# MONETARY POLICY REPORT

**June** 2012

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## June 2012*

*/ This is a translation of a document written originally in Spanish. In case of discrepancy or difference of interpretation, the Spanish original prevails. Both versions are available at www.bcentral.cl.

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*/ The statistical closing date of this *Monetary Policy Report* was 14 June 2012.

# PREFACE

The main objective of the Central Bank of Chile's monetary policy is to keep inflation low, stable, and sustainable over time. Its explicit commitment is to keep annual CPI inflation at around 3% most of the time, within a range of plus or minus one percentage point. To meet this target, the Bank focuses its monetary policy on keeping projected inflation at 3% annually over a policy horizon of around two years. Controlling inflation is the means through which monetary policy contributes to the population's welfare. Low, stable inflation promotes economic activity and growth while preventing the erosion of personal income. Moreover, focusing monetary policy on achieving the inflation target helps to moderate fluctuations in national employment and output.

The *Monetary Policy* serves three central objectives: (i) to inform and explain to the Senate, the Government, and the general public the Central Bank Board's views on recent and expected inflation trends and their consequences for the conduct of monetary policy; (ii) to publicize the Board's medium-term analytical framework used to formulate monetary policy; and (iii) to provide information that can help shape market participants' expectations on future inflation and output trends. In accordance with Article 80 of the Bank's Constitutional Charter, the Board is required to submit this report to the Senate and the Minister of Finance.

The *Monetary Policy Report* is published four times a year, in March, June, September, and December. It analyzes the main factors influencing inflation, which include the international environment, financial conditions, the outlook for aggregate demand, output, and employment, and recent price and cost developments. The last chapter summarizes the results of this analysis in terms of the prospects and risks affecting inflation and economic growth over the next eight quarters. Some boxes are included to provide more detail on issues that are relevant for evaluating inflation and monetary policy.

This *Report* was approved at the Board's session on 15 June 2012 for presentation to the Senate Finance Committee on 18 June 2012.

**The Board**

# SUMMARY

The differences between the Chilean economy and the global economy have widened in recent months. The external scenario has worsened and risks have increased, with growing tensions in financial markets and weaker world growth. In Chile, in the first quarter, y-o-y GDP growth exceeded March's expectations. However, in quarter-to-quarter terms it was less dynamic than in late 2011 and expanded according to trend. Inflation has been less than forecast, a fact that, combined with lower international fuel prices, has reduced the risks for its short-term evolution. Nonetheless, medium-term inflationary risks are still latent because of tight domestic markets. In this context, the Board has kept the monetary policy interest rate (MPR) flat at 5.0% and has conditioned its actions going forward to the implications of domestic and external conditions on the inflation outlook.

After improving in the first quarter of the year, conditions in the Eurozone deteriorated further and tensions in financial markets have aggravated to mimic or exceed those of last December. The baseline scenario in March's *Report* assumed that temporary, limited frictions could occur. However, there has been renewed debate about the possibility of a disorderly unfolding of the crisis in the Eurozone, and several economies have rebuffed the political support for the agreed fiscal austerity measures. The economic and financial situation of Spain has worsened further and its risk premium has risen to record highs despite the announced capitalization of its banking industry. In addition, doubts persist over whether other countries will be needing similar action.

In response, at the developed financial markets risk premiums have risen and there is increased preference for safe assets. Stock prices have fallen across the board, volatility is up, the dollar has appreciated again and the interest rates on government bonds of safe economies have dropped to record lows. Also worth noting is the substantial drop in commodity prices, especially oil. Just like in late 2011, the main effects of these tensions on emerging economies, aside from lower commodity prices, have been a depreciation of their currencies, reduced stock prices and higher risk premiums. Chile has not been spared. As of the closing date of this *Report*, these effects have been bounded. Comparing with March, the peso/dollar parity has depreciated a little less than 5%; the stock exchange, as measured by the selected price index IPSA in pesos, has lost a bit more than 7% and the Chilean credit default swaps (CDS) premiums have risen nearly 40 basis points. Monetary markets have operated normally.

**International baseline scenario assumptions**

| | 2010 | 2011 (e) | 2012 (f) | 2013 (f) |
|---|---|---|---|---|
| | (annual change, percent) | | | |
| Terms of trade | 19.4 | 0.5 | -6.9 | -1.5 |
| Trading partners' GDP (*) | 6.2 | 4.1 | 3.6 | 3.9 |
| World GDP at PPP (*) | 5.3 | 3.8 | 3.2 | 3.6 |
| World GDP at market exchange rates (*) | 4.2 | 2.8 | 2.5 | 2.8 |
| External prices (in US$) | 5.8 | 10.1 | 0.6 | 2.4 |
| | (levels) | | | |
| LME copper price (US¢/pound) | 342 | 400 | 355 | 340 |
| WTI oil price (US$/barrel) | 79 | 95 | 92 | 87 |
| Brent oil price (US$/barrel) | 80 | 111 | 107 | 97 |
| Gasoline parity price (US$/m³) (*) | 598 | 803 | 802 | 717 |
| Libor US$ (nominal. 90 days) | 0.3 | 0.3 | 0.5 | 0.5 |

(*) For definition. see glossary.
(e) Estimate.
(f) Forecast.

Source: Central Bank of Chile.

The outlook for growth in developed economies is still gloomy. In the Eurozone, the recent financial tensions have deepened credit constraints, and ongoing fiscal adjustment measures will not help boost growth in the near term. The recession that is foreseen for this year in the region will be deeper than previously thought. However, important differences persist from one member country to the next. The rest of the developed economies will grow at a slow pace. The U.S. will fall short of March's predictions, suffering from the slow recovery of its labor market, a still not fully adjusted real-estate sector, a continuing process of household deleveraging and insufficient additional room to apply policies to boost growth.

Unlike in 2011, the main emerging economies have lost dynamism. Some indicators for China suggest that its growth rate will drop somewhat more than was projected in March. This has prompted the adoption of more expansionary fiscal and monetary policies, and India has followed suit. The rest of emerging Asia is feeling its effects in the form of lower exports and signs of manufacturing weakness. In Latin America, although there is more heterogeneity, the poor performance of Brazil in the first quarter stands out. The reduced inflationary pressures due to the lower oil price has motivated a relaxation of monetary policy in several emerging economies.

**Economic growth and current account**

| | 2009 | 2010 | 2011 | 2012 (f) |
|---|---|---|---|---|
| | (annual change, percent) | | | |
| GDP | -1.0 | 6.1 | 6.0 | 4.0 - 5.0 |
| National income | 0.5 | 13.1 | 6.1 | 3.3 |
| Domestic demand | -5.7 | 14.8 | 9.4 | 5.2 |
| Domestic demand (w/o inventory change) | -2.5 | 10.2 | 10.2 | 5.5 |
| Gross fixed capital formation | -12.1 | 14.3 | 17.6 | 7.4 |
| Total consumption | 0.8 | 9.0 | 7.9 | 4.8 |
| Goods and services exports | -4.5 | 1.4 | 4.6 | 3.9 |
| Goods and services imports | -16.2 | 27.4 | 14.4 | 4.9 |
| Current account (% of GDP) | 2.0 | 1.5 | -1.3 | -3.1 |
| National saving (% of GDP) | 22.2 | 25.1 | 23.4 | 22.2 |
| GFCF (% of nominal GDP) | 21.7 | 21.5 | 23.2 | 24.2 |
| GFCF (% of real GDP) | 21.9 | 23.6 | 26.2 | 26.9 |
| | (US$ million) | | | |
| Current account | 3,518 | 3,269 | -3,221 | -8,000 |
| Trade balance | 15,360 | 15,324 | 10,792 | 5,000 |
| Exports | 55,463 | 70,897 | 81,411 | 79,300 |
| Imports | -40,103 | -55,572 | -70,619 | -74,300 |
| Services | -2,010 | -1,806 | -2,417 | -2,200 |
| Rent | -11,395 | -14,765 | -14,015 | -13,000 |
| Current transferss | 1,563 | 4,515 | 2,418 | 2,200 |

(f) Forecast.

Source: Central Bank of Chile.

The baseline scenario foresees Chile's trading partners growing 3.6% in 2012 and 3.9% in 2013, a little less than predicted for both years in the last *Report*. This also means lower oil and copper prices than estimated in March. Summing up, the baseline scenario contemplates a reduced impulse from abroad, due to lower world growth and somewhat tighter external financing conditions. It also assumes that new stress episodes will occur in international markets.

The feeble external outlook contrasts with the performance of domestic output and demand. In the first quarter, y-o-y GDP growth exceeded forecasts in the March *Report*. In any case, in quarter-on-quarter terms it expanded at trend rate, leading the Board to estimate that output gaps are still narrow. This view is also based on the fact that, although the labor market continues to show signs of being tight, these signs have not intensified: employment has reduced its rate of expansion, the unemployment rate has stabilized at low levels and y-o-y growth in wages, while still strong, has moderated lately. In the first quarter, domestic demand grew somewhat less than output, but private consumption and investment remain robust.

Inflation has behaved favorably in the past few months, below March's forecasts. This, combined with oil prices falling in external markets, has reduced the risks that were envisioned then for its short-term trajectory. Still, the services component of inflation continues to be the largest contributor to its increase, so medium-term risks remain present, due to the closing of output gaps and the tight labor market. In line with the state of inflationary risks, market inflation expectations have moderated for the short term and remain around 3% over the projection horizon.

The baseline scenario foresees GDP growing this year in the 4.0%-5.0% range, unchanged from March. Although the economy grew more than forecast in the first quarter, the deteriorated external scenario will mean that in the second half there will be a sharper slowdown than foreseen in March. Still, GDP growth will not depart much from its trend, which the Board estimates at 5%. This forecast also considers further moderation of the y-o-y increase in private consumption, in line with decelerating labor income and less favorable lending conditions than a few months back. Within investment, the greater persistence of the construction and infrastructure component —largely associated to important mining and energy projects now in the pipeline— suggests that it will remain strong in the quarters to come. The baseline scenario foresees that the current account of the balance of payments will post a deficit of 3.1% of GDP this year, less than forecast in March.

The Board foresees y-o-y CPI and core inflation oscillating around the target until the end of the projection horizon, this time the second quarter of 2014. This trajectory assumes that wages will be adjusted to reflect productivity and the inflation target. It also uses as a working assumption that the real exchange rate (RER) will remain fairly horizontal, because considering the current level of the nominal exchange rate and currency parities, the RER is estimated to be within the range of values consistent with its long-term fundamentals. Finally, the baseline scenario uses as a working assumption that, in the short term, the MPR will be stable.

The baseline scenario reflects the developments that the Board believes to be the most likely to occur with the information at hand at the statistical closing of the *Report*. However, there are risk scenarios that, if materialized, might change —significantly, in some cases— the macroeconomic outlook and, therefore, the course of monetary policy. On this occasion, after evaluating the alternative scenarios, the Board estimates that the risk balance is downward biased for output, and unbiased for inflation.

