial liabilities in 2001. This increase is more moderate, however, when compared to exports, and represents no difficulties in overall debt management (Table III.2).

Table III.2
External vulnerability indicators for emerging markets

	S&P debt rating	Total foreign debt (% GDP) (1)	Foreign debt (% exports) (1)	Short-term foreign debt + amortizations (% NIR*) (2)	M2 (% NIR) (3)
Chile	A-	54	148	52	204
Argentina	BB-	53	385	109	169
Brazil	BB-	38	315	207	675
Mexico	BB+	28	77	134	695
China	BBB	14	52	23	937
Korea	BBB	29	59	85	376
Philippines	BB+	77	100	128	302
Indonesia	B-	89	199	96	274
Malaysia	BBB	43	34	48	306
Thailand	BBB-	66	86	68	360
Taiwan	AA+	15	27	28	515

(1) Projections for 2001.
(2) Short-term foreign debt and reserves at the end of 2000. Estimated amortizations for 2001.
(3) Latest information available.
*Net international (foreign currency) reserves.

Source: JP Morgan. World Financial Markets (12 January 2001).

At its Monetary Policy Meeting held on 18 January 2001 the Board of Governors of the Central Bank of Chile decided to reduce the TPM by 25 basis points, to 4.75% (UF +). The structure of real interest rates has declined for every maturity, in line with events in the real sector both domestically and abroad. Expectations of inflation, according to the Central Bank of Chile's monthly survey are consistent with the inflation target. Despite weak domestic expenditure, lower interest rates and the recent recovery in both monetary aggregates and credit should stimulate consumption and private investment, particularly given that there seems to be room to expect a greater improvement in total loans. The real exchange rate has continued to depreciate, posting values similar to the 1994-1995 period. For the future, it is expected to remain stable, close to current levels. On the stock market, construction's performance has stood out recently. Finally, the Chilean economy continues to show a solid external financial position, although certain indicators, particularly quotients measuring short-term commitments, are currently somewhat less robust than in the past.

BOX III.1: THE REAL EXCHANGE RATE: LONG-TERM DETERMINANTS AND SHORT-TERM DYNAMICS

In economies with markets open to foreign trade, innumerable goods and services are produced and consumed. Often their prices differ from one country to the next due to transportation costs, tariffs and other barriers to free trade. The ratio between price levels for two different countries, measured using a common unit of account, corresponds to a relative price key to the economy that is known as the real exchange rate.[4]

A country's price levels are measured using a price index that is based on a representative basket of goods and services. Thus, if P represents domestic prices, and P* represents external prices, the real exchange rate is defined as:

$$e = \frac{E \cdot P^*}{P}$$

where E is the nominal exchange rate measured in domestic currency units per foreign currency unit.[5] An increase in "e" is read as a real depreciation and a decrease in "e" is read as a real appreciation.

In a world in which transportation costs are zero, with no barrier of any kind to foreign trade, with a perfectly competitive market structure, and in which price indices for each country are based on a common basket, the law for a single price is met; or, in other words, the real exchange rate would be constant and equal to 1, or at the very least, would revert rapidly back to a specific given value, when affected by shocks that disturb its long-term balance.[6] Clearly, the real world does not meet the conditions described above. Therefore, one of the main sources for divergence from predictions based on PPP theory is the existence of non-tradable goods.[7]

Under certain assumptions, that can be representative of long-term conditions, the real exchange rate is independent of consumption patterns and depends on sector productivity, the intensity of factor use in each sector, and factor remuneration (real wages and real interest rates).

Thus, assuming that the non-tradable sector makes more intensive use of the labor factor an increase in the real external interest rate, which, assuming perfect mobility of capital, is equal to the real domestic interest rate, would pressure real wages in the opposite direction, leading to a decline in the price of non-tradable goods, that is, depreciation of the real exchange rate. Moreover,

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[4] In strict terms, the concept described here corresponds to the real bilateral exchange rate, for example, between Chile and the United States. Estimates such as the real exchange rate (TCR) and the real exchange rate with Chile's five main trading partners (TCR5), which are used regularly for macroeconomic analysis, respond to a broader concept for the real exchange rate, as Chile's price levels are measured against those of a group of trading partners.

[5] In Chile's case, the better-known definitions for the nominal exchange rate include the peso-dollar rate (observed exchange rate or *tipo de cambio observado*, TCO) and the TCM5 and TCM. These last correspond to the nominal counterpart of the TCR5 and the TCR, respectively.

[6] This is what the theory of absolute Purchasing Power Parity (PPP) predicts. A less demanding version of PPP corresponds to a relative definition, which predicts that changes in price levels among countries, measured in a common accounting unit, tend to be equal in the long term.

[7] Non-tradable goods correspond to those goods and services whose transaction cost beyond the borders of a given country are so high that they're only worth trading domestically.

more rapid growth of productivity in the tradable sector, by pressuring real wages upward, would lead to an increase in the prices of non-tradable goods, that is, appreciation in the real exchange rate.

Productivity's effect on the real exchange rate can also be interpreted in comparative terms with other countries, in what is known as the Harrod-Balassa-Samuelson effect. Thus, a country will experience appreciation of the real exchange rate to the degree that growth in the tradable sector's comparative productivity advantages outstrips growth in the non-tradable sector's comparative productivity advantages.

Both results mutually reinforce each other the more intensively the labor factor is used in the non-tradable sector and remain completely independent of demand conditions. This last conclusion undoubtedly raises some questions about the assumptions behind this long-term analysis. One assumption involves the free mobility of capital, both internationally and between different sectors of the economy. By introducing rigidities into these capital movements in the short-term, demand factors play a significant and persistent role in determining the real exchange rate.

Among these demand factors is government expenditure. Thus, if the public sector tends to spend more on non-tradable goods than the private sector, a view that is usually supported by empirical evidence, an increase in public expenditure will cause the real exchange rate to appreciate. In Chile, this effect is estimated to negatively affect the real exchange rate by less than 1%, unless transfers to the private sector are included in the definition of public expenditure, in which case the impact can reach somewhere around 3%.

Domestic demand also directly affects the real exchange rate through private absorption. This is an endogenous variable, however, that can be described as a function of exogenous variables, such as long-term capital inflows and the relevant real interest rate. Larger inflows of capital therefore increase private absorption, because they finance a larger trade deficit, while an increase in the relevant real interest rate leads to a situation where current expenditure tends to be replaced by future consumption. Finally, higher absorption is consistent with more appreciation of the real exchange rate.[8]

Another effect of including capital flow rigidity is its impact on the economy's ability to adjust to productivity shocks. This ability to adjust is not affected if the productivity shock affects the non-tradable sector, where an increase will produce real depreciation. If tradable sector productivity rises, however, short-term appreciation is greater than long-term, producing what is known as an "overreaction".

A similar phenomenon occurs when the real interest rate that controls the balance between savings and investment flows shifts due to micro or macroeconomic developments affecting the economy's long-term equilibrium. If, for example, this rate falls, as the real market interest rate adjusts to the new equilibrium, expectations of real, long-term appreciation arise, which require a real depreciation in the short term to maintain a balance between the actual real domestic interest rate and its counterpart abroad.

It is also necessary to consider the effect of other exogenous variables on the real exchange rate, among them the terms of trade and tariff policy. The terms of trade can be introduced into the analysis by desegregating tradable goods

[8] If capital inflows are spurred by domestic imbalance, these last should be reflected in expectations that the currency will depreciate.

into importables and exportables. The impact of an increase in the terms of trade is ambiguous, because on the one hand the terms of trade generate a wealth effect, caused by the higher value of exports, which increases the demand for non-tradable goods, and as a result, the real exchange rate tends to appreciate; but on the other hand, the terms of trade generate a substitution effect, which increases the cost of imported inputs used to produce non-tradable goods, which causes the real exchange rate to tend to depreciate. This ambiguity is reflected in empirical estimates that differ in terms of which of the two effects, substitution or wealth, is relatively more important. The sign changes, for example, depending on the number of lags included or the sample period. The instability of this parameter leads some studies to simply omit this variable or to represent it using a proxy variable. Higher tariffs, on the other hand, are consistent with a more appreciated real exchange rate.

So far, this analysis has implicitly assumed that the real exchange rate moves around a point of equilibrium. Nonetheless, an important branch of the literature suggests that it is possible to observe persistent deviations, at least in the short term, in the real exchange rate compared to its value as determined by fundamentals. These deviations occur to the degree that there is a differential between domestic and external interest rates, adjusted for risk premiums and expectations of depreciation. Thus, a negative differential between the domestic and external interest rates should generate immediate depreciation and expectations of future appreciation. Whether the short-term misalignment of the real exchange rate increases or not with regard to its point of equilibrium depends on the initial situation. Another important source of short-term deviations involving the significant volatility observed on exchange markets, according to a recent study of exchanges of non-US currency, is excessive speculation and exchange rate hedging operations.[9]

How does this analysis affect the prospects for the future exchange rate?

In the first place, there are fundamental variables that have not changed enough to play a significant role in recent trends and the future prospects of the equilibrium real exchange rate. These include tariff policy, fiscal policy and the terms of trade. Regarding tariff policy, the gradual reduction in the tariff rate of 1% per year until it reaches 6% was announced more than two years ago, and as a result, its impact should be fully incorporated. Similarly, the terms of trade and their future prospects have become slightly less favorable since last September's report, but the size of the change is small, so this factor's impact on the current equilibrium and future performance of the real exchange rate should not be significant, particularly given the contrary effects of substitution and wealth. Finally, the government's commitment to an austere fiscal policy has been common knowledge since the new economic team assumed last March. While perceptions of the team's commitment to fiscal austerity may have become slightly more positive during the year, this should not significantly affect the behavior of the real exchange rate.

Productivity is one of the main variables that must be considered. In comparative terms, strong gains in productivity observed in the US economy have not met with similar gains in other regions of the world. In recent years this triggered appreciation in the US' real exchange rate compared to its trading partners. For the future, the US economy's productivity growth should tend to normalize, particularly given that current prospects for growth are more pessimistic. Recently, Chilean manufacturing experienced a significant increase in productivity, associated with the tradable sector, well above the productivity of sectors such as construction and others involved in the non-tradable sector. This trend should translate into appreciation of the real equilibrium exchange rate. Nonetheless, relative sector productivity should tend to catch up over time.

[9] See Cheung and Chinn (2000).

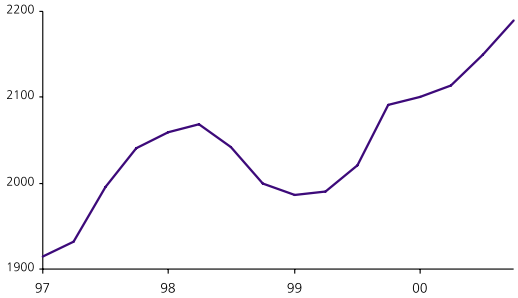
Another relevant variable is the performance of the real equilibrium interest rate, that is, the rate at which savings and investment flows are equal. Thus, more prudent consumer behavior, due to higher unemployment and a permanent drop in earnings, translates into a reduction in the growth of private consumption, consistent with a lower real equilibrium interest rate. While the real market interest rate is adjusting to its new equilibrium value, the real exchange rate depreciates, accompanied by expectations of future appreciation.