The greater risk originates abroad, because of the situation in the Eurozone. This is very complex and the developments of recent months have revived the possibility of more extreme scenarios. Most importantly, economic and financial problems in the region could be worked out in a costly and disorderly way, for example with Greece leaving the monetary union. Despite its small size within the Eurozone, such an outcome could inflict severe damage on the rest of the world if there is contagion to bigger European economies. The macroeconomic and financial situation of Spain continues to spur doubts, as reflected in the steady increase in its risk premiums. The lack of clarity about the capitalization plan announced for Spanish banks, its difficulties to meet the fiscal targets given its gloomy growth outlook and its impact on its sovereign debt are still cause for concern. Similarly, apprehensions have increased about other countries in the region, such as Italy, because of the bulk of its public debt and its slow growth. The coupling of risk premiums in Spain, Italy and France provides evidence of this risk. Also possible is a reversal of current tensions, for instance if there are agreements favoring compliance with the adjustment measures agreed or new announcements of support by economic authorities in the zone that could buy time to advance in the necessary structural changes.

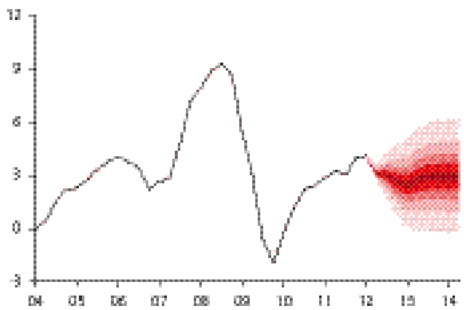
**Inflation**

| | 2010 | 2011 | 2012 (f) | 2013 (f) | 2014 (f) |
|---|---|---|---|---|---|
| | (annual change, percent) | | | | |
| Average CPI inflation | 1.4 | 3.3 | 3.3 | 2.8 | |
| December CPI inflation | 3.0 | 4.4 | 2.7 | 3.0 | |
| CPI inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIX inflation | 0.5 | 2.4 | 2.9 | 2.9 | |
| December CPIX inflation | 2.5 | 3.3 | 2.7 | 2.9 | |
| CPIX inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIX1 inflation | -0.7 | 1.3 | 2.8 | 3.0 | |
| December CPIX1 inflation | 0.1 | 2.5 | 3.2 | 2.9 | |
| CPIX1 inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIEFE inflation | 0.5 | 1.3 | 2.8 | 3.0 | |
| December CPIEFE inflation | 1.5 | 2.4 | 3.2 | 3.0 | |
| Core CPIWFE inflation in around 2 years (1) | | | | | 3.0 |

(f) Forecast.
(1) Inflation forecast at the second quarter of 2014.
(2) The CPIEFE (CPI excluding food and energy) is the price index of the consumer basket excluding the prices of foodstuffs and energy. In most OECD economies this index is used as a core inflation measure.

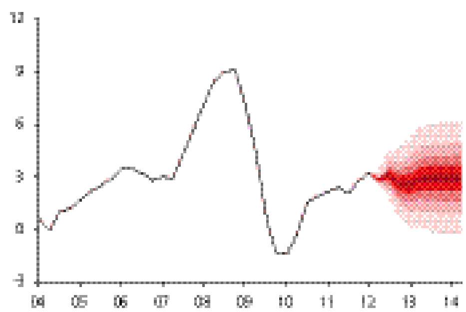
Source: Central Bank of Chile.

**CPI Inflation Forecast (*)**
(annual change, percent)



(*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the baseline scenario are included. These intervals summarize the risk on future inflation as assessed by the Board. The baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable.

**CPIX Inflation Forecast (*)**
(annual change, percent)



(*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the baseline scenario are included. These intervals summarize the risk on future inflation as assessed by the Board. The baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable.

Source: Central Bank of Chile.

Other risks have to do with world growth prospects beyond the Eurozone. Doubts persist in the U.S. about how the transition to a sustainable medium- and long-term debt trajectory will proceed. Special attention is due to the possibility that political difficulties to reach agreements on the fiscal front triggering the automatic adjustments foreseen towards 2013, hurting its GDP growth. In the emerging world, a sharper and/or longer Chinese slowdown than foreseen in the baseline scenario cannot be ruled out, hindering growth in other economies due to its weight in the global economy, and affecting commodity prices significantly.

Domestically, as aforesaid, medium-term risks for inflation are still present. The growth rate for domestic demand and output has dropped, albeit not as fast as expected. Although the Board estimates that output gaps have not narrowed further, if output again takes up a more dynamic path, there can be pressures pushing inflation up and demanding a monetary policy response. By the same token, domestic demand has outgrown GDP in the last two years, thus widening the current account deficit. Households' saving rate is low compared with earlier years, while corporate savings have decreased in the past year and investment is in record-high levels. If domestic demand becomes more dynamic, it could amplify the current account deficit. This could be risky in a scenario of weak world growth, lower copper price and costlier external financing.

The complexity of today's scenario calls for prudent monetary policy making, and at the same time it requires being prepared to address significant risks. The international economy's situation is worrisome and a further worsening could have major effects in Chile. Domestically, some risks persist relating to inflation, and it is the Central Bank's task to be vigilant. The Board monitors the evolution of the external and internal macroeconomic scenario and its consequences on inflation closely, and it reaffirms its commitment to conduct monetary policy in a way such that projected inflation stands at 3% in the policy horizon.

# MONETARY POLICY DECISIONS IN THE LAST THREE MONTHS

## BACKGROUND: MARCH 2012 MEETING AND *MONETARY POLICY REPORT*

By March, the risks facing the Chilean economy had changed relative to the scenario described in the December *Monetary Policy Report*. Externally, although the outlook for world growth continued to be weak, fears of a more adverse scenario had diminished, and confidence had partially recovered in the financial markets. The provision of three-year loans from the European Central Bank had contributed to alleviating the liquidity problems in the banking and sovereign debt markets, while a second rescue package for Greece combined with private sector debt restructuring had distanced the possibility of a disorderly outcome in that economy.

The calmer markets had led to reductions in risk and liquidity spreads, a depreciation of the dollar and an increase in commodity prices, in particular copper and oil. Oil prices were also affected by the geopolitical tensions in the Middle East, which contributed to raising the Brent crude price to over US$120 per barrel. Consequently, forecasts were adjusted upward, and the terms of trade were expected to improve relative to projections made in December. The world growth scenario had not changed significantly on aggregate, although there were changes in its composition. In the United States, more favorable indicators were reflected in an upward adjustment in the forecasts for this year, which partly offset the lower forecasts for the Eurozone. For the emerging economies, especially in Asia, the outlook was adjusted slightly downward, taking into account the less favorable results at year-end 2011.

In Chile, the external financial frictions had had limited effects, and some of the signs of pass-through seen in late 2011 had been reversed, at least partially. In real terms, the effects of the external scenario had also been limited, and domestic demand and output had grown more than forecast in December. Thus, after a less-dynamic third quarter, data for the fourth quarter of 2011 had accelerated. Based on the data gathered, together with the reduction in external risks and the assumption that the domestic demand adjustment would slow somewhat, the projected growth range for this year was raised to between 4.0 and 5.0%.

Annual CPI inflation was above the target ceiling. Core measures were around 3%, but its growth rates were higher than in the last quarter of 2011 and above the forecast in the December *Monetary Policy Report*. Nevertheless, the level of the core measures was consistent with the assessment of the state of the output gap.

The risks to output and inflation were unbiased. Externally, the risks were similar to previous *Reports'*, but the probability of occurrence was lower. Other risks had intensified, however. In particular, the possibility of a sharper slowdown in China and the escalation of geopolitical tensions in Iran could have a significant impact on the oil price, with negative effects on world growth and stronger pressure on fuel inflation. In addition, domestic spending continued to be dynamic in Chile, which could affect the baseline scenario in two ways. First, it could magnify inflation risks and increase the propagation of supply-side shocks, for example in oil or fresh fruits and vegetables. Moreover, the speed at which core inflation had risen could be a response to a tighter output gap. Second, the continued growth of domestic demand could cause an increase in the current account deficit and reinforce the effects of external shocks on Chile, especially if the copper price were to fall at the same time.

For the March meeting, the available data led to the single proposal of holding the monetary policy rate (MPR) at 5%. In recent months, the option of further cuts had been justified as a preventive action, given the forecasts of a sharper deterioration in the external scenario and its consequences for Chile. However, as described in the *Monetary Policy Report*, the external scenario was somewhat more favorable and the associated negative risks were estimated to be limited, so there was less justification for considering a cut. Moreover, inflation risks had risen, which further supported withdrawing the option of lowering the MPR. At the same time, the option of raising the MPR was also discarded, as there were doubts about whether the greater optimism in the international financial market was sustainable. Keeping the MPR unchanged was a viable option as long as it was within the normal range, and it would provide the flexibility to wait and collect information on the evolution of the external situation, the dynamism of the Chilean economy and the state of core inflation pressures. The Board therefore decided to hold the MPR at 5.0% in annual terms.

## APRIL AND MAY MEETINGS

In April, the available data did not vary greatly from the baseline scenario of the *Monetary Policy Report.* Internationally, the resurgence of financial frictions in the Eurozone and in the global markets confirmed that there were still doubts about the sustainability of the progress achieved in that region. Other external risk scenarios identified in the *Monetary Policy Report* were also still valid, most notably the possibility of a sharper slowdown in China and a steeper increase in the oil price. Domestically, output data pointed to a partial reversal of the positive surprise at the end of last year, but the easing of domestic demand had not yet solidified. Inflation was lower than expected in March, which caused short-term expectations to abate. The risks remained, however, in particular the temporary pressure stemming from the fuel price hike and the possibility of a greater pass-through to other prices or to expectations. There was also an ongoing risk that core inflation would accelerate as a result of tighter conditions in the labor market and the use of installed capacity. For the moment, these risks had not materialized.

This scenario led the Research Division to propose two options for monetary policy: increasing the MPR by 25 basis points or keeping it at 5%. A working assumption used in the *Monetary Policy Report* was that the MPR trajectory would be consistent with financial prices, which assumed gradual, moderate increases in the second half of the year. However, the occurrence and timing of these adjustments would have to take the evolution of internal and external conditions in the economy into account. In this context, the option of raising the MPR was equivalent to anticipating the adjustments in the policy rate, which would have been justified if there had been a more favorable evolution of the external scenario, an acceleration of demand and output growth which threatened to widen the output gap and raise core inflation, or a greater pass-through of temporary supply pressures to other prices, labor costs or inflation expectations. None of these conditions were met at that time, so the option of increasing the MPR was not recommended. In addition, an MPR hike would have come as a surprise to the market, and it would thus have communicated greater concern for dynamic output and inflation risks, together with the possibility of faster, steeper increases in the future. This could have undesirable consequences on the interest rate curve, which, in general terms, had kept in line with the working assumptions of the *Monetary Policy Report.* Holding the MPR at its current level was a viable option since it was within the neutral range defined for this variable, and it would provide the flexibility to wait and collect information on the evolution of the external situation, the dynamism of the Chilean economy and the state of core inflation pressures. The Board therefore decided to hold the MPR at 5.0% in annual terms.