Finally, the persistence of the relative scarcity of capital flows beyond what was originally forecast and an increase in sovereign risk for the region's countries also seems to have played an important role in the recent depreciation episode. At the margin, sovereign risk has slowly begun to decline and deceleration of the US economy should free up available resources for other countries, suggesting better prospects for capital flows in the medium term.

This section analyzes recent and foreseeable trends in the real sector of the economy, including prospects for economic activity, the labor market and the current account, in order to examine their relevance to the future behavior of inflation. It begins with a summary of the prospects for economic growth and the current account and goes on to review the factors that influence domestic and external demand, along with aggregate supply.

Prospects for economic growth and the current account

Figure IV.1
Seasonally adjusted GDP (1)
(billions of 1986 pesos)



(1) Estimate for 2000.IV

Source: Central Bank of Chile.

In 2000, economic activity grew steadily, averaging 5.4%. GDP is estimated to have grown 4.3% in the fourth quarter of 2000 over the fourth quarter of 1999. Rates of annual change throughout 2000 provided evidence of the situation described in the previous report. After growing quickly during the second half of 1999, the economy slowed its quarterly growth rate (Figure V.1 and Table IV.1). Similarly, domestic demand rose almost 8% on average in 2000, indicating that two-digit figures for annual growth in expenditure posted during the first part of last year were to a large degree due to the low basis for comparison. This growth in expenditure was mainly the result of the intense accumulation of stocks during the first half, while more permanent components, consumption and fixed investment, grew moderately throughout the year. Finally, job creation first tended to stagnate and then to fall, ultimately leaving unemployment high, apart from seasonal fluctuations. In this context, private expectations about future economic growth have become more moderate, which is also evident in the behavior of consumer confidence indicators.

The macroeconomic conditions in which the Chilean economy is functioning today suggest that domestic expenditure will remain more moderate in the coming two years. In particular, persistent high unemployment, low job creation, and current levels of private debt will limit households' spending on consumption. Moreover, the slack apparent in the housing market suggests no strong growth in investment is likely, above all in construction. Although in 2000, the above was partially offset by better prospects for the economy's tradable sectors, thanks to greater growth of the world economy and depreciation of the real exchange rate, these factors will no longer drive aggregate demand over the next two years. These factors contributed to the projection that with interest at 5.0% (UF +) inflationary pressures would decline in the medium term, thus motivating its recent reduction.

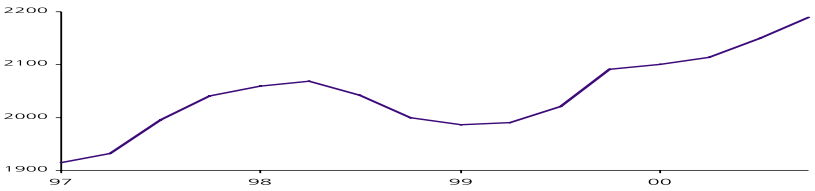
The baseline scenario analyzed in this report, assuming a constant 4.75% monetary policy rate over the next eight quarters, is consistent with average annual GDP growth that is lower than forecast some months ago, with rates around 5.8% for this year and next. Growth throughout 2001 should reach 5.6%, and 5.9% in 2002. Today's estimate for domestic demand is that it should grow about 7% in 2001 and 2002.

After reaching a deficit of 1.3% in 2000, the information available suggests that the current account deficit will reach 1.8% this year and

* Output figures by point of origin and destination in this report are calculated using 1986 as the base year. National accounts using the new base year of 1996 will be published on 23 March and will be used in May's Monetary Policy Report.

next. Thus, indicators of the overall indebtedness of the Chilean economy abroad should remain similar to or lower than levels observed in recent years.

Table IV.1
Economic growth and current account 1997-2002
(annual change, %)



(f) Projected.

Source: Central Bank of Chile.

Annual GDP should average 5.8% growth over the next 24 months.

In any case, there are clearly important margins of uncertainty around these projections. This is partly reflected in the presentation of growth projections as confidence intervals in Chapter V, which also discusses some of the relevant alternative scenarios in more detail. Within these scenarios, it is important to note there is more uncertainty about the future performance of the world economy. On the one hand, a higher than expected deceleration United States would lead to projections for slower growth in exports and the terms of trade. On the other hand, the probable response in terms of the Federal Reserve's monetary policy could lead to lower international interest rates, thus reducing credit costs faced by domestic agents.

Another source of risk involves the performance of domestic expenditure and employment. Although estimates indicate that consumption and employment should enjoy moderate growth over the next two years, there is too much uncertainty about the functioning of the labor market in Chile to discard *a priori* the idea of a more intense recovery. Nor can a scenario in which high unemployment persists be completely disregarded. Overall, the Central Bank considers the risks for growth in activity to be balanced. The implications of this on the direction of monetary policy is discussed in the "Balance of Risks" subsection included in Chapter V of this report.

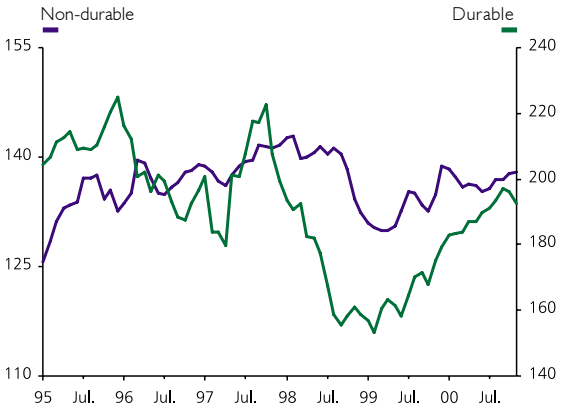
In future, the Board will pay special attention to the performance of the world economy and the pace of growth in domestic demand, as well as unemployment and the evidence regarding changing trends in prices and wages, in order to evaluate the behavior of inflationary pressures within the economy, in either direction, which could threaten achieving the inflation target.

Domestic demand

Consumption and inventory changes

In the first nine months of 2000, the "other" component within domestic demand, which includes total consumption and inventory changes, rose 10.8% over the same period the previous year. In the

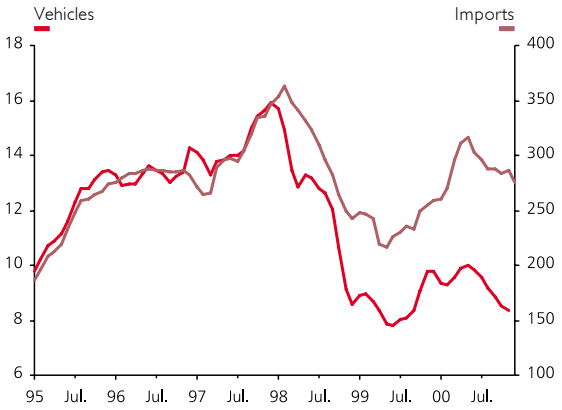
Figure IV.2
Seasonally adjusted sales of non-durable and durable goods (1)
(1989 average = 100)



(1) Moving quarterly average.

Source: National Statistics Bureau.

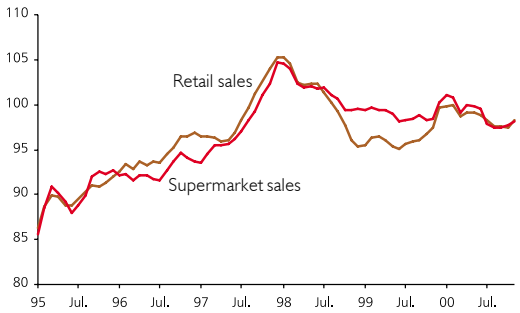
Figure IV.3
Seasonally adjusted imports of consumer goods and new vehicle sales (1)
(US$ million, thousands of units)



(1) Moving quarterly average.

Sources: Central Bank of Chile, National Association of Automobile Dealers of Chile.

Figure IV.4
Seasonally adjusted retail and supermarket sales (1)
(1997 average = 100)



(1) Moving quarterly average.

Sources: National Chamber of Commerce, Association of Supermarkets of Chile.

third quarter, this component fell to 5.9%, down from the previous quarter, due to stagnant consumption and slower inventory accumulation.

Figures for different sectors reveal the moderate behavior of seasonally adjusted private consumption. According to the National Statistics Bureau, sales of durable goods for household use began to decline in July, and between September and November they fell –0.7% over the previous quarter. Sales of non-durable consumer goods continued to rise moderately, by 0.7% over the previous quarter, compared to a 1.6% rise during the quarter before that (Figure IV.2).

From September to November, sales of new vehicles fell 9.2% compared to the previous quarter, well below sales toward the end of the previous year (Figure IV.3). Consumer loans remained stable toward year's end, as they had throughout the year.

In the same period, supermarket and retail sales in general were down slightly compared to the second quarter of the year (Figure IV.4). According to the association of supermarkets, ASACH, from September to November sales rose 0.6% over the previous quarter, while figures for retail sales from the national association of retailers, CNC, rose 0.8% during the same period.

Indicators for inventory accumulation from September to November indicate lower levels than those observed in the previous report and are consistent with weaker growth in consumption. This is apparent in the reduced gap between rising imports of consumer goods and sales, on one hand, and the performance of production and sales for industry itself, on the other. Thus, inventory accumulation during the first half probably exercised only a temporary impulse on domestic demand, an observation already advanced in our previous report.

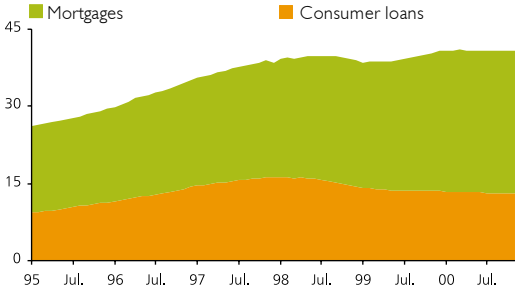
Consumption's less robust performance may indicate that private agents perceived a drop in permanent disposable income, linked to families' uncertainty about the future, particularly job security and the economy's growth potential. In fact, lower potential growth estimates for the coming years necessarily affect families' net wealth and, as a result, their capacity for consumption (Figure IV.5).

Another factor affecting disposable income and consequently private consumption is the structure of fiscal transfers to families. Consistently with its commitment to achieve a structural surplus of 1%, the State has reduced the pace of transfers to families and these are intimately linked to private consumption. In fact, by the third quarter of 2000, fiscal transfers had risen by just 3.3%, well under trends for the previous decade.

Households' spending on consumption grew moderately during the third quarter of 2000, consistently with the reduction in disposable income apparent within the economy.

In the short term, the prospects for growth in consumption are moderate. From September to November, consumer credit fell 1.0% over the

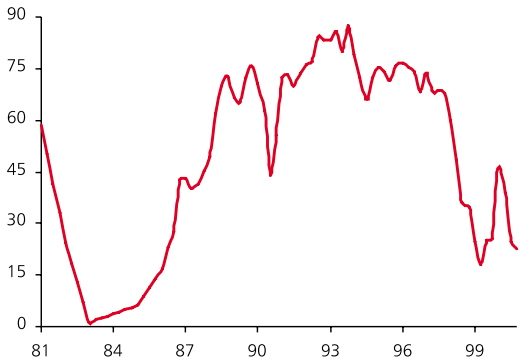
Figure IV.5
Debt indicators
(loans as share of working income (1))



(1) Working income represents seasonally adjusted total wage bill.

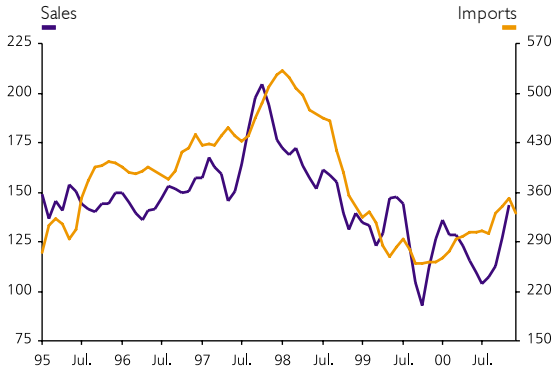
Source: Central Bank of Chile.

Figure IV.6
Economic perception index (índice de percepción económica, IPEC)



Source: ADIMARK.

Figure IV.7
Seasonally adjusted imports and sales of capital goods (1)
(US$ millions and average monthly index 1990=100)



(1) Moving quarterly average.

Sources: Central Bank of Chile, National Statistics Bureau.

previous quarter. Similarly, by the fourth quarter of 2000, expectations regarding the economy's future performance, as measured by the Economic Perception Index (IPE), deteriorated slightly over the previous quarter (Figure IV.6).

Fixed investment: construction, machinery and equipment

Gross fixed capital formation has started to recover. In effect, it rose by 7.7% during the third quarter of 2000, much more quickly than during the first half of the year. This increase in investment consolidated the turnaround that began during the second quarter of 2000. The growth thus achieved, however, remained insufficient to recover investment levels observed years before. The rate of fixed investment (as a percentage of real GDP) is currently somewhere between 25% and 26%, well below the 30% achieved in 1997 and 1998.

The recovery in investment that has become apparent is driven by the strong growth of the component machinery and equipment and, to a lesser degree, by the non-residential construction.

Capital goods imports have recovered the drive shown early last year, with the exception of trends during the last quarter, when they rose just 0.5%. Capital goods sales tended to revert their fall during the first half of the year, rising 33.3% between September and November over the previous three months (Figure IV.7).

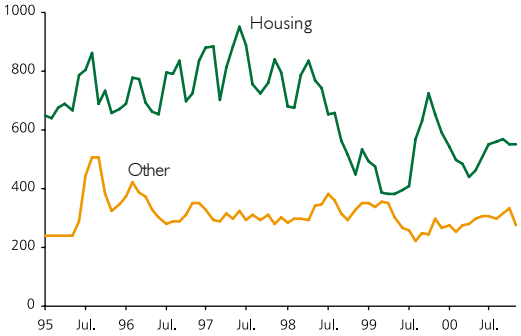
The non-residential construction sector began to show positive signs too. Building permits for this sector rose throughout the year, except for September-November, when they fell 7.0% over the previous three months (Figure IV.8). Unemployment in the construction sector, which reached 17.5% from September-November, is now the lowest it has been since August 1999.

More recent indicators suggest that expectations in the housing market have become more favorable than in previous periods. Sales of new homes for the September-November period rose 20.3% over the previous three months, much more than in previous quarters. If this trend continues, there will be more incentive to carry out new housing projects (Figure IV.9).

The end of the tax incentive for the purchase of DFL2 housing last September affected the housing construction sector. Nonetheless, a gradual decline in unemployment combined with more stability in the labor market should generate the incentives necessary for households to purchase new homes. This would also be consistent with current conditions for financing housing, which are advantageous for buyers.

Projected growth in investment for 2001 and 2002 is similar to that included in the previous report, which suggests that after averaging around 26% in 2000, investment rate (measured in constant pesos) should rise to 28% in 2001 and 29% in 2002.

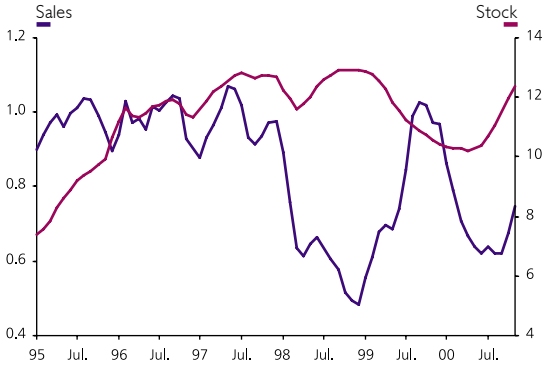
Figure IV.8
Building permits, new works (1)
(thousands of square meters)



(1) Moving quarterly average.

Source: National Statistics Bureau.

Figure IV.9
Seasonally adjusted sales and stock of new housing (1)
(thousands of units)



(1) Moving quarterly average.

Source: Association of Real Estate Brokers (ACOP)

Gross capital formation will continue to grow this year and next.

These forecasts are based on recent and foreseeable trends in financing costs and idle capacity. The decline of long-term interest rates both in Chile and abroad is particularly relevant here, and will partially offset persistently high sovereign premiums and a less dynamic world economy.

The list prepared by the Capital Goods Corporation (*Corporación de Bienes de Capital*) is consistent with this view of investment prospects in the coming years, as it includes a larger volume of investment compared to that mentioned in the previous report. The latest survey, from October, with information on expectations gathered during the third quarter, found an increase in the investment expected for 2001 and 2002, compared to the previous report.

By economic sector, the increases expected for public works-related projects continue to stand out, mostly associated with tenders and investment in sewage treatment facilities. However, these will be less in 2001 than they were in 2000. Similarly, more investment is expected in the mining, manufacturing and port sectors. Investment in energy and telecommunications remains similar to prospects reported in July, while the projection for the forestry sector reveals investment will fall again over the next two years. Expectations for the real estate sector are also less optimistic (Table IV.2).

Table IV.2
Investment survey
(US$ millions)

Sector	1998	1999	2000(e)	2001(f)	2002(f)
Mining	2,129	782	669	2,182	2,060
Forestry	166	68	176	230	508
Manufacturing	562	343	245	389	589
Energy	1,827	1,177	414	484	855
Ports	110	75	20	103	67
Real Estate	1,780	1,391	1,478	1,979	1,919
Public Works	687	796	1,273	1,129	1,473
Telecommunications	845	725	624	189	33
Other	115	20	15	8	2
Total	8,221	5,378	4,914	6,693	7,508

(f) Projected.
(e) Estimate.

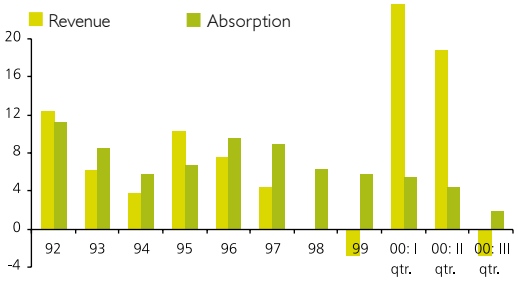
Source: Corporation for Technological Development of Capital Goods (Corporación de Desarrollo Tecnológico de Bienes de Capital).

Fiscal policy

The government made the decision to manage its fiscal accounts so as to achieve a structural surplus of 1% of GDP as of 2001. If the actual output of the economy can catch up with the level defined by authorities as potential GDP (long-term output growth of 6.2%), and the copper price reaches its long-term level (92 cents per pound), the economy should achieve an accounting surplus equal to a structural surplus of 1%.

As of the third quarter of 2000, public expenditure with macroeconomic effects had risen 3.9% over the same quarter in 1999, above the target of 3.3% for the year. This rate is expected to drop, however, once the

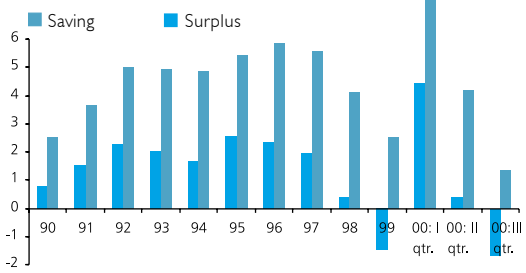
Figure IV.10
Current revenue (1) and public absorption (change over previous year, percent)



(1) Includes income from privatizations in 2000.

Source: Budget Division.

Figure IV.11
Central government's current saving and general surplus (1)
(percentage of GDP)



(1) No adjustment for FCC and including income from privatizations in 2000.

Source: Budget Division.

basis for comparison from the previous year includes the impact of spending on employment programs. On the income side, taxes rose during the third quarter by 13.4% over the same quarter in 1999, more than estimated in the 2000 budget (Figure IV.10). Income for the third quarter does not include additional income from privatizations or taxes associated with public offerings for shares (OPA) carried out during that period.

With these figures, the overall fiscal surplus for the 12-month period running from the fourth quarter of 1999 to the third quarter of 2000, reached 0%, compared to the overall deficit of 1.6% posted at the end of 1999 (Table IV.3 and Figure IV.11). This figure includes US$475 million in extraordinary income during the first quarter of 2000, the result of the privatization of water utilities, considered within the "current revenue" item.

For the fourth quarter of 2000, growth in public absorption was expected to fall significantly yet again, allowing authorities to meet their target of a 3.3% increase in public expenditure with macroeconomic impact, as specified by the 2000 budget law. By year's end, therefore, fiscal accounts were expected to balance, a clear indication of the importance of fiscal policy's contribution to macroeconomic balances in 2000.

The national budget for 2001, as included in the budget law, assumes actual GDP growth of 6.2%, potential GDP growth of 5.7%, inflation of 3.0%, and a copper price of 88 cents per pound. To guarantee that the country achieves a structural fiscal surplus equal to 1% of GDP, real public absorption (public expenditure with macroeconomic impact) was budgeted to rise 5.0%. Fiscal transfers (including education subsidies and excluding spending on social welfare) were to rise a real 5.4%. Real investment (excluding financial investment) was expected to rise 8.5% this year, with most of it going to the Public Works and Housing Ministries, which are important generators of employment.

The 2001 budget assumes that real annual tax income will rise by 11.8%. If this materializes, it would offset lower income from privatizations, budgeted to fall by 79% in 2001, and the impact of the scheduled reduction to customs duties. The overall accounting surplus included in the 2001 budget is –0.1% of GDP.