In May, the macroeconomic scenario continued to show marked differences between domestic and international conditions. The international risks, especially with regard to the situation in the Eurozone, had moved toward more negative scenarios, given the reemergence of Greece's possible exit from the Eurozone and Spain's banking situation. In addition, output indicators were weaker than expected in several economies, including the United States, China and Brazil. This was reflected in sharp adjustments in asset prices and increased risk aversion and volatility in global financial markets. The scenario outlined in the *Monetary Policy Report* remained in effect, characterized by low growth in the developed economies, ongoing frictions in international financial markets and lower terms of trade than in 2011. Domestically, output and demand data were higher than expected, but they were growing around trend and were not substantially different from the baseline scenario of the *Monetary Policy Report.* With regard to inflation, the short-term risks projected in the *Monetary Policy Report* had diminished as a result of the drop in the prices of oil and derivatives. Core measures, especially services and nominal wages, had not accelerated further, which would have been an indication of tighter conditions than anticipated in the output gap or the labor market; they also had not stalled, which would have signaled a lower risk. Therefore, the options presented at this meeting were again to increase the MPR by 25 basis points or hold it at 5%. The possibility of an increase was discarded, given that the international scenario had not improved, output data did not show signs of an upturn and the temporary supply pressures had not passed through to other prices such as labor costs and inflation expectations. In contrast, holding the MPR at its current level was justified as it was within the neutral range, while short-term inflation risks were limited. This would provide the flexibility to wait and collect information on the evolution of conditions abroad, the dynamism of the Chilean economy and the state of core inflation pressures. The Board therefore decided to hold the MPR at 5.0% in annual terms.

# I. INTERNATIONAL SCENARIO

*This chapter analyzes the recent evolution of the world economy and the outlook for the next two years. It also describes the most likely external scenario relevant to the Chilean economy, as well as the main risks.*

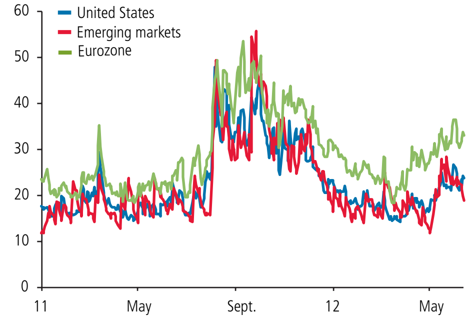
## INTERNATIONAL FINANCIAL MARKETS

Tensions have risen again in the international financial markets. The baseline scenario of the March *Monetary Policy Report* considered the occurrence of temporary and limited frictions. In the past few months, however, some new risks have materialized, and others that were considered unlikely in March have reemerged. The possibility of a disorderly unfolding of the European crisis is once again under discussion. The economic situation in Spain has worsened, and it is increasingly likely to spread to large economies like Italy. Furthermore, the political situation in several Eurozone countries has become less favorable for the fiscal austerity plans as originally negotiated, in particular due to the high unemployment rates and generally weak macroeconomic indicators.

The reappearance of more adverse scenarios is exemplified by the possibility of Greece exiting the Eurozone, and its consequences for the other economies. While the effects of such an event could conceivably be contained and limited to Greece, the bigger concern is that the contagion could spread to larger economies, which would make the solution to the crisis even more difficult and have more severe consequences for the rest of the world.

The economic and financial situation of Spain has continued to deteriorate. The concern for this economy is related to the complex vicious circle in which it is trapped: the output contraction reduces tax income—which makes it harder to comply with the fiscal deficit targets—and weakens the quality of bank assets. The country's risk spread spiked to historic peaks despite the announcement of banking sector capitalization. At the same time, it is as yet unclear whether other countries will require similar support. Spain and Italy have a heavy public debt maturity schedule in 2012–2013, and the risk spreads for the two countries have been strongly coupled, which reflects the risk of contagion. France is also exhibiting signs of correlation, albeit to a lesser extent, which is related to the fact that the main holders of Spanish and Italian sovereign debt are precisely the French banks.

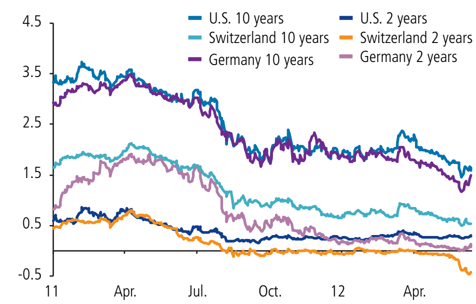
**FIGURE I.1**
Stock market volatility (*)
(percent)




(*) For the United States, the VIX index; for the Eurozone, the VSTOXX index; for emerging markets, an estimate of the historical volatility of the MSCI emerging market index in dollars. For definition, see glossary.

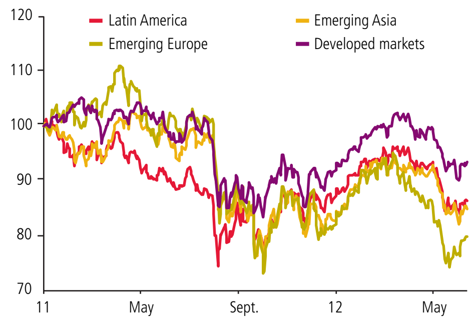
Sources: Central Bank of Chile and Bloomberg.

**FIGURE I.2**
Interest rates on nominal government bonds
(percent)



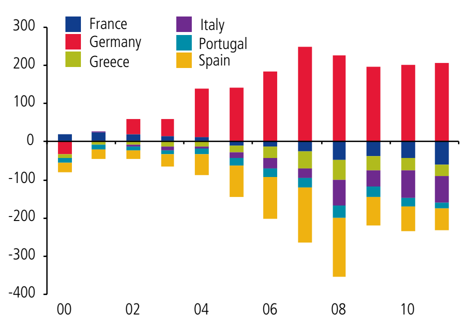

Source: Bloomberg.

**FIGURE I.3**
World stock exchanges (*)
(index: 01/03/2011 = 100)



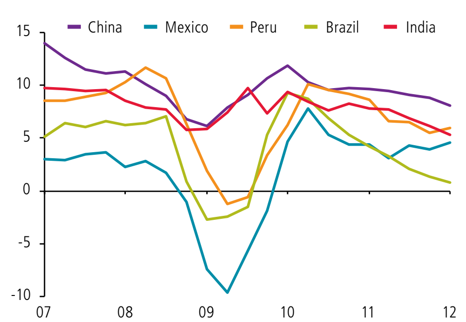

(*) MSCI indices in local currencies.
Source: Bloomberg.

**FIGURE I.4**
Current account balance
(US$ billion)




Source: International Monetary Fund.

**FIGURE I.5**
GDP
(annual change, percent)




Source: Bloomberg.

The heightened tensions in the Eurozone have been accompanied by lower world growth, which has fueled market fears and revived the preference for safer assets. Several financial indicators are approaching the levels seen in the final months of 2011, such as the risk spreads for the Eurozone and the stock exchanges. Although volatility has risen since March, it has not hit the peaks of late 2011, and liquidity pressures have not increased in the money markets (figure I.1). The dollar, as a safe haven currency, has generally appreciated in international markets, by almost 4% relative to the statistical closing date of the March *Monetary Policy Report.* In reflection of the greater risk aversion, government bond interest rates have bottomed out in the United States, Germany and the United Kingdom. In early June, the nominal interest rate on ten-year government bonds was 1.5% in the United States and 1.2% in Germany. The interest rates on two-year nominal securities from Germany and Switzerland were recently negative (figure I.2).

In general, this situation has passed through to emerging financial markets via stock market drops, capital outflows, increases in sovereign and corporate spreads and sharp currency depreciations against the dollar (figures I.3 and II.6). In Brazil, for example, the real has depreciated 15% since the close of the March *Monetary Policy Report,* which prompted a huge intervention in the foreign exchange market by the country's Central Bank. Other emerging economies, such as India and Peru, have also taken measures to counteract the loss in value of their currency. For now, however, there are no signs of significant pass-through of these tensions to the local money markets.

## WORLD GROWTH

Relative to March, the world growth forecast has been adjusted downward. Thus, the baseline scenario of this *Report* projects that Chile's trading partners will grow 3.6% in 2012 and 3.9% in 2013. The recession in the Eurozone is expected to be more severe than previously forecast, and while the other developed economies are expected to expand, their growth rates will remain low. Lower growth rates are also expected in the emerging economies (table I.1). Market consensus forecasts have not yet incorporated these downward adjustments, although neither did they rise much during the upswing early in the year, which may be a sign of reigning uncertainty. At any rate, consensus forecasts normally adjust with some lag.

The developed economies will continue to contribute little to world growth. In the Eurozone, while GDP did not contract further in the first quarter on aggregate, there were large differences across member countries. Germany recorded an annualized quarterly growth rate of 2.1%, but other economies have contracted significantly for several quarters (table I.2). The outlook is gloomy for the region, with weak indicators of confidence, manufacturing and retail sales. The latest developments will keep on tightening credit conditiones in the region. Moreover, exchange rate and wage rigidity does not help resolve the imbalances within the region. Although the current account is practically balanced for the Eurozone as a whole, the individual countries display large differences (figure I.4). Germany has maintained a current account surplus for several years, whereas the peripheral economies have run a deficit. In the past few quarters, the region has achieved part of the necessary adjustment, and Germany has increased its imports from the peripheral European economies and reduced its exports to those countries. The baseline scenario assumes that the Eurozone will contract 0.6% in 2012 and expand 0.3% in 2013.

In the United States, indicators have been weaker than expected. The labor market continues to recover very slowly, households are still in the process of deleveraging and the real estate market has not yet completed its adjustment. These factors do not support a recovery of consumption. There is also persistent uncertainty about the fiscal accounts, not only because of the size of the automatic cuts that will be implemented in 2013 if a political agreement is not reached to reduce them, but also due to the political difficulties of devising a formula for transitioning toward sustainable debt in the medium and long terms.

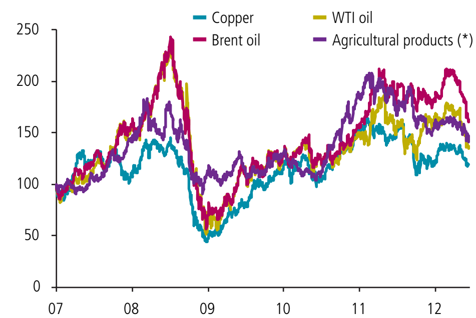
Another concern that has arisen in recent months is the economic downturn of the emerging economies (figure I.5). In particular, doubts are growing about the performance of China and the possible impact of a deeper and/or longer slowdown in this economy on growth in the rest of the world and on commodity prices. In the first quarter of 2012, GDP grew 8.1% in y-o-y terms, versus 8.9% in the previous quarter and 10.4% in 2010. The most recent indicators, such as manufacturing output, credit and confidence surveys, show that this slowdown continues and has even intensified relative to projections a few months ago. In the rest of the region, the effects of temporary factors that stimulated growth in the first months of the year, such as the rebound after the floods in Thailand, have eased. Some economies are also feeling the effects of lower growth of their trading partners (namely, China, Europe and the United States), and the latest data have been weaker, especially for exports and the manufacturing sector. In India, for example, first-quarter GDP was 5.3% y-o-y, versus growth of 6.1% in the previous quarter. Thus, the growth forecast for emerging Asia is 6.7% in 2012 and 7.1% in 2013. Both rates are substantially lower than the 8.6% average for the two-year period 2010–2011.

In Latin America, the situation is more heterogeneous. Output has been disappointing in Brazil: in the first quarter, the economy grew 0.2% relative to the previous quarter. This is largely explained by the weak performance of manufacturing. Other economies, such as Mexico, Peru and Colombia, have been more dynamic, with strong domestic demand. Thus, the baseline scenario projects that the region will grow 3.3% in 2012 and 3.7% in 2013, which is three-tenths lower than the forecast in March for each year.

## COMMODITIES

Commodity prices have generally fallen. This primarily reflects the greater stress in the international financial markets and the perception of a slowdown in world demand (figure I.6).

**FIGURE I.6**
Commodity prices
(index: 02. Jan.2007 = 100)




(*) Goldman Sachs aggregate index.

Source: Bloomberg.

**TABLE I.1**
World growth (*)
(annual change, percent)

| | Averg. 90-99 | Averg. 00-07 | 2010 (e) | 2011 (e) | 2012 (f) | 2013 (f) |
|---|---|---|---|---|---|---|
| World at PPP | 3.0 | 4.2 | 5.3 | 3.8 | 3.2 | 3.6 |
| World at market exchange rate | 2.7 | 3.2 | 4.2 | 2.8 | 2.5 | 2.8 |
| United States | 3.2 | 2.6 | 3.0 | 1.7 | 2.0 | 2.0 |
| Eurozone | 1.6 | 2.2 | 1.9 | 1.5 | -0.6 | 0.3 |
| Japan | 1.5 | 1.7 | 4.4 | -0.7 | 2.7 | 1.3 |
| China | 10.0 | 10.5 | 10.4 | 9.2 | 7.9 | 8.2 |
| India | 5.6 | 7.1 | 10.6 | 6.7 | 6.5 | 7.2 |
| Rest of Asia | 5.6 | 5.1 | 7.8 | 4.2 | 3.9 | 4.6 |
| Latin America (excl. Chile) | 2.8 | 3.5 | 6.4 | 4.4 | 3.3 | 3.7 |
| Commodity exporters | 2.7 | 3.1 | 2.9 | 2.3 | 2.4 | 2.5 |
| Trading partners | 3.1 | 3.6 | 6.2 | 4.1 | 3.6 | 3.9 |

(e) Estimate.
(f) Forecast.
(*) For definitions, see glossary.

Sources: Central Bank of Chile, based on a sample of investment banks, Consensus Forecasts, International Monetary Fund and statistics offices of each country.

**TABLE I.2**
GDP growth
(Annualized quarterly change, percent)

| | III.2011 | IV.2011 | I.2012 |
|---|---|---|---|
| Spain | 0.2 | -1.2 | -1.3 |
| Italy | -0.8 | -2.6 | -3.2 |
| Portugal | -2.5 | -5.0 | -0.4 |
| Ireland | -4.2 | -0.8 | - |
| Netherlands | -1.7 | -2.6 | -0.6 |
| Greece (a/a) | -5.0 | -7.5 | -6.5 |
| Germany | 2.3 | -0.7 | 2.1 |
| France | 1.2 | 0.3 | 0.2 |
| Eurozone | 0.5 | -1.3 | 0.0 |
| United Kingdom | 2.4 | -1.2 | -1.2 |

Source: Bloomberg.

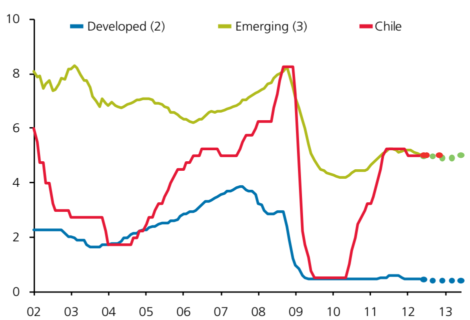
**TABLE I.3**
World inflation (*)
(annual average change in local currency, percent)

| | Averg. 1990-99 | Averg. 2000-07 | 2010 | 2011 | 2012 (f) | 2013 (f) |
|---|---|---|---|---|---|---|
| United States | 3.0 | 2.8 | 1.6 | 3.0 | 2.1 | 2.1 |
| Eurozone | 2.3 | 2.2 | 1.6 | 2.7 | 2.2 | 1.6 |
| Japan | 1.2 | -0.3 | -0.7 | -0.3 | 0.2 | 0.0 |
| China | 7.8 | 1.7 | 3.3 | 5.3 | 4.1 | 3.6 |
| Australia | 2.5 | 3.2 | 2.8 | 3.4 | 2.5 | 3.0 |
| New Zealand | 2.1 | 2.6 | 2.3 | 4.3 | 2.0 | 2.5 |
| Brazil | 854.8 | 7.3 | 5.0 | 6.5 | 5.8 | 5.3 |
| Mexico | 20.4 | 5.2 | 4.2 | 3.3 | 3.9 | 3.8 |
| EPI (*) | 1.8 | 4.6 | 5.8 | 10.1 | 0.6 | 2.4 |
| IPL (*) | 27.2 | 5.2 | 4.8 | 6.6 | 2.9 | 2.9 |

(*) For definition, see glossary.
(f) Forecast.

Sources: Central Bank of Chile, based on a sample of investment banks, Bloomberg, Consensus Forecasts and International Monetary Fund.

**FIGURE I.7**
Monetary policy rates (1)
(percent)




(1) Simple average of the reference rates of each group of countries. For the regions, the dots indicate the median of the Bloomberg analyst surveys on the expected MPR at the end of each quarter through September 2013. For Chile, the expected MPR is from the June EES.
(2) Includes the United States, the Eurozone, Japan and the United Kingdom.
(3) Includes Brazil, China, Colombia, Hungary, Mexico, Peru, Poland, Czech Republic, South Korea and South Africa.

Sources: Central Bank of Chile, central banks of the respective countries, Bloomberg and International Monetary Fund.

The oil price has dropped substantially, especially in the last few weeks, reversing the increases of the first months of the year. Both the WTI and Brent oil prices fell around 20% since the March *Monetary Policy Report,* and they are currently just under US$85 and US$100 per barrel, respectively. Price forecasts have therefore also dropped, which is in line with the weaker outlook for demand. Based on average futures contracts in the last ten business days prior to the close of this *Report*, the WTI oil price is expected to average around US$90 per barrel in the two-year period 2012–13, while the Brent oil price is forecast at US$100 per barrel in the same period. Oil derivatives forecasts incorporate similar reductions.

The copper price also fell in the last three months. On the statistical closing date of this *Monetary Policy Report,* copper was trading at US$3.40 per pound, or about 13% lower than in March. Metal exchange inventories contracted more than 20% in the same period, which could help contain sharper price reductions. The baseline scenario of this *Report* projects average prices of US$3.55 in 2012 and US$3.40 in 2013. In the medium and long terms, supply is expected to pick up in the coming years in response to the start-up of new projects and moderate demand growth. This could reflect changes in the composition of demand in China, from investment to consumption. In the short term, the cost structure of the mining industry—determined by the low ore grade of the exploited minerals and the increase in extraction costs—support higher prices above the historical average. However, if demand falls drastically, the copper price could drop below this value in the short term, given the slow response of supply to price changes (box I.1).

## INFLATION AND MONETARY POLICY

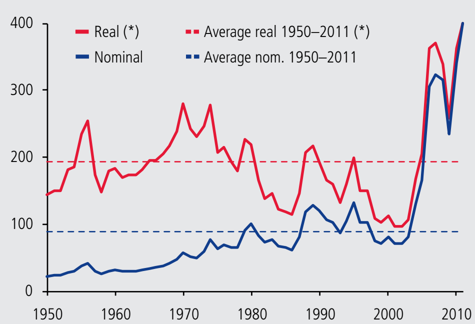
At the global level, inflationary pressures have continued to ease in recent months, due to the growth slowdown, the reduction in demand pressures and the sharp downward adjustment of commodity prices, especially oil. Thus, both actual and forecast inflation for this year are lower than a few months ago. Together with the strong appreciation of the dollar in international markets, this has led to a downward adjustment since March in the external inflation forecast, as captured in the external prices relevant to the Chilean economy measured in dollars (EPI) (table I.3).

In response to this scenario—in which the concern for high inflation has fallen, the outlook for output growth is low, and there are fears that the European situation could trigger stronger effects—some central banks have increased the monetary stimulus (figure I.7). Since the last *Monetary Policy Report,* Australia, Brazil, China and India have lowered their reference rates by a total of 75, 125, 25 and 50 basis points, respectively. China also reduced reserve requirements, and Japan increased its asset purchases.

# BOX I.1
## OUTLOOK FOR THE COPPER PRICE

The copper price has been at historically high levels in both nominal and real terms over the past few years (figure I.8). This trend was resilient to the global recession of 2009, which contrasts with the Asian crisis, when the copper price remained low for some time afterward. This performance is largely explained by the combination of a steady increase in world demand, the slow response of supply and an increase in extraction costs. However, the financial turbulence and significant risks that characterize the current external scenario raise questions about the short- and long-term outlook for the copper price. This box provides information on the factors underlying the price forecasts contained in the baseline scenario of this *Monetary Policy Report.*

**FIGURE I.8**
Copper price
(US¢/lb)



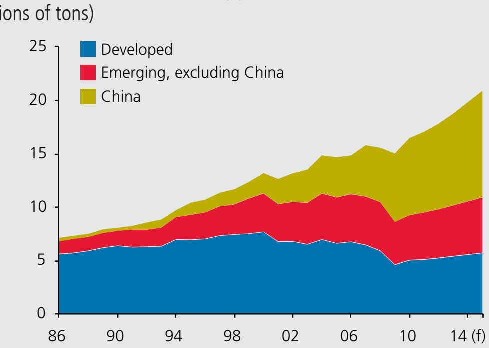

(*) Deflated using the 2011 average of the U.S. PPI.

Source: Central Bank of Chile.

As mentioned, the increase in the copper price in recent years can be explained by greater demand combined with a supply that has little capacity to respond in the short term. On the demand side, the emerging economies have seen a steady increase in their demand for refined copper over the past few years (figure I.9). The biggest push has come from China, which accounted for less than 4% of world demand in 1990 and 44% in 2011. The growing industrialization of this economy and the strong increase in its investment in infrastructure are the main determinants of the increased demand. At the same time, a large share of the demand for copper is associated with the manufacture of goods that are destined for other economies, in particular developed economies.

On the supply side, world copper production has been slow to respond to the increase in demand. This reflects several factors. The low copper prices of the past decades held back investment until the mid-2000s, which is why so few projects have come into their completion phase in recent years. This factor is magnified by the fact that mining projects, by their very nature, take a long time to develop. Estimates indicate that once the pre-feasibility studies are completed, the project financing and construction phases usually take seven years, on average. Moreover, mining production at the world level has been affected by exogenous factors, such as labor conflicts and natural disasters.