Table IV.3
Fiscal indicators

	1998	1999	2000(e)	2001(p)
	(annual change, percent)			
Public Absorption	6.2	5.7	3.3	5.0
Current Revenue	0.0	-2.9	10.3	6.2
Tax Revenue	-0.2	-5.6	11.2	11.8
	(percentage of GDP)			
General surplus (1)	0.4	-1.5	0.0	-0.1
FCC	-0.4	-0.7	-0.7	-0.6
Fiscal impulse	0.7	1.2	-1.8	-1.0

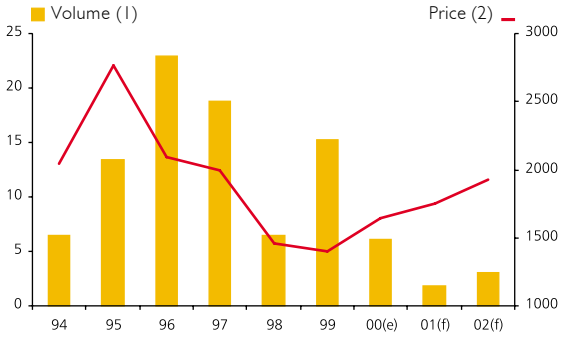
(e) Estimates.
(f) Projections.
(p) Budget 2001.
2001 projection consistent with a structural surplus of 1% of GDP.
(1) With no adjustment for FCC, and including capital gains due to privatization of EMOS in 2000 (0.7% of GDP).

Source: Budget Division.

Results for the third quarter of 2000 indicate the consolidation of fiscal policy in line with the country's goal of achieving a structural surplus of 1% of GDP in 2001.

External sector

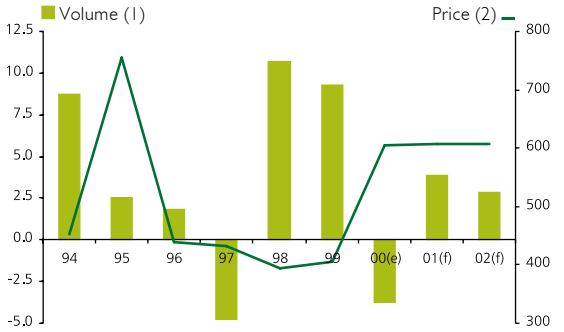
Figure IV.12
Copper exports by volume and price



(1) Annual change (%) volume exported.
(2) US dollars per ton.
(f): Projection.
(e): Estimate.

Source: Central Bank of Chile.

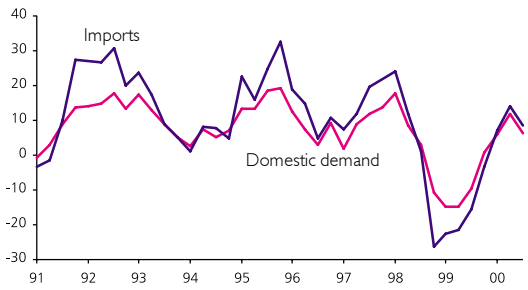
Figure IV.13
Wood pulp exports by volume and price
(percentage change over previous year)



(1) Annual percentage change of exported volume.
(2) US dollars per ton.
(f) Projected.
(e) Estimate.

Source: Central Bank of Chile.

Figure IV.14
Imports growth by volume and domestic demand (1)
(percentage change over the same quarter of the previous year)



(1) Domestic demand for 2000.IV estimated.

Source: Central Bank of Chile.

Starting in the third quarter of 2000, external demand picked up again after flagging temporarily during the second quarter of the year. Thus, despite the quarterly volatility shown, external demand was one of the components that drove economic growth last year. The slowdown of the world economy, forecast for this year and greater than originally predicted, will reduce the external sector's contribution to aggregate growth over the next two years.

Foreign trade

On average, the quarterly performance of exports during 2000 remained very strong, except for the second quarter when it was particularly affected by a temporary drop in copper volumes. For the year as a whole, exports rose 16.3% by value over the previous year, the result of a vigorous world economy, which stimulated demand for higher volumes and favorably influenced prices. Export volumes rose by 6.2%, while prices rose 9.5%. The increase in the price of copper was fundamental to this improvement, followed by other traditional export products, such as wood pulp and methanol (Figure IV.12 and Figure IV.13).

In contrast, higher volumes were more significant for non-traditional products, reflecting their extreme sensitivity to external demand. The food and drink sector (salmon, trout, wine) led the increase in volumes exported, followed by the chemical sector (fertilizers and manure, plastic goods, perfumes), basic metals, and the transportation subsector.

As reported in the previous report, the prospects for 2001 and 2002 indicate that the world economy will continue to enjoy reasonably strong growth, although more moderate than last year. Foreign demand and the impact of a higher exchange rate continue to explain the expected increase in exports. Potentially slower growth in Asian countries and the United States, our main trading partner, however, lead to projections for export growth of 4.5% by volume, almost 9% by value.

The relative deterioration in the external scenario suggests that non-traditional exports will face a less favorable climate in 2001 and 2002 than forecast in the September report.

In 2000, annual imports rose 19.6% by value, 9% by volume and 10% by price, continuing trends that began in mid-1999. The higher oil price on international markets, which particularly affected imports with intermediate destinations, as well as growth in economic activity, played a decisive role in these results. Inventory accumulation particularly influenced imports of consumer goods, which rose 20.6%. Non-fuel, intermediate goods rose 10.3% by volume, and capital goods increased 7.5%.

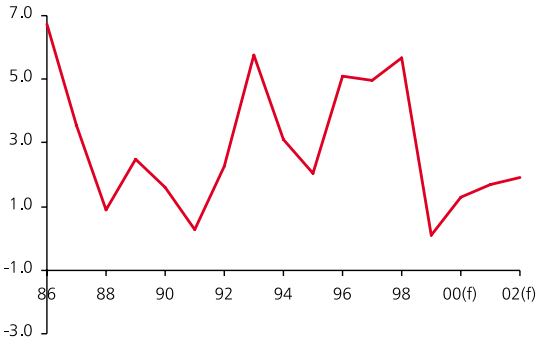
Imports' contribution to growth of domestic expenditure varied considerably throughout last year. While consumer imports increased primarily in the first half of the year, capital goods rose most during the second half (Figure IV.14).

Several factors mentioned in the previous report, specifically those forming part of the economic cycle and low levels of inventories and imports in 1999, remain relevant when it comes to forecasting imports' future behavior. The relatively higher prices for purchases abroad and the probable behavior of domestic demand will also play a role. Projections indicate that imports will rise on average by almost 8.6% in real terms between 2001 and 2002. By value, imports are projected to grow around 11% during the same period.

Projections for imports indicate they will rise almost 11% this year and next.

Current account

Figure IV.15
Current account deficit
(percentage of GDP)



(f): Projections.

Source: Central Bank of Chile.

The trade balance posted a surplus of US$1.43 billion in 2000, US$240 million less than the previous year. This result was affected by higher outflows associated with other components of the current account, in particular, profits on foreign direct investment. This, to a large degree, was the result of higher profits derived from recovery of prices in sectors receiving investment, particularly copper mining. The current account deficit reached about 1.3% of GDP, more than originally projected in last September's report.

For this year and next, the deficit is expected to reach around 1.8%, basically as a result of growth in domestic expenditure being somewhat less than anticipated a few months ago.

Table IV.4
Current account
(US$ million)

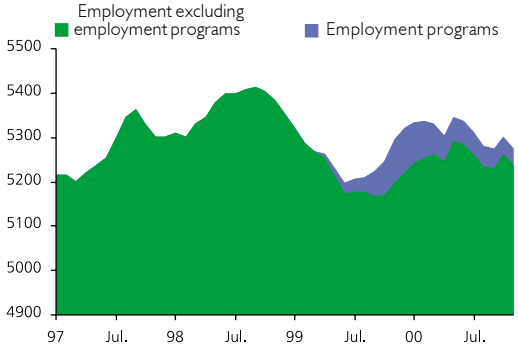
	1999	2000 I	2000 II	2000 Total (e)	2001 (f)	2002 (f)
CURRENT ACCOUNT	-80	-160	-730	-890	-1,210	-1,490
Balance of Trade	1,660	950	480	1,430	1,190	1,040
Exports	15,620	9,180	8,980	18,160	19,640	21,790
Imports	13,950	8,230	8,500	16,730	18,450	20,750
Non-financial services	-310	-210	-280	-490	-530	-400
Financial services	-1,880	-1,120	-1,210	-2,330	-2,470	-2,850
Unilateral transfers	450	230	280	510	600	710

(e) Estimates.
(f) Projections.

Source: Central Bank of Chile.

The current account deficit reached 1.3% of GDP in 2000 and is expected to reach about 1.8% this year and next.

Figure IV.16
Seasonally adjusted national employment
(thousands of people)

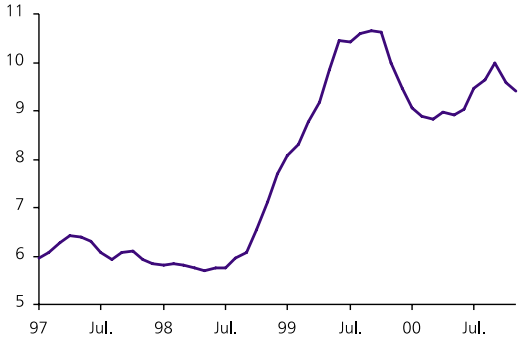


Source: National Statistics Bureau, Ministry of Labor and Social Security.

Transitory supply factors

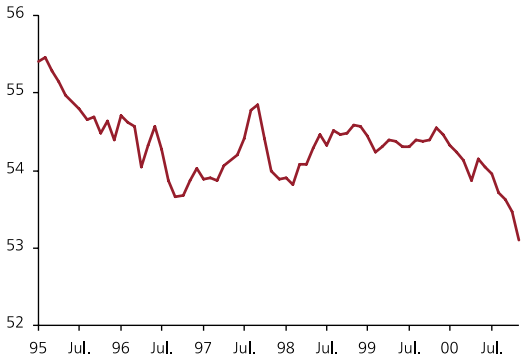
Normalization of hydroelectric power supply, mentioned in previous reports, generated a positive contribution to output growth during the first three quarters of 2000, an effect that faded during the last quarter of the year. Altogether, this factor contributed around 0.25% to the year's GDP. Compared to 1999, normalization of the water supply gave agriculture an extra boost during the second half of 2000, contributing 0.1% to annual growth.

Figure IV.17
Seasonally adjusted national unemployment
(percentage of the workforce)



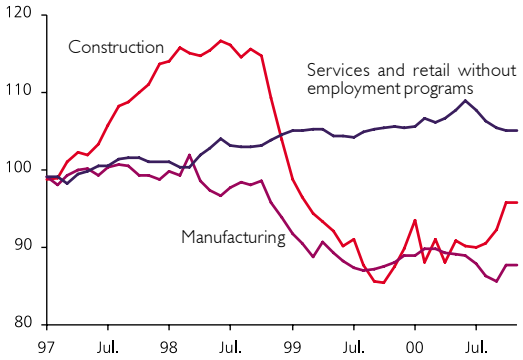
Source: National Statistics Bureau.

Figure IV.18
Seasonally adjusted national participation rate
(percentage of the population 15 years and over)



Source: National Statistics Bureau.

Figure IV.19
Seasonally adjusted employment by sector
(January 1997 = 100)



Source: National Statistics Bureau.

In contrast, mining contributed the least to aggregate activity in 2000, especially compared to its performance during the previous five years, when several large-scale copper projects started up. Mining contributed one percentage point less to GDP in 2000 than it did in 1999. For 2001 and 2002, no specific factors are expected to influence the prospects for economic growth.

Aggregate supply

Employment and unemployment

Employment performed poorly during 2000. Between March and November, the number of seasonally adjusted employed people fell by 58,000. This decline reflected job loss in the private sector, with seasonally adjusted unemployment reaching 9.4% during the mobile quarter of September-November (Figures IV.16 and IV.17). Fewer jobs' impact on unemployment was weaker than might be expected, however, thanks to a significant decline in the size of the labor force, as participation in the labor market fell sharply (Figure IV.18).

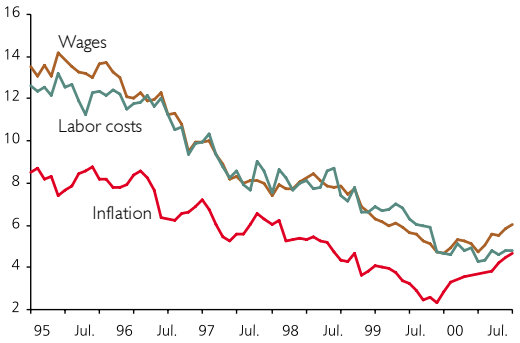
Since March 2000, employment has fallen, prolonging a period of high unemployment.

Less employment in recent quarters particularly affected the manufacturing sector, as well as retail, and social and personal community services. In effect, employment in these sectors first stagnated and then fell from May on. Manufacturing was able to post better figures during just the last two mobile quarters, but both retail and community services (excluding employment programs) remained depressed (Figure IV.19).

The economy's current weakness when it comes to job creation is primarily the result of imperfections that inhibit reassignment of productive resources. In the first place, wage rigidities exist in the private sector, as nominal wages remain indexed to past inflation. The large real increase in the minimum wage in recent years was also significant and it coincided with a significant drop in the demand for labor and a strong real depreciation of the peso between 1997 and 2000. Moreover, construction, one of the main components of total employment, has grown only moderately due to the slow pace of investment in this sector. Labor market imperfections have also been compounded by problems in the capital market, where less foreign credit and companies' high debt-loads have limited credit, affecting investment and reducing employment. Box IV.2 discusses the relative contribution of these and other factors to unemployment in the recent past.

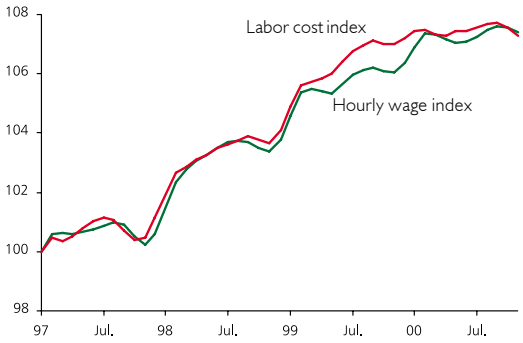
The prospects for employment's recovery in coming quarters is directly related to greater flexibility in private sector wages and a faster recovery in sectors such as construction, manufacturing and retail. Moreover, for employment to recover the economy must not run into any pitfalls toward 2000, such as excessive increases in real wages or more labor regulation, which affect the economy's ability to create jobs.

Figure IV.20
Wages, labor costs and inflation indexes
(percentage change over 12 months)



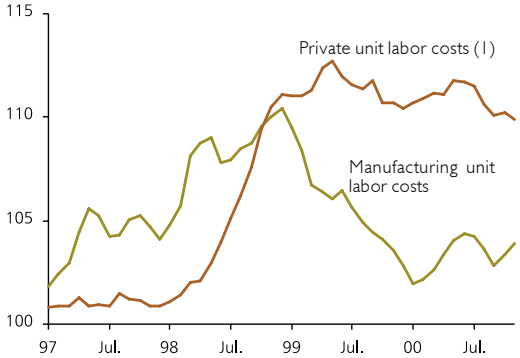
Source: National Statistics Bureau.

Figure IV.21
Wages and cost of labor
(Real index, january 1997=100)



Source: National Statistics Bureau.

Figure IV.22
Unit labor costs
(movile quarterly average, january 1997=100)



(1) Ratio between the private sector nominal wage index and average labor productivity (IMACEC/Employment), seasonally adjusted.

Sources: National Statistics Bureau, Central Bank of Chile.

Remunerations and unit labor costs

In 2000, nominal wages accelerated slightly. In November, the wage index prepared by the national statistics bureau (INE) rose 6% over the previous year and 0.3% over the previous month. During the same period, INE's (the National Statistics Bureau) index of the cost of labor rose 5% over the previous year and 0.2% over the previous month. Wages' performance was determined both by higher inflation and by institutional indexing. Since early 2000, higher inflation influenced private sector wages through automatic cost of living adjustments. Public sector wages grew more moderately, however, because increases were based on expected inflation. Consequently, for 2001 nominal wages are expected to grow at a pace similar to that of recent months (Figure IV.20).

In 2000, annual growth of real wages, as measured by the ratio of the wage index over CPI, slowed and as a result has tended to stabilize. Thus in November, INE's real wage index rose 1.3% over November 1999 (Figure IV.21). If real wages are measured using the ratio of the wage index over the CPIX, they experienced moderate growth of 2.6% over November 1999. At the same time, positive GDP growth and lower levels of employment in recent months have led to significant growth in average productivity. As a result, average productivity grew more than real wages, thus reducing the unit labor cost, which was particularly noticeable in the manufacturing sector. Therefore, wage raises have not had the expected inflationary effects since they have been offset by higher productivity (Figure IV.22).

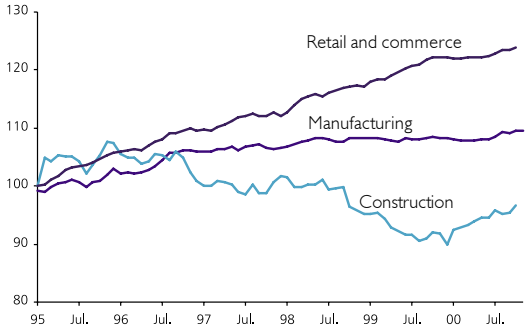
Wages' inflationary impact has been moderate thanks to the increase in average labor productivity and lower wage increases in the public sector.

So far, real wages' performance has not helped employment to recover. Thus, real wage levels in manufacturing and retail remained relatively stable throughout 2000 (Figure IV.23). More flexible wages would help to make labor cheaper and thus expand employment. This has occurred in construction, a sector where real wages fell sharply in 1999-2000 and employment has gradually recovered in recent quarters.

The moderate 4.3% increase, agreed upon recently for the public sector, is based on expected inflation and is a good sign for employment. It is important that, in the case of the minimum wage, even more demanding criteria be applied, given the substantial real increase in this indicator in recent years and its potentially negative impact on the employment of younger workers.

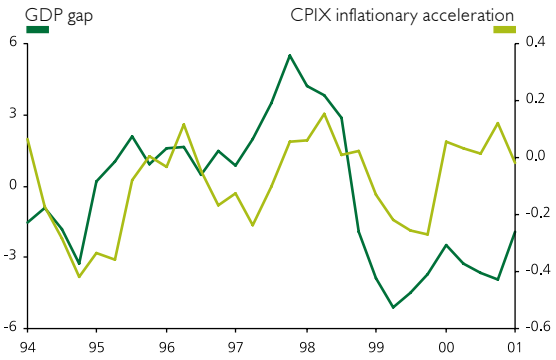
In conclusion, there is no doubt that the acceleration of private nominal wage increases has reflected automatic cost of living indexation, without being particularly affected by unemployment. Wages' impact on inflation, however, has been more moderate because of an increase in average labor productivity and lower wage increases for the public sector. As a result, inflationary pressures generated by the labor market are considered to be under control. The future performance of wages, however, may become a decisive element in determining how quickly unemployment can be reduced.

Figure IV.23
Real wages by sector
(January 1995 = 100)



Source: National Statistics Bureau, Central Bank of Chile.

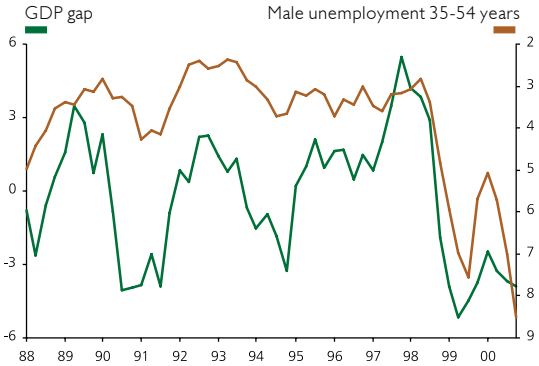
Figure IV.24
Output gap (1) and inflationary acceleration (2)
(percent)



(1) Trend GDP calculated using Hodrick-Prescott filter. Estimate for 2000.IV and 2001.I.
(2) Estimated 2001.I.
Projected figures for 2000.IV and 2001.I.

Sources: Central Bank of Chile, National Statistics Bureau.

Figure IV.25
Seasonally adjusted output gap (1) and
unemployment gap (2)
(percent)



(1) Trend GDP calculated using Hodrick-Prescott filter. Estimate for 2001.I.
(2) Unemployment for September-November.

Sources: Central Bank of Chile, National Statistics Bureau.

Use of productive resources

As other reports have explained, indicators for the use of resources include the gap between output and the unemployment rate. Both indicate latent inflationary pressures within the economy. In this regard, figures confirm the September report's analysis: significant underutilization of productive resources persists, essentially in the labor market, and continues to help control present and future inflationary pressures. This is apparent in both potential GDP and unemployment (Figure IV.24).

As mentioned, in 2000 total unemployment reached high levels, despite positive results in from October to November. This conclusion is confirmed by examining unemployment among men aged 35 to 54, which tends to be less distorted by cyclical fluctuations in the labor force. This rate was also higher than usual and showed a high correlation with the output gap, estimated using statistical methods (Figure IV.25). Starting in May, this indicator rose permanently and then turned around in October, which is consistent with unemployment's overall performance.

Idle capacity within the labor market rises further if calculations take into consideration those registered with special, municipal employment programs, which on average hired over 36,000 people between September and November, that is, about 0.6% of the labor force. Moreover, the increase in average labor productivity in 2000 suggests that this year idle capacity may be more than previously forecast.

Idle capacity remains in the labor market.