**FIGURE I.9**
World demand for refined copper
(millions of tons)



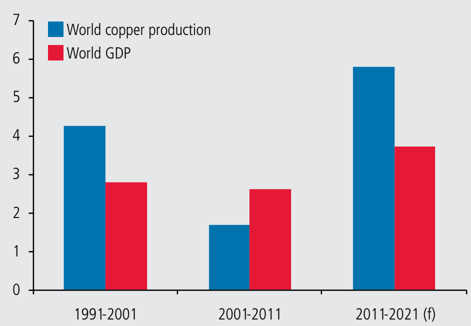

(f) Forecast.

Source: Palominos (2012).

In the short term, the price trend has led to greater exploitation of installed capacity, with increasingly low ore grades[1]/. Consequently, a third element that has become important in the behavior of the copper price is the significant increase in extraction costs associated with this drop in ore grade. The costs of energy, labor and other inputs have also risen.

Going forward, the forecast for the world copper supply points to an increase in the growth rate over the next few years. According to market data, for the 2011–2021 period, world mine copper production is projected to grow at an average y-o-y rate of 6%, whereas the average annual growth rate from 2001 to 2011 was not less than 2% (figure I.10). However, a share of this higher production is tied to projects that may not come to fruition, as they are still in the development phases and in some cases are located in high-risk geographic areas, due to geopolitical issues.

**FIGURE I.10**
World copper production
(average annual change for the period, percent)




(f) Forecast.
Source: Palominos (2012).

On the demand side, China is expected to undergo a change in its growth composition, with a shift from investment to consumption, which could reduce the use of copper per unit of output in this economy[2]/. The sum of these two factors—that is, the expansion of supply and a possible slowdown in the growth of demand—underpin expectations that, in the long term, the copper price will be lower than in recent years. The working assumption used for calculating the current account at trend prices in this *Report* is based on a long-term copper price of US$2.80 per pound, measured in 2012 dollars.

In the short term, however, the copper price is subject to key risks. The external economic scenario is complex, and the associated risks are substantial. In particular, the possibility that the slowdown in China will be deeper and/or longer than projected in the baseline scenario raises the risk that the demand for copper will fall significantly, bringing down the price. The industry's cost structure will support prices in the short term in the face of a drastic drop in demand. In 2011, the average producer had estimated costs of around US$1.60 per pound, which is almost double the average cost five years ago.

In sum, the outlook for the copper price indicates that in the medium term, the price will be below current levels. The working assumption, therefore, is that the medium-term value will be lower than today's price. In the short term, however, the range of possible prices is wider and depends mainly on what happens in the world economy.

[1]/ Palominos (2012) provides a more detailed analysis of the long-term outlook and evolution of the copper market.

[2]/ For more details on China's structural change plan and its possible consequences, see Contreras and Pinto (2012).

# II. FINANCIAL MARKETS

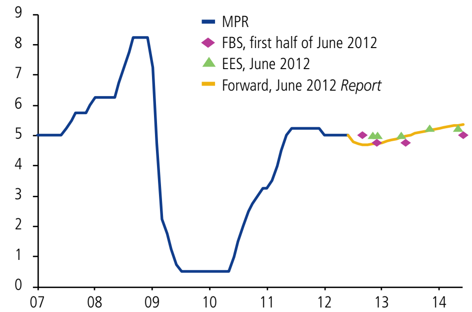
*This chapter reviews the recent evolution of the main financial market variables from a monetary policy perspective.*

## MONETARY POLICY

The differences between the Chilean economy and the global economy have widened in recent months. The international scenario has deteriorated and the risks have increased, with growing tensions in the financial markets and signs of weaker world growth. In contrast, domestic demand and output remain strong. In the first quarter, both indicators grew above the forecast in the March *Monetary Policy Report*, although they were less dynamic than in late 2011. Inflation was lower than expected, and the short-term inflation risks have eased. Nonetheless, medium-term inflationary, risks are still, latent as a result of tight conditions in domestic markets. The Board has kept the monetary policy rate (MPR) at 5.0%, and has conditioned its actions going forward to the implications of domestic and external conditions for the inflation outlook.

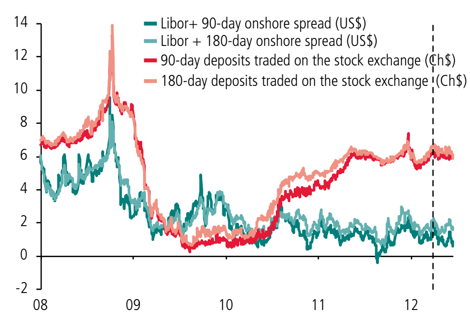
The developments in the external macroeconomic scenario and the reduction of short-term inflation risks has caused a gradual change in market expectations for the MPR trend. In April and May, expectations on the timing of the first MPR rise were pushed back, and at the same time the size of the necessary increase began to be scaled down. In the past few weeks, as external frictions intensified, expectations began to incorporate the possibility of a reduction in the MPR over the course of this year. However, this assessment is by no means uniform. While the Economic Expectations Survey (EES) points to a stable MPR over a long period, the Financial Brokers Survey (FBS) and the expectations derived from financial prices both forecast a marginal reduction (figure II.1). Thus, depending on the different measures of expectations, the MPR will range from 4.6% to 5.0% at year-end 2012 (versus 5.0% to 5.4% in the March *Monetary Policy Report*) and from 5.0% to 5.4% two years out (versus 5.25 to 6.0% in March) (table II.1). The baseline scenario uses as a working assumption that in the short term, the MPR will be stable.

**FIGURE II.1**
MPR and expectations
(percent)




Source: Central Bank of Chile.

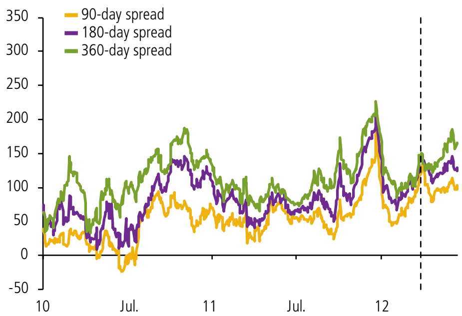
**FIGURE II.2**
Interest rates in dollars and pesos in the local market (*)
(percent)




(*) Vertical dotted line indicates the statistical closing date of the March 2012 *Monetary Policy Report.*

Source: Central Bank of Chile.

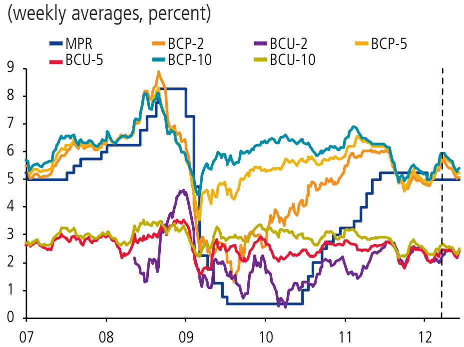
**FIGURE II.3**
Money market spread in pesos (*)
(basis points)




(1) Measured through the prime-interbank swap spread.
(2) Vertical dotted line indicates the statistical closing date of the March 2012 *Monetary Policy Report.*

Source: Central Bank of Chile.

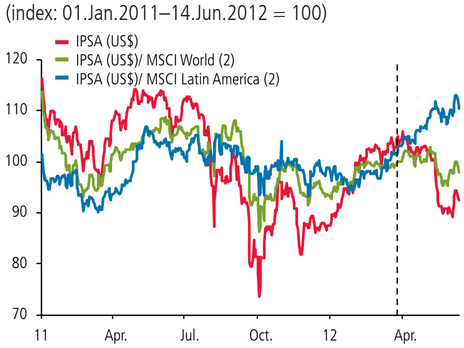
**FIGURE II.4**
MPR and interest rates on Central Bank of Chile instruments (*)
(weekly averages, percent)




(*) Vertical dotted line indicates the statistical closing date of the March 2012 *Monetary Policy Report.*

Source: Central Bank of Chile.

**FIGURE II.5**
Stock markets (1)
(index: 01.Jan.2011–14.Jun.2012 = 100)




(1) Vertical dotted line indicates the statistical closing date of the March 2012 *Monetary Policy Report.*
(2) Morgan Stanley Capital International regional stock indices.

Sources: Central Bank of Chile and Bloomberg.

**TABLE II.1**
Expectations for the MPR
(percent)

| | As at December 2012 | | One year ahead | | Two years ahead | |
|---|---|---|---|---|---|---|
| | March *Report* | June *Report* | March *Report* | June *Report* | March *Report* | June *Report* |
| EES (1) | 5.00 | 5.00 | 5.00 | 5.25 | 5.25 | 5.25 |
| FBS (2) | | 4.75 | 5.25 | 4.75 | 5.50 | 5.00 |
| Forward curve (3) | 5.37 | 4.74 | 5.60 | 4.98 | 5.98 | 5.37 |
| Swap contracts (4) | 5.26 | 4.59 | 5.49 | 4.58 | 5.82 | 4.92 |

(1) Surveys from December 2011 and March 2012.
(2) Surveys from the second half of March 2012 and the first half of June 2012.
(3) Constructed using the interest rates on swap contracts up to two years and then the interest rates on BCPs.
(4) Constructed using the interest rates on swap contracts up to two years.

Source: Central Bank of Chile.

## FINANCIAL AND MONEY MARKETS

The increasing tension in the international financial markets has not had much effect on the performance of the local interbank market and money market, which have continued to function normally. As in other emerging economies, the biggest impact of the external frictions has been seen in the fixed-income, stock and foreign exchange markets and in increased risk spreads.

In general, liquidity conditions in dollars and pesos in the money market are similar to those at the statistical closing date of the last *Monetary Policy Report*. With some fluctuation, nominal TAB rates and the rates on deposits traded in the stock exchange are somewhat lower than in March. With regard to dollar liquidity, the interest rates on dollar loans at 90 and 180 days are below the levels of the last *Monetary Policy Report,* with oscillations (figure II.2). The spread between bank deposit rates and swap rates in pesos has widened, to varying extents depending on the term. Again with fluctuations, long-term spreads have risen since March, while short-term spreads are narrower (figure II.3).

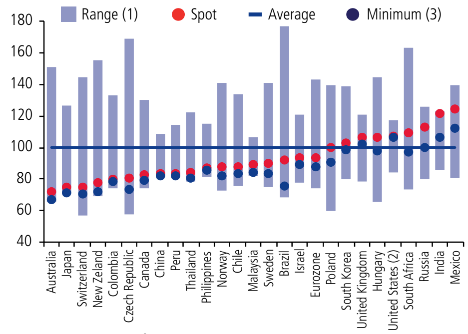
The greater risk aversion is also reflected in the interest rates on nominal and indexed Central Bank and Treasury instruments, which are now lower than in March. This trend coincides with increased investment in these instruments by the pension funds and with the trend for U.S. and German Treasury bonds. Interest rates have fallen more on peso-denominated instruments than on UF-denominated instruments. Thus, two- to ten-year peso bonds (BCPs) fell around 50 basis points since the close of the last *Monetary Policy Report*. Interest rates also fell on UF-denominated bonds (BCUs), but they rose in the last few weeks. Nevertheless, in a total drop of between 5 and 20 basis points on five- to ten-year BCUs. Two-year BCUs are around 30 basis points higher than their level in March (figure II.4), which reflects the reduction in short-term inflation expectations.