Given conditions in the labor market, trend GDP performance suggests potential GDP should average about 5.5% per annum over the next two years. Trend growth is expected to recover gradually in the future, until it reaches around 6%, consistent with historical growth rates for total productivity factors and an investment rate of 29% of GDP.

The economy's performance in 2000 confirms that the absorption of idle capacity will be gradual over the next two years, without generating inflationary pressures.

BOX IV.1: **THE STRUCTURAL SURPLUS POLICY**

The structural balance differs from the actual balance mainly in the fact that the former tries to exclude cyclical components from fiscal accounts. Concretely, it tries to reflect for each year what the net flows for fiscal accounts would have been if that year the economy (and its main variables) had followed its medium-term trajectory.

The methodology used for official calculations of the Finance Ministry's structural balance is based on criteria recommended by the International Monetary Fund (Hagemann, 1999) adapted to the specific characteristics of the Chilean economy. Variables associated with tax and copper income are considered to be subject to cyclical effects. The structural balance ($B_{s,t}$), is calculated for the central government, excluding other public institutions like municipalities, public companies and the Central Bank. Equation (1) summarizes this calculation.[1]

$$(1)\quad B_{s,t} = \left[B_t + A_t\right] + \left[-T_t + T_t\left(\frac{y_t^*}{y_t}\right)^{\varepsilon}\right] + \left[-IC_t + IC_{s,t}\right]$$

Adjustments above (below) the line: $\left[B_t + A_t\right]$

In the first step of the calculation for the structural balance ($B_{s,t}$), the overall balance of the central government (B_t) is adjusted (A_t) to exclude some financial items (in other words, to remove accounts that fall below the line). The adjusted items include: Purchase of different kinds of securities, Sale of financial assets (from privatization and other sources), Operating revenue (solely from privatization), Recovery and granting of loans, FCC (Copper Compensation Fund), FEPP (Oil Price Stabilization Fund) and Pension recognition bonds.

Cyclical adjustment to tax income: $\left[-T_t + T_t\left(\frac{y_t^*}{y_t}\right)^{\varepsilon}\right]$

In the second step, the cyclical component is subtracted from Net tax income (T_t). Tax income is subtracted from the balance and then added in, adjusted according to the position of the cycle. This last is represented by the ratio between potential GDP for the year in question (y_t^*) and its actual level (y_t), adjusted for elasticity (e) or degree of response of tax income to GDP.

Potential output is calculated using cointegration methodology and elasticity of tax income to GDP (e), calculated as follows:

(2) Log (Real tax income) = a + b log(GDP)

Based on different calculations, b is treated as equal to 1.05.

[1] Throughout this Box we attempt to maintain the nomenclature used in the original report by the Finance Ministry.

Cyclical adjustment of copper income $\left[-IC_t + IC_{s,t}\right]$

In the third step, a cyclical adjustment is made for copper income, based on current price deviation from the reference or medium-term price, established in the regulations of the FCC. Thus,

(3) $$-IC_t + IC_{s,t} = (Ventas\ Físicas\ CODELCO_t)(P_t^{Ref} - P_t^{Fob})$$ [2]

where PFob is the FOB price for Codelco's exports and PRef the reference price.

[2] Ventas físicas: physical sales

BOX IV.2: **EMPLOYMENT: IMPLICATIONS AND HYPOTHESES**

Throughout 2000, employment's behavior was surprising: first it stagnated, then it declined in absolute terms, with seasonally adjusted unemployment rising by almost 10% from July to September. Although recent information has become more positive, unemployment remains high.

Unemployment's impact on the economy

These developments affect the conduction of monetary policy through two channels of importance. First, unemployment has a direct impact on household decisions and possibilities for consumption. Not only does it increase uncertainty about families' economic future, it also directly affects their ability to obtain mortgages and to finance the purchase of durable goods.

Secondly, unemployment affects decisions about wages and the cost structure in the private sector, thus influencing the generation of inflationary pressures from the economy's factor markets. This second channel of transmission from unemployment to inflation has been harder to quantify in the Chilean economy, given that a series of institutional mechanisms influence wages and may obscure and diffuse unemployment's impact on them. These institutional factors include automatic wage adjustments based on past inflation, the minimum wage, and public sector wage increases. On the other hand, unemployment is not necessarily a sufficient indicator of the extent of wage pressures. Economic literature provides ample theoretical evidence of the importance of the vacancy rate as an equally relevant indicator for detecting inflationary pressures.[3] For example, a situation where there is high unemployment and many vacancies, because different sectors temporarily have different job creation abilities, can hide significant wage pressures in some economic sectors or occupational categories. Similarly, high unemployment and a low vacancy rate indicate depressed macroeconomic conditions, from which lower wage pressures can be deduced. Unfortunately, Chile does not keep statistics on vacancies, but this information can be obtained indirectly by looking at relative job creation, the unemployment rate, and wage increases for different sectors.

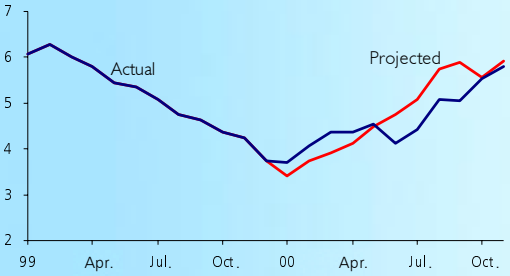
Hypotheses about unemployment's recent behavior

It is possible to advance a series of hypotheses, not necessarily mutually exclusive, that allow us to explain persistent high unemployment despite the recovery in activity that has been observed. It is important to note right away that what follows is an initial approach to a very complex problem, which requires a major effort in the field of academic research.

In addition to the distortions and rigidities that may exist in the labor market, imperfections in other areas of the economy generate persistent unemployment because they prevent the efficient assignment of resources. In the financial market, which plays the role of facilitating capital movements, reduced external financing, and companies' growing debt load may have generated credit rationing, particularly to PYMES (small- and medium-sized firms) that must maintain larger working capital. On goods markets, tendencies may have arisen that increase sector protectionism (for example, trade barriers), which reduced workers' mobility between sectors.

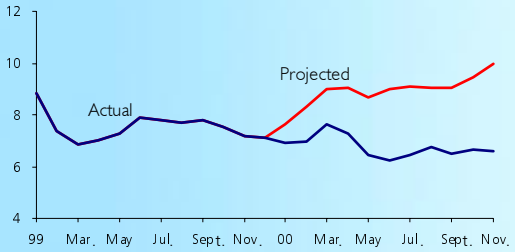
[3] See for example, Pissarides (2000), Blanchard and Diamond (1989).

Figure IV.26
Annual change in private nominal wages



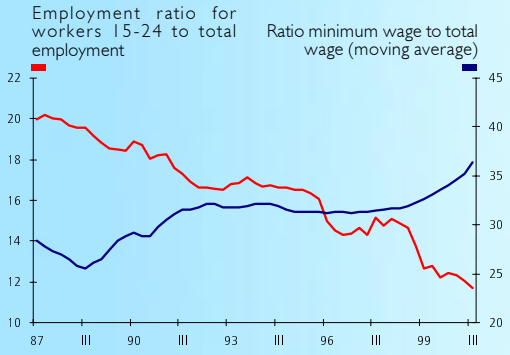
Source: National Statistics Bureau and Central Bank of Chile.

Figure IV.27
Annual change in public nominal wages



Source: National Statistics Bureau and Central Bank of Chile.

Figure IV.28
Employment ratio for workers 15-24 to total employment and relative minimum wage



Source: National Statistics Bureau and Central Bank of Chile.

With regard to the rigidities of the labor market itself, indexation based on past inflation is the main problem. This has prevented real wages from falling enough to move the economy toward equilibrium, generating more employment after a negative supply shock.[4] Evidence from 1999 and 2000 indicates that higher nominal wage increases in the private sector did not appear to reflect higher unemployment; to the contrary, these rose according to projected indexation mechanisms (Figure IV.26). Thus, since 1998 inflation-driven acceleration of nominal wages has prevented real wages from adjusting enough to absorb unemployed labor. Only public sector wages rose less than projections, based on inflation lags in 2000. Their impact on total unemployment is indirect, however, given that job creation in this sector is not the result of market decisions (Figure IV.27).

Second, increases in the minimum wage between 1997 and 2000, both in real terms and relative to the average salary, may have created a fragile employment situation for less skilled workers, such as young people. The drop in the demand for labor in 1998 and 1999, therefore, may have hit these workers particularly hard, and at present the minimum wage may be discouraging job creation for these groups. Evidence in this sense can be found in Figure IV.28, where the rise in the minimum wage since 1998 coincided with a more pronounced fall in the ratio of workers aged 15 to 24 to total employment.

Thirdly, the rigidity of real wages has prevented the absorption of unemployment generated by efficiency adjustments that companies carried out during 2000. This hypothesis establishes that companies take advantage of recessive periods to carry out improvements that have been postponed during boom periods, which are associated with an increase in the output to employment ratio. When the economy recovers, therefore, part of the fall in employment takes longer to be reabsorbed, especially if the necessary adjustments to real wages have not been applied. Figure IV.29 shows how average labor productivity, mainly in manufacturing and to a lesser degree in retail, has grown significantly since the first quarter of 2000.

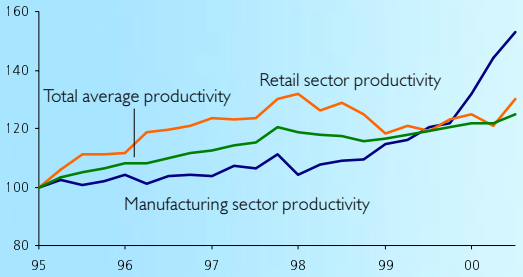
Fourth, it can be argued that investment is rising very slowly and is not enough to absorb the number of unemployed in the construction sector. The evidence, in any case, points to recovery in investment to date in line with the development of fundamentals such as extensive idle capacity within the housing market and austere fiscal policy. Growth in investment is likely to gradually take up current slack, leading unemployment in construction to fall throughout 2001. So far, employment and unemployment in construction have behaved consistently with growth in investment. In this respect, Figure IV.30 shows that the ratio of total gross capital formation to construction sector employment has remained relatively constant throughout the cycle, while the sector's unemployment rate has fluctuated considerably from 1998-2000. Consequently, higher investment should push employment in this sector higher, reducing unemployment rates.

Fifth, higher unemployment may be caused by sector adjustments in the presence of labor market imperfections. For example, real peso depreciation during 2000 should cause job creation to rise in the tradable sector to the detriment of the non-tradable sector. In this scenario, imperfections in the labor market may prevent the market from quickly and efficiently moving the labor factor out of contracting sectors and into expanding sectors, thus generating temporary increases in unemployment.[5] To test this hypothesis, we first require evidence of sector changes like those mentioned. The lack of vacancy figures makes this difficult, so we take an alternate approach here by

[4] Jadresic (1992,1996) and García (1995).