In the past few months, the increased risk aversion in world markets has led to somewhat tighter external financing conditions at maturities longer than one year. Sovereign and corporate spreads have increased for the emerging economies. In Chile, the five- and ten-year sovereign spreads—as measured through credit default swaps (CDS)—rose nearly 40 basis points between March and June. In contrast, the spread has been relatively stable on short-term loans contracted abroad by Chilean banks, while the terms and amounts of these loans have fallen. In any case, short-term external bank financing conditions continue to be somewhat tighter than in 2010 and early 2011. As analyzed in the *Financial Stability Report* for the first half of 2012, the average solvency and liquidity indicators of the banking sector have been stable in recent months. Nevertheless, the banking industry's access to external financing could be affected if the global financial environment deteriorates further. One favorable development cited in the *Financial Stability Report* is the greater diversification of types of foreign financing in the banking sector, as well as the accumulation of liquid foreign currency assets. However, the reduction in credit from banks established in the peripheral European economies has led to a concentration of bank financing sources in the past few months. The *Financial Stability Report* signals, however, that the banking system retains the capacity to absorb the materialization of a severe macroeconomic risk scenario. In particular, stress tests show that the current capitalization levels of the banking sector would allow it to absorb an episode characterized by a slowdown of GDP, an increase in Chilean peso financing costs and a depreciation consistent with the current external risk scenario.

As mentioned, the external financial frictions have had their biggest impact on stock prices and the exchange rate, in terms of both the level and volatility of these markets. Thus, the selected price index IPSA fell just over 7% in pesos (–11% in dollars) since the statistical closing date of the last *Monetary Policy Report,* with some fluctuation (figure II.5). The developed countries' stock exchanges, as measured through the MSCI indexes, fell 9.5% in local currency (–10% in dollars). The stock markets in Latin America, emerging Asia and emerging Europe dropped 11%, 9% and 15% in local currency, respectively (–19%, –12% and –23% in dollars, respectively). The larger losses in value of the emerging market stock exchanges have coincided with net capital outflows and higher currency depreciations against the dollar, on average, than in the developed economies.

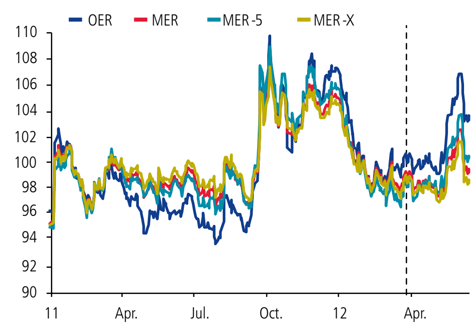
With regard to the foreign exchange market, the dollar has appreciated at the global level, though again with substantial fluctuations. In the case of the Chilean peso, the loss in value has coincided with a lower copper price. This trend is similar to other emerging currencies, especially in the cases of other commodity exporters (figure II.6). At the close of this *Report*, the currency traded at just over $500 to the dollar, after hitting $520 to the dollar in early June. In total, the peso has depreciated a little less than 5% since the close of the March *Monetary Policy Report.* The peso has depreciated less against other currencies (the multilateral exchange rate excluding the dollar), at just under 2% (figure II.7).

**FIGURE II.6**
Nominal exchange rates in the world
(annual change, percent))



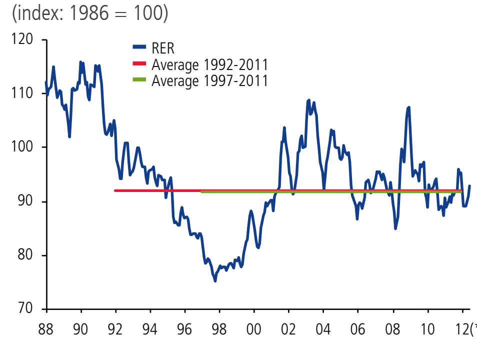

(1) The range identifies the maximum and minimum recorded by the local currency in the indicated period.
(2) The broad index of the U.S. Federal Reserve.
(3) Most appreciated value recorded in 2012.
Sources: Central Bank of Chile and Bloomberg.

**FIGURE II.7**
Nominal exchange rate (1) (2)
(index: 01/02/2011–06/14/2012 = 100)



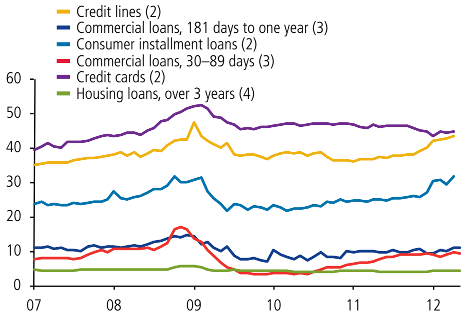

(1) For definitions, see glossary.
(2) Vertical dotted line indicates the statistical closing date of the March 2012 *Monetary Policy Report.*
Source: Central Bank of Chile.

**FIGURE II.8**
Real exchange rate
(index: 1986 = 100)




(*) June includes data through 14 June 2012.
Source: Central Bank of Chile.

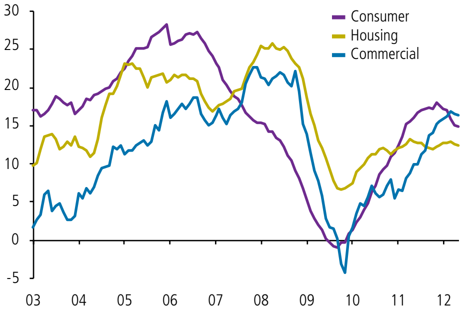
**FIGURE II.9**
Interest rates on loans (1)
(percent)




(1) Weighted average rates on operations carried out in the month.
(2) Interest rates on consumer loans over 90 days and up to 200 UF.
(3) Nominal rates.
(4) UF rates.

Sources: Central Bank of Chile and Superintendence of Banks and Financial Institutions (SBIF).

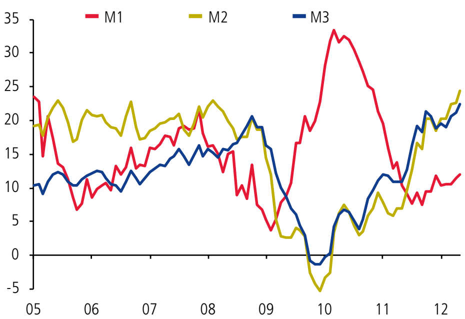
**FIGURE II.10**
Nominal loans by type of loan (1)
(annual change, percent)




(*) Preliminary data for May 2012.

Sources: Central Bank of Chile and Superintendence of Banks and Financial Institutions (SBIF).

**FIGURE II.11**
Monetary aggregates
(annual change, percent)




Source: Central Bank of Chile.

The real exchange rate (RER) has increased by around 4% since March. Based on the nominal exchange rate and parities in the ten business days prior to the statistical closing date of this *Report*, the RER was around 91 (where 1986 = 100). The current level of the RER is thus around its average of the last 15 to 20 years and is within a range that is consistent with its long-term fundamentals (figure II.8). Consequently, the working assumption used in the baseline scenario of this *Report* is that the RER will remain around its recent level in the forecast horizon.

## FINANCIAL CONDITIONS

Personal loan conditions in the local banking sector are less expansive than they were a few months ago, especially in the consumer debt segment. For this segment the interest rates have increased for some loan sizes, while annual loan growth rates have fallen (figures II.9 y II.10). In particular, between January and April the rates on consumer credit lines of up to 200 UF and over 90 days rose 130 basis points, consumer installment loans 150 basis points, and credit cards 120 basis points. These trends suggest that the annual growth rate of private consumption will continue to decrease.

With regard to housing loans, neither the annual growth rate nor the interest rates charged have changed substantially since the last *Monetary Policy Report*[1]/.

The Bank Lending Survey for the first quarter indicated that supply conditions were somewhat tighter for consumer and housing loans, relative to year-end 2011. However, banks perceived a strengthening of demand for new loans, especially mortgages, in line with the low unemployment rate and the increase in labor income.

For businesses, lending conditions are similar to March's. Business loans have recorded a stable annual growth rate of around 16%. However, the interest rates on these loans rose by almost 90 basis points in the most important segments. According to the Bank Lending Survey, the approval standards for business loans did not change on aggregate, and the demand for business financing continues to strengthen. Data gathered in different regions of the country indicates that firms perceive that lending conditions have not changed substantially over the course of the second quarter.

With regard to the monetary aggregates, the expansion velocity increased over the past few months, after recording negative monthly variations in February. The annual growth rate also rose. Based on data available in May, M1 grew at an annual rate of 12% (versus 10.6% in February); while M2 grew 24% and M3, 22% (versus 20 and 19%, respectively, in February) (figure II.11).

[1]/ As described in the *Financial Stability Report*, the statistics on home loans should be interpreted with caution, because the new subsidy policy, which reduces the share of the Banco Estado in total housing loans, affects historical comparisons.

# III. DEMAND AND OUTPUT

*This chapter reviews the recent evolution of demand and output and their short-term outlook, in order to examine possible inflationary pressures derived from them*

## SECTORAL ACTIVITY

In the first quarter, the annual growth rates of output and domestic demand were above the forecast in the March *Monetary Policy Report*. However, in quarterly terms, the velocity slowed relative to late 2011. Also, these growth rates were around trend (figure III.1).