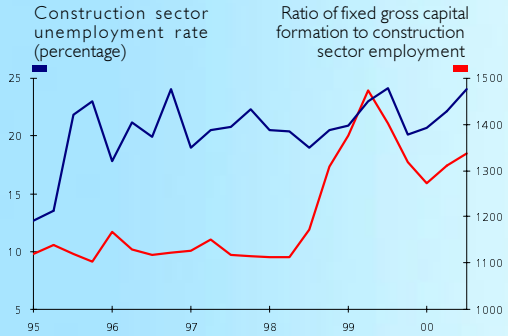
[5] Caballero and Hammour (1994) build a theoretical model along these lines.

Figure IV.29
Average labor productivity
1995.I = 100



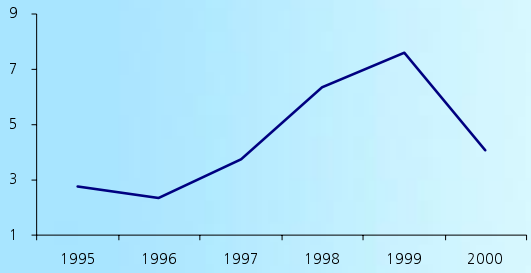
Source: National Statistics Bureau and Central Bank of Chile.

Figure IV.30
Construction employment indicators



Source: National Statistics Bureau and Central Bank of Chile.

Figure IV.31
Sectoral dispersion of unemployment
(percentage)



Source: Central Bank of Chile.

comparing economic sectors' dispersion over time to the aggregate performance of growth in unemployment (Figures IV.31). A larger dispersion today as compared to the period previous to 1998 would support the idea that the Chilean economy is experiencing a shift in sectors.[6] In general, dispersion rose sharply in 1998-1999; today, however, it is lower and relatively similar to 1996-1997.

Sixth, there is uncertainty about the future environment in which the Chilean economy will develop. This is associated with external factors, such as the international environment, and domestic aspects regarding labor reforms and other institutional changes. If uncertainty produces inaction, then the persistence of higher degrees of uncertainty leads players to postpone investment decisions and therefore job creation.

In summary, the economy's recent performance and its prospects for growth in 2001 and 2002, indicate that GDP should grow around 5.8%, while expenditure will rise by about 7%. The information available also suggests that the current account deficit will reach 1.8% this year and next. Weak job creation capacity in current conditions is primarily explained by imperfections in the economy that make it difficult to reassign productive resources. Wages and unit labor costs indicate that the faster growth of nominal private wages has reflected automatic cost of living adjustments. Wages' impact on inflation, however, has been moderated by an increase in average labor productivity and lower wage increases in the public sector. As a result, inflationary pressures generated by the labor market are under control. Future wage trends, however, may become a decisive factor in determining how quickly unemployment can be reduced.

[6] Abraham and Katz (1986) use a similar methodology for the case of the US.

This section presents the Board's evaluation of the prospects for the Chilean economy over the next two years, analyzed during the Monetary Policy meeting on 18 January 2001. Forecasts are provided for inflation and economic growth and the most significant risks are examined. These projections assume that the monetary policy rate will remain at the rate set by the meeting, 4.75% (UF +), for this evaluation period. Moreover, the forecasts depend on the series of events that together make up the baseline or most probable scenario. New information will modify that scenario and the associated projections. Forecasts are presented in the form of confidence intervals in order to reflect the sources of risk to future monetary policy.

Baseline scenario: main assumptions

International outlook

Recently, the international outlook has undergone substantial modifications. Today, projections of world growth for 2001are lower than before, due to the harsher landing the US economy is experiencing. This has brought about other effects, such as lower international interest rates and the strengthening of the Euro. As well, the Brent oil price is likely to be somewhat lower than foreseen in the previous report.

Growth of world output for the current year is estimated at 3.9%, rising to just over 4% per annum in 2002. This is lower than last September's projection, as is the trade-weighted GDP growth of the main Chilean trade partners. In any case, analysts agree that US monetary and fiscal policy will play an active role in preventing a deep recession. Prospects for Chile's terms of trade during 2001 and 2002 remain similar to those of the previous report, despite the fact that results for 2000 were somewhat lower because of the higher average oil price. In particular, the price of copper is projected at somewhere between 86 and 95 cents per pound for this year and next, which allows an expected improvement of 5% in the terms of trade over the next eight quarters.

Clearly, it is hard to foresee the future behavior of oil prices, but recent trends indicate somewhat lower prices than foreseen by the previous report. The price of crude oil on international markets is expected to average US$25 in 2001, then US$23 through 2002.

World growth over the next eight quarters is estimated at 4% per annum.

The prospects for capital flows into Chile do not look particularly promising, according to estimates from some investment banks, so the sovereign premium is expected to remain close to 200 basis points over coming quarters. The US Federal Reserve unexpectedly began a series of cuts to the interest rate, which today also is foreseen as more pronounced, and which in part offsets the less positive prospects for sovereign spread and the world economy overall.

Projections of international inflation have not changed significantly since the last report. This is because the impact of lower oil prices and a gradual depreciation of the dollar were already incorporated into previous estimates for 2001.

It is estimated that the oil price will average US$25 per barrel in 2001, then fall to around US$23 per barrel in 2002.

Interest rates and the exchange rate

The baseline scenario assumes the monetary policy rate will remain stable at UF + 4.75% for the next two years. This is not a forecast, but rather a methodological assumption that permits an evaluation of the coherence of current monetary policy with the medium-term inflation target that guides it.

The market expected the reduction of the monetary policy rate at the meeting on 18 January. This was apparent in the steady reduction, from November on, of the yield curve, both nominal and real. This reflects the consolidation of expectations that inflation will be lower in 2001 and 2002, as well as the recognition of the dampening effect on medium-term inflationary pressures due to the current pace of growth in domestic expenditure and the international outlook.

The baseline scenario assumes the monetary policy rate will remain stable at UF + 4.75% over the next 24 months.

The nominal exchange rate, along with international inflation, influences the prices of importable goods and conditions of external competitiveness. In the ten days prior to the monetary policy meeting, the nominal exchange rate averaged 570 pesos per US dollar, while the multilateral exchange rate (TCM) reached 120.5 (January 98=100), almost 4% more than last September in the case of the TCM and 5% in the case of the real exchange rate. To evaluate the future performance of the exchange rate, market expectations as well as real and nominal interest rate differentials provide some useful information, which can be complemented by scrutinizing the fundamentals behind this relative price.

The baseline scenario assumes that in real terms the exchange rate will remain relatively stable at its current level over the next eight quarters. From a long-term perspective, it also considers the probability of the exchange rate appreciating in the future as similar to the probability that it will depreciate. In either case, the expected exchange rate toward the end of the projection horizon is similar to that foreseen last September. Of course, there is a significant amount of uncertainty around the future performance of this variable, which is reflected in the volatility of exchange rates within a floating regime. This uncertainty has been incorporated into the Balance of Risks analysis in the corresponding subsection of this chapter.

Fiscal policy

These projections incorporate the information contained in the national budget approved for this year, which is consistent with fiscal accounts (central government) achieving a structural surplus in the order of 1% of GDP. Although overall fiscal policy has remained austere for the projection horizon, the projection for growth in expenditure with a macro impact and real investment for 2001 is higher than in 2000.

The baseline scenario takes into consideration the target of a 1% structural fiscal surplus for this year.

Potential output

Trends in the gap between demand and potential output play an important role in judging future inflationary pressures. The evaluation of productivity and potential output is based on historical evidence, adjusted for elements that could affect them, such as variations in investment rates.

Current levels of fixed investment and their probable trends for the next two years, suggest moderate growth of the economy's capital stock. Total factor productivity, which fell through 1998 and 1999, should consolidate the positive rates of growth shown in recent quarters.

All this suggests that the annual expansion of the economy's productive capacity should average around 5.5% for the next two years. This growth in supply should not constitute an immediate restriction on demand growth and the control of inflation because there is considerable slack within the economy, above all in the labor market. In this sense, it is important for this and other markets to become increasingly flexible, so they can reassign resources more efficiently in response to changes expected in relative prices. A decline in this flexibility could negatively affect investment rates and the pace of productivity growth and employment within the Chilean economy, which would reduce its ability to grow in the medium term.

Transitory price factors

During the fourth quarter of last year, domestic fuel prices rose more than expected in September, with a resulting impact on total CPI. Recently, the price of oil fell sharply compared to prices in late 2000, bringing with it a drop in the price of gasoline and diesel. The baseline scenario assumes prices will remain similar to those apparent at the close of this report, consistent with the impact of the probable OPEC cutbacks in production, and assumptions implicit in futures prices. Finally, other regulated prices will not change significantly, and neither will perishable prices.

Inflation and economic growth in the baseline scenario

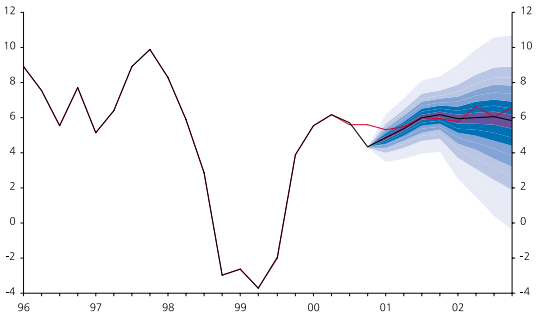
Economic growth

The figures available indicate that in 2000 the domestic economy grew, but more slowly than in late 1999. Similarly, domestic demand rose, but mainly based on the accumulation of inventories, while its more permanent components, such as fixed investment and consumption, showed a more subdued expansion.

Given the current macroeconomic conditions, economic growth in 2001 and 2002 will be driven mainly by exports and investment. On the consumer side, employment has performed more poorly than expected in early 2000, which has limited the growth of wage income and led to more prudent behavior on the part of households. Similarly, prospects for growth in disposable income over the next two years suggest moderate growth in household spending.

The prospects for investment growth over the next two years reflect the gradual absorption of idle capacity in the housing market. Fixed investment in non-housing projects, such as buildings and engineering works has already become more robust, as well as in machinery and equipment. This reveals that current conditions, including the terms of trade, depreciation of the real exchange rate over 1999, and lower domestic and foreign interest rates in the medium and long term, favor capacity expansion in the economy's tradable sectors.

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



(1) The figure shows the base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The red line indicates the projection in September 2000.

Source: Central Bank of Chile.

Finally, demand projections incorporate assumptions regarding trends in mining, fishing, electric power generation, which in the short term show significant fluctuations due to factors independent of the economic cycle.

The above elements lead to projections for average annual economic growth in the baseline scenario of around 5.8% over the next eight quarters, that is, from the third quarter of this year through the fourth quarter of 2002. In the short term, the economy should grow 5.6% in 2001, 5.9% in 2002 (Figure V.1). Domestic demand should rise at around 7% per annum for the next two years. The current account deficit is expected to average 1.8% of GDP in 2001 and 2002.

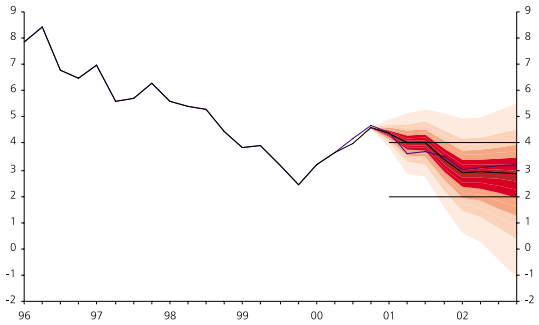
Alternative scenarios for GDP are expressed as a distribution of probabilities, which reflects confidence intervals that accompany the baseline scenario for economic growth, taking into consideration historic trends in supply and demand, as well as specific risks inherent to current conditions, which are discussed below, always assuming no change in the monetary policy rate. As a point of reference, the confidence interval with a 50% likelihood of occurring has economic growth ranging from 5.3% to 7.1% over the next 12 months, and 3.3% to 8.4% over the following 12 months. Values outside this range are possible, although the more they distance themselves in one direction or another the less likely they become.

Inflation

The stance of monetary policy determines inflation's behavior in the medium and long term, but this relationship is uncertain and variable in the short term, reflecting the influence of a wide range of factors. These factors include overall inflation trends, the exchange rate, labor cost pressures, the performance of retail margins, competitive conditions on end markets, regulated service tariffs, as well as the probable performance of output and demand pressures.

After recovering throughout the first half of 2000, monetary aggregates performed less robustly during the second half of the year, reflecting trends in private consumption. Broader aggregates along with loans grew somewhat more than money during 2000, and that growth is expected to continue through 2001 and 2002.

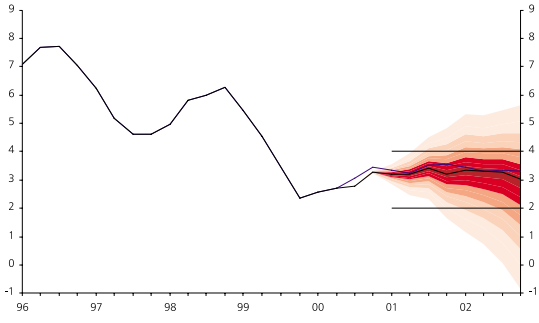
Figure V.2
Inflation (CPI) projection (1)
(percentage change over the same quarter of the previous year)



(1) The figure shows the base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The blue line indicates the projection in September 2000.

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 base projection (dark line) and the confidence interval for the respective time interval (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 UF + 4.75% for the next two years.
The blue line indicates the projection in September 2000.

Source: Central Bank of Chile.

Nominal wages, measured by the national statistics bureau, INE, have reflected the impact of automatic cost of living adjustments based on past inflation, which are apparent above all in private wage increases. Persistently high unemployment has had only a minimal impact on wage increases, which reflects the degree of resistance to reductions built into the wage-setting process within the Chilean economy. In any case, the increase in average labor productivity has, to date, limited wages' impact on inflation. The baseline scenario assumes this situation will continue in coming quarters, combined with moderate increases in the public sector based on expected inflation, and expectations that adjustments will remain similar for the minimum wage in 2001 and 2002.

Inflation's behavior through 2000, revealed that the second round effects of the fuel price increase on other prices were limited to those services that specifically consider these factors within their indexing formulae, among them public transportation and other regulated public utilities. Aside from these prices, there is no evidence of second round effects. Expectations for inflation have fallen toward the inflation target, according to the monthly survey published by the Central Bank, a situation confirmed by inflation expectations implicit in nominal interest rates.

This situation may be revealing the presence of more permanent factors affecting compressed retail margins, such as the expansion of capacity within the retail sector, increased productivity and more competitive pressure at the end-sale stage. Consolidation of inflation targeting and the floating exchange rate could also be relevant here.

By combining the above elements, a 12-month projection for CPI and CPIX inflation can be constructed, conditional on the assumption that the monetary policy rate remains constant at UF + 4.75% .The goal of price stability is defined in terms of CPI inflation, but the Board also pays attention to CPIX inflation, in order to evaluate more precisely demand pressures' impact on prices. Projections are presented as a distribution of probabilities affecting the performance of annual inflation over the projection horizon, that is, from the first quarter of 2001 through the fourth quarter of 2002. They refer to the change in the average price index for each quarter compared to the same quarter the previous year (Figures V.2 and V.3).

With the rise in total inflation during 2000, as a result of one-off changes in fuel prices, projections point to lower CPI inflation in the future. This should be less than 4% toward mid-year, reaching 3.4% at year's end, 2.9% at the end of 2002. CPIX inflation should remain at around 3.2% per annum in 2001 and 3% per annum in 2002. Prospects for a stable exchange rate, the expected drop in the price of oil, stable medium-term expectations of inflation, along with projections for growth in demand and economic activity over the next two years should support this gradual decline in inflation from current levels toward the center of the target range of 2% to 4%.

The baseline scenario forecasts that annual CPIX inflation will be around 3.4% by the fourth quarter of 2001, 2.9% for 2002. The CPI is expected to rise 3.2% in 2001 and 3% in 2002.

Balance of risks

The *baseline scenario* described above corresponds to the most likely trajectory for inflation and economic growth, depending on assumptions about monetary policy and other economic and financial developments. As mentioned above, however, risk factors may change this scenario and the behavior of both inflation and economic growth. This subsection examines some of the alternative scenarios that could be relevant for the future course of monetary policy.

The main threat from abroad is how hard a landing the US economy will experience. In fact, there are doubts about how quickly the US economy will approach trend growth rates and the degree of financial instability that this could provoke. This more complex international environment could dampen export growth. Lower international interest rates, on the other hand, could offset these negative effects on activity. Altogether, it is hard to anticipate the net effect of these developments on domestic activity, but they will probably be unfavorable.

Most recent trends affecting oil prices also indicate risks associated with inflation and growth. Although the main scenario assumes the price of oil will be lower than forecast in the last report, it could rise above or fall below recently observed prices. This could directly influence inflation, via domestic fuel prices, as well as generating a series of additional impacts on the terms of trade and disposable income. In any case, the evidence accumulated in recent quarters makes it unlikely that this movement of the oil price over or under the expected level will affect inflation expectations in the medium term.

Domestically, as in September, the main scenario takes into consideration a series of elements that have changed the environment in which the Chilean economy functions. The main consequence of this scenario is that in coming years domestic demand will rise more moderately than during the past decade. The economy will also experience other effects: (i) sectors producing goods tradable internationally will carry relatively more weight; (ii) there will be more lasting changes in relative prices, as with the compression of retail margins, lower growth in real wages, depreciation of the real exchange rate and lower real interest rates; (iii) employment will recover more slowly, as will consumer confidence, in line with sector adjustments, and (iv) the current account deficit will be

lower. Financial markets and private expectations have already foreseen the implications of these facts for the monetary policy stance, and suggest that interest could remain very close to its current level for much longer.

The risks associated with the main scenario are related to developments that could tend to modify inflationary pressures within the projection horizon. These include the possibility that retail margins could decompress more and faster than foreseen in the baseline scenario, or a surprisingly positive turnaround in employment throughout 2001.

In any case, it is also possible that unemployment could remain high during the first half of the year, independently of seasonal factors. In this sense, recent employment levels seem to indicate the limited ability of the Chilean economy's to efficiently reassign capital and labor. In the future, the flexibility of these markets must be increased, not reduced. Similarly, increases in the minimum wage, and salaries in general, must remain in line with general conditions in the labor market, so as not to block job creation.

The probability that these alternative scenarios could occur may indicate upward or downward bias in inflation and growth projections. The Board believes that information available to date suggests that scenarios of lower growth in activity and less inflationary pressure are more likely than the alternatives. In fact, the main risks are associated with a greater than expected deceleration of the world's economy, which would also involve lower international interest rates. Both effects tend to reduce domestic inflationary pressure, as does the possibility that unemployment may remain high. The Board therefore considers the probability of these situations occurring, and their impact on inflationary trends in the medium term, to be greater than the alternative scenarios, which are for example associated with higher oil prices or an unexpected recovery in employment and expenditure throughout 2001 and 2002.

The Board estimates that the relative risks of inflation and growth are biased downward.

Table V.1 shows the distribution of probabilities for the annual inflation rate in one or two years more, assuming the same policy interest rate is maintained. This Table contains the same information as Figures V.2 and V.3, and reveals the variability around the inflation projection, due to specific price volatility, the exchange rate, and uncertainty regarding economic growth projections. In the case of the inflation projection over 12 months, as measured by the CPI, the confidence interval with a 50% probability ranges from 2.6% to 4.1% for the fourth quarter of this year, and 1.2% to 4.5% for inflation for the following 12 months. In the case of inflation measured by the CPIX, these ranges go from 2.6% to 3.9% over 12 months, and 1.4% to 4.7% for the following 12 months. Levels outside these ranges are also possible, but less likely to the degree that they move off in one direction or the other.

The working assumption of the fixed monetary policy rate is essential to correctly interpret this distribution of probabilities and risks around the baseline projection for inflation. In fact, this distribution reflects the probability that changes in the inflation projection – and not inflation itself – occur, because it ignores the impact of eventual monetary policy

responses to the same. In fact, if projection revisions were significant, monetary policy would have to be adjusted to stabilize inflation around the medium-term target. In this sense, probabilities do not reflect the actual behavior of inflation but rather an evaluation of risks relevant to future monetary policy measures.

Table V.1
Inflation scenarios

		Inflation ranges			
		2% or less	2% to 3%	3% to 4%	4% or more
		(percent)			
Inflation					
	2001.IV	27	17	18	38
	2002.IV	49	10	10	31
CPIX Inflation					
	2001.IV	26	19	20	34
	2002.IV	48	10	10	32

(1) Average inflation according to the average annual CPI.

Source: Central Bank of Chile.

Other projections

Throughout recent months, expectations about monetary policy rates expressed in the survey and those deduced from asset prices have converged. At the same time, both indicators have revealed a steady decline, approaching the current policy rate of 4.75% in the short term. Inflation and growth projections can be made based on these alternative trends for monetary policy but, in general, they provide growth rates for economic activity and price levels similar to those included in the main scenario of this report.

Conclusion

In conclusion, the Board considers the current monetary policy stance coherent with maintaining inflation consistently in the middle of the 2% to 4% annual range, while economic growth should reach 5.8% per annum over the next two years. The main scenario projects CPI inflation of around 3.4% during the first year, 2.9% during the second.

However, it's important to emphasize the conditional nature of these projections. Currently some risk factors could change the future path of inflation, but it is hard to estimate their influence using the information available to date. This means that during its next meetings the Board will pay special attention to evaluating three main issues: first, developments in the world's economy and international financial markets; second, the behavior of the domestic economy, in particular domestic expenditure and employment, as indicators of future inflationary pressures within the economy; third, the performance of the exchange rate and the price of oil. This will ensure that monetary policy is able to respond flexibly to events that, by moving in one direction or the other, could threaten achievement of Chile's inflation target, given that the final purpose of monetary policy is to contribute to economic and social progress.

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