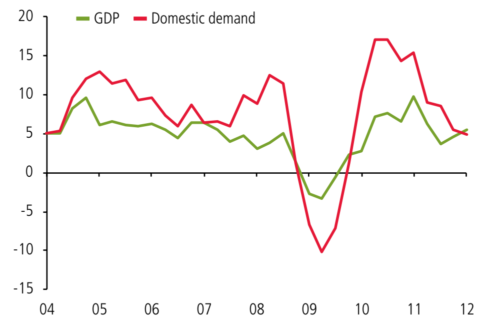
**TABLE III.1**
Gross domestic product (1)
(weight in GDP; real annual change, percent)

| | Weighted 2011 | 2010 | 2011 | 2011 I | 2011 II | 2011 III | 2011 IV | 2012 I |
|---|---|---|---|---|---|---|---|---|
| Agriculture, livestock and forestry | 2.8 | 2.3 | 11.2 | 15.2 | 11.6 | 1.8 | 9.6 | -2.7 |
| Fishing | 0.4 | 2.2 | 17.1 | 25.2 | 7.0 | 18.6 | 19.4 | -6.5 |
| Mining | 12.0 | 1.1 | -4.8 | -2.5 | -5.3 | -9.6 | -1.9 | 2.9 |
| Manufacturing | 10.6 | 3.4 | 6.6 | 12.7 | 8.3 | 5.6 | 0.4 | 3.0 |
| EGW | 3.4 | 10.7 | 12.5 | 14.1 | 13.9 | 11.6 | 10.7 | 23.6 |
| Construction | 7.1 | 1.7 | 11.1 | 13.4 | 9.8 | 9.4 | 11.7 | 9.5 |
| Retail | 9.3 | 17.5 | 12.1 | 22.7 | 11.1 | 9.0 | 7.8 | 8.3 |
| Restaurants and hotels | 1.4 | 8.9 | 9.7 | 17.9 | 11.9 | 5.7 | 5.0 | 7.6 |
| Transport | 4.5 | 8.5 | 8.4 | 20.6 | 9.2 | 2.3 | 4.0 | 5.3 |
| Communications | 2.2 | 9.2 | 6.9 | 7.6 | 6.8 | 6.7 | 6.5 | 6.0 |
| Financial services | 5.6 | 6.1 | 9.3 | 10.0 | 9.1 | 9.4 | 8.7 | 7.8 |
| Business services | 12.8 | 7.4 | 8.2 | 10.4 | 9.3 | 7.2 | 6.3 | 8.9 |
| Housing services | 4.7 | 0.2 | 2.5 | 1.1 | 3.1 | 2.9 | 2.8 | 2.9 |
| Personal services (2) | 10.6 | 5.3 | 7.0 | 11.1 | 8.3 | 4.5 | 5.3 | 5.8 |
| **Total GDP** | | **6.1** | **6.0** | **9.9** | **6.3** | **3.7** | **4.5** | **5.6** |

(1) Preliminary data.
(2) Includes education and health care (public and private) and other services.
Source: Central Bank of Chile.

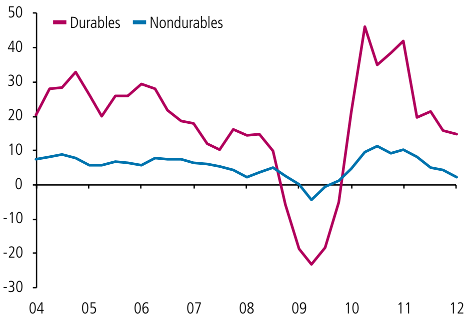
In sectoral terms, the higher output growth in the early part of the year was seen in the majority of sectors. In natural resources, the electricity, gas and water sector grew at a y-o-y rate of 23.6%, based on the use of more efficient electricity generation plants. Mining grew by 2.9% in annual terms, after contracting in the last twelve months throughout 2011. Among the other sectors, services continued to perform solidly. Retail trade grew by over 8% in annual terms, while business services increased almost 9% y-o-y (from just under 7% in the second half of

**FIGURE III.1**
GDP and domestic demand
(annual change, percent)



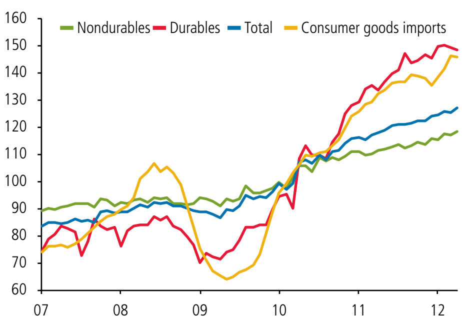

Source: Central Bank of Chile.

**FIGURE III.2**
Private consumption
(annual change, percent)




Source: Central Bank of Chile.

**FIGURE III.3**
Private consumption indicators (*)
(index: average Jan.2007–Apr.2012 = 100)




(*) Moving quarter. Seasonally-adjusted series.

Sources: Central Bank of Chile and National Statistics Bureau (INE).

2011). Construction posted slower growth than in late 2011, but maintained annual rates around 10%. Manufacturing improved its performance, although its seasonally-adjusted levels have been flat for several quarters (table III.1).

Thus, in the first quarter of the year, GDP grew 5.6% in y-o-y terms. The baseline scenario projects that GDP will grow between 4.0 and 5.0% this year, which is the same range forecast in March. Although the economy grew above the forecast in the first quarter, the deterioration in the external scenario will cause a sharper slowdown in the second half than was projected in March. In any case, GDP growth will not deviate substantially from tend, which the Board estimates at 5%. Market forecasts have fluctuated, but they have generally been adjusted upward in the last few months. In March, the Economic Expectations Survey (EES) projected that yearly GDP would increase 4.4%; in May the forecast rose to 4.8% and then fell slightly to 4.7% in June.

## DOMESTIC DEMAND

Domestic demand closed the first quarter with an annual growth rate of 4.9%, which is lower than that of previous quarters. This trend for domestic demand went hand in hand with a gradual easing of the growth of private consumption and investment. In both cases, the velocity was slower than forecast. When changes in inventory are excluded, the annual increase in domestic demand becomes slightly higher, at 5.2% (table III.2).

**TABLE III.2**
Domestic demand (*)
(weight in GDP; real annual change, percent)

| | Weighted 2011 | 2010 | 2011 | 2011 I | II | III | IV | 2012 I |
|---|---|---|---|---|---|---|---|---|
| Domestic demand | 104.4 | 14.8 | 9.4 | 15.4 | 9.0 | 8.6 | 5.5 | 4.9 |
| Gross fixed capital formation | 26.2 | 14.3 | 17.6 | 22.9 | 14.7 | 17.1 | 16.3 | 8.3 |
| Construction and other works | 15.2 | 1.9 | 12.7 | 13.4 | 11.7 | 11.0 | 14.6 | 11.4 |
| Machinery and equipment | 11.0 | 40.3 | 25.8 | 40.5 | 19.7 | 27.4 | 19.5 | 3.3 |
| Total consumption | 76.8 | 9.0 | 7.9 | 11.8 | 8.9 | 6.2 | 5.6 | 4.5 |
| Personal consumption | 64.9 | 10.0 | 8.8 | 12.9 | 9.6 | 7.2 | 6.0 | 5.2 |
| Durable goods | 7.0 | 35.4 | 23.6 | 42.1 | 19.6 | 21.4 | 15.8 | 14.7 |
| Nondurable goods | 27.0 | 8.7 | 6.9 | 10.2 | 8.2 | 5.1 | 4.5 | 2.2 |
| Services | 31.0 | 7.4 | 7.7 | 10.3 | 8.9 | 6.6 | 5.5 | 6.0 |
| Government consumption | 11.9 | 3.9 | 3.9 | 6.1 | 5.7 | 1.2 | 3.3 | 0.5 |
| Change in inventories (annual accum.) | 1.3 | 2.0 | 1.3 | 2.3 | 2.0 | 2.0 | 1.3 | 1.2 |
| Goods and services exports | 37.8 | 1.4 | 4.6 | 7.2 | 7.5 | -0.7 | 4.9 | 6.2 |
| Goods and services imports | 43.4 | 27.4 | 14.4 | 23.3 | 15.9 | 13.0 | 7.2 | 4.4 |
| **Total GDP** | | **6.1** | **6.0** | **9.9** | **6.3** | **3.7** | **4.5** | **5.6** |

(*) Preliminary data.

Source: Central Bank of Chile.

With regard to private consumption, the annual growth of the durable goods component continued to decrease, prolonging a trend that began in early 2011 (figure III.2). In terms of levels, partial indicators for private consumption have become less dynamic in the recent period, especially in the case of durable goods. Their levels remain high, however (figure III.3).

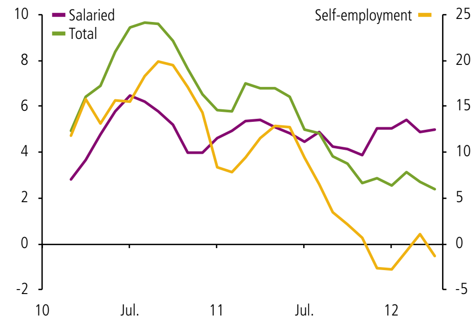
The lower annual growth rates of consumption are consistent with the evolution of its fundamentals. Although the labor market continues to be tight, the unemployment rate has stabilized or even increased slightly, depending on the data source. Seasonally-adjusted data from *Universidad de Chile* indicate that in March, the unemployment rate was 7.2% in Greater Santiago (versus 6.6% in December). According to the National Statistics Bureau (INE), unemployment in the moving quarter ending in April was 6.5% at the national level; the rate has oscillated around that level since late 2011. Employment, in turn, recorded lower y-o-y growth rates in 2012 than in the previous year, and closer to trend. In the moving quarter ending in April, the annual growth rate of employment was 2.4%, compared with an average of 5.1% in 2011. The composition of employment continues to shift away from self-employment and into salaried jobs (figure III.4). By sector, services continue to post the biggest job growth.

Wages continue to reflect the tight labor market. Year-on-year growth rates of the different wage measures remain high, although they fell to between 6 and 7% in April. Other signs that the labor market is still tight include the difficulty of finding workers, as reported by business contacts. This is a particular problem in some sectors and regions of the countries, such as mining, construction and agriculture.

Some factors support the view that consumption growth will continue to ease in the coming months. On one hand, the annual growth rate of labor income has been slowing in recent months. On the other hand, lending standards for consumer loans have tightened, with rising interest rates in the past few months coinciding with a drop in annual lending growth. The Bank Lending Survey for the first quarter showed signs of a somewhat tighter credit supply on the part of financial institutions. That was not the case on the demand side, which continued to expand, according to the survey. Consumer expectations, as measured through the IPEC, have not changed substantially in the past few months. If anything, they have risen slightly, but they remain below their neutral level. A bigger change was seen in the perception of when is the best time to purchase household items. This measure—which has been above neutral for the last two years—fell from 62 to 57% in 2012. Finally, the greater uncertainty regarding the external scenario is also expected to affect the performance of consumption, especially of durable goods.

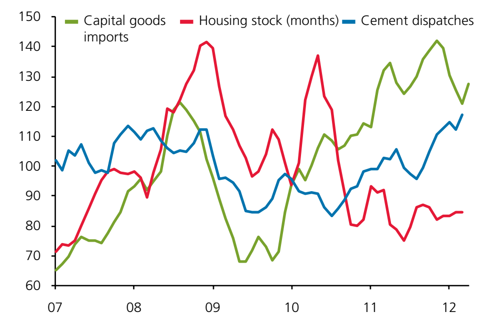
With regard to investment, as in past quarters, the most notable trend in the first quarter of the year was the ongoing shift in the composition of growth away from machinery & equipment and toward construction and infrastructure. Machinery and equipment, which increased 19.5% in annual terms in the last quarter of 2011, grew just 3.3% in the first quarter of this year. This is a reflection of capital goods imports that are becoming less dynamic, although with important fluctuations. Moreover, its levels, while still high, are lower than in mid-2011 (figure III.5). In contrast, investment in construction and infrastructure has recorded solid growth. Most of the increase stems from investment projects in the mining and energy sectors. The investment survey of the capital goods & technological development corporation *Corporación de Desarrollo Tecnológico de Bienes de Capital*, CBC shows a significant investment level for this and the coming years, despite a downward adjustment between December and March.

**FIGURE III.4**
Employment
(annual change, percent)




Source: National Statistics Bureau (INE).

**FIGURE III.5**
Investment indicators (*)
(index: average Jan.2007–Apr.2012 = 100)




(*) Moving quarter. Seasonally-adjusted series.

Sources: Central Bank of Chile and Chilean Chamber of Construction.

The housing component has also grown substantially, although new home sales and inventories have not changed much relative to a few months ago. At the same time, lending conditions for this segment have been relatively stable. Business expectations remain optimistic, rising sharply in early 2012 and then easing in recent months.

The short-term outlook is for investment to remain dynamic in the coming quarters, given the fact that construction and infrastructure is a more persistent component and taking into account the capital goods survey data, tight capacity in domestic markets and normal financing conditions (Box III.1). While capital goods imports were weak in the first quarter, data for April and May already show a recovery in their annual growth rates. In fact, in May the twelve-month increase was 10.4%. Nevertheless, the external uncertainty will have an impact on this variable, so its annual growth rate in 2012 is expected to be lower than last year.

Following a sharp adjustment between the third and fourth quarters of 2011, inventories recovered at the beginning of this year. The Monthly Business Confidence Index (IMCE) indicates that the current inventory level in retail and wholesale trade and manufacturing is higher than optimal. In the baseline scenario, the deterioration of external conditions will have a strong effect on inventory accumulation, due to both the greater external uncertainty and the assessment of the current level.

In the past few years, domestic demand has consistently grown above output growth, which has led to an increase in the current account deficit of the balance of payments (Box III.2). Thus, the current account moved from a surplus of 1.5% of GDP in 2010 to a deficit of 1.3% in 2011. For this year, the deficit is expected to widen to 3.1% of GDP. Despite the lower growth of spending, the drop in the average copper price is a key factor in this result. In the first quarter of the year, the twelve-month growth of the current account deficit was 1.7% of GDP. The Board considers that the possibility of domestic demand becoming even more dynamic represents an important risk in the domestic scenario, since it could cause an expansion of the current account deficit. This would be particularly risky in a context of a weak world economy, lower copper prices and higher external financing costs.

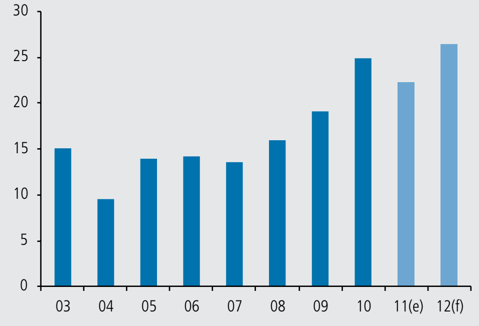
With regard to foreign trade statistics, the volume of total exports increased 7.2% in the first quarter, a trend that started in the second half of 2011. By sector, foreign sales of manufacturing and agricultural products grew above the average. On the imports side, the volume of foreign purchases recorded a drop in its annual growth rate in the quarter, to 5.2% (versus 15.1% in 2011), in line with the slower growth of domestic demand. By type of good, the biggest change was in capital goods imports, which fell 2.2% in annual terms in the period, after increasing 22.6% annually, on average, in 2011.

# BOX III.1
# IMPLICATIONS OF THE MINING SECTOR BOOM

In recent years, the combination of high copper prices, low ore grade and increased extraction costs have generated incentives for greater investment in the field at the world level (Box I.1). Chile is no exception. For 2012 and 2013, large investment projects are expected in both the development of new fields and the expansion of mines already in operation. The sectoral boom is obvious in the country's mining regions, which are experiencing very dynamic activity, significant real estate development, expansion of services and clearer signs of a tight labor market. This box describes the direct and indirect effects that the current and projected increase in mining investment will have on Chile's output and labor market.

As mentioned, mining investment has grown at high rates in the past few years and accounts for an increasing share of total investment in the country, capturing less than 15% between 2003 and 2007 and almost 25% on average in 2010–2011. The biggest impact of this investment has been in construction and engineering works, where the mining sector expanded its share from 8% in 2004 to nearly 23% in the present (figure III.6). This reflects the fact that the start-up of operations requires the construction of roads, ports and a range of facilities such as electric energy plants and desalination systems to obtain water.

**FIGURE III.6**
Share of mining Investment in construction and infrastructure
(percent)




(e) Estimate.
(f) Forecast.

Source: Central Bank of Chile.

Based on the projects identified in the investment survey carried out by the Capital Goods and Technological Development Corporation (CBC), in 2012 mining investment in construction and engineering works will increase almost 50% relative to 2011, to US$4.0 billion. Projections for 2013 point to a level around US$4.8 billion. Thus, even taking into account only the mining projects under way, investment can be expected to be very dynamic this year and next.

The increased investment in mining has important ramifications for output, stemming from both finished projects that are entering into production and projects that are currently under way. The former have a direct effect on the growth of mining output. In 2012 and 2013, the sector is projected to have an average y-o-y growth rate of 2.5%, which contrasts with the 4.8% contraction recorded in 2011. The sector's contribution to the growth of the economy is expected to reach half a percentage point per year. This direct effect is augmented by indirect effects on other sectors, such as manufacturing, trade and financial and business services (table III.3).

**TABLE III.3**
Direct and indirect impact of a 2.5% increase in the value added of mining
(percentage points)

| Activity | GDP share | 2.5% increase in mining | |
|---|---|---|---|
| | 2011 | Sector | Total |
| Agriculture, livestock and forestry | 2.8 | 0.0 | 0.001 |
| Fishing | 0.4 | 0.0 | 0.000 |
| Mining | 15.2 | 2.8 | 0.424 |
| Manufacturing | 10.9 | 0.3 | 0.030 |
| Electricity, gas and water | 2.4 | 0.3 | 0.006 |
| Construction | 7.4 | 0.0 | 0.001 |
| Retail, hotels and restaurants | 9.5 | 0.1 | 0.011 |
| Transport and communications | 6.0 | 0.1 | 0.007 |
| Financial and business services | 17.2 | 0.3 | 0.059 |
| Housing services | 5.0 | 0.0 | 0.000 |
| Personal services | 10.6 | 0.0 | 0.001 |
| Public administration | 4.3 | 0.0 | 0.000 |
| Impact on GDP | | | 0.541 |

Source: Central Bank of Chile.

The biggest indirect impact on output is through the effect of mining sector investment in construction, due to the level of development required by the projects underway. In this case, the projected increase in mining investment could cause an increase in construction activity on the order of 3.5%, which in turn will add around half a percentage point of higher aggregate GDP (table III.4).

**TABLA III.4**

Impact of a 3.5% increase in the value added of construction
(percentage points)

| Activity | GDP share | 3.5% increase in construction | |
|---|---|---|---|
| | 2011 | Sector | Total |
| Agriculture, livestock and forestry | 2.8 | 0.1 | 0.003 |
| Fishing | 0.4 | 0.0 | 0.000 |
| Mining | 15.2 | 0.1 | 0.010 |
| Manufacturing | 10.9 | 1.0 | 0.111 |
| Electricity, gas and water | 2.4 | 0.1 | 0.003 |
| Construction | 7.4 | 3.5 | 0.261 |
| Retail, hotels and restaurants | 9.5 | 0.3 | 0.030 |
| Transport and communications | 6.0 | 0.2 | 0.011 |
| Financial and business services | 17.2 | 0.7 | 0.116 |
| Housing services | 5.0 | 0.0 | 0.000 |
| Personal services | 10.6 | 0.0 | 0.002 |
| Public administration | 4.3 | 0.0 | 0.000 |
| Impact on GDP | | | 0.546 |

Source: Central Bank of Chile.

Another important area for analysis is the impact of the mining sector boom on the labor market. The direct effect of the sector on employment is limited, as it is not a labor-intensive industry. In 2011, direct employment in the sector represented around 3% of total employment, whereas mining accounts for nearly 16% of total GDP. Nevertheless, the increase in mining activity has had indirect effects on jobs and wages in some sectors and regions of the country. There are some indications that mining has generated a migration of workers to the country's mining regions, reducing the pool of workers available to sectors such as construction and agriculture. It is therefore becoming increasingly difficult to find labor in these latter sectors, and businesses are having to raise wages in order to retain workers or hire new employees.

In sum, the available data show that the growth of the mining sector will have a strong impact on output in the coming quarters. The direct and indirect effects will contribute nearly one percentage point to GDP growth in 2012 and 2013. This higher growth will generate further effects on other markets, especially the labor market. In particular, some regions and sectors are seeing a rise in hiring pressure and an increase in labor costs due to the migration of workers into mining.

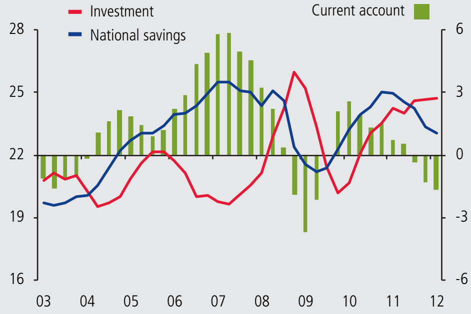
# BOX III.2
## EVOLUTION OF SAVINGS, INVESTMENT AND THE CURRENT ACCOUNT

After several years of surplus in the current account of the balance of payments (with the exception of the year of the international financial crisis), a deficit of 1.3% of GDP was recorded in 2011. The baseline scenario used in this *Report* also projects a deficit for 2012, of 3.1% of GDP. This figure reflects the fact that the terms of trade for the Chilean economy are high from a historical perspective. If current copper and oil prices are adjusted to their long-term values, the current account deficit would be nearly 6% of GDP[1]/.

The evolution of the current account of the balance of payments reflects the difference between investment made in the country and the saving of residents. Its recent behavior is due to both a strong increase in investment and a reduction in savings (figure III.7). The drop in savings has occurred across firms, personal and government savings (figure III.8.). Investment, in turn, has been very dynamic, reaching historically high levels.

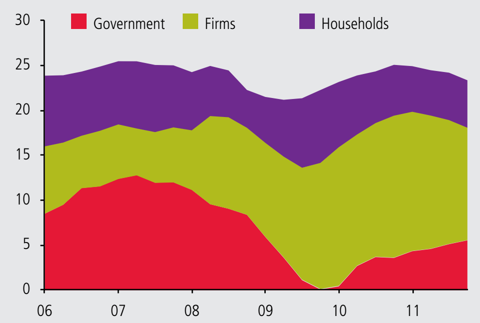
The household savings rate increased strongly during the international financial crisis. As the economy recovered, personal spending began to grow at high levels again starting in mid-2010, more than reverting the savings rate to pre-crisis levels. Thus, the household savings rate was just over 7% of GDP through mid-2008, it increased to over 8% of GDP during the financial crisis, and it then started falling in 2010, settling at about 5% of GDP since early 2011.

**FIGURE III.7**
Current account, national savings and investment
(percent of GDP, accrued in a moving year)




Source: Central Bank of Chile.

**FIGURE III.8**
Savings by economic agent
(percent of GDP, accrued in a moving year)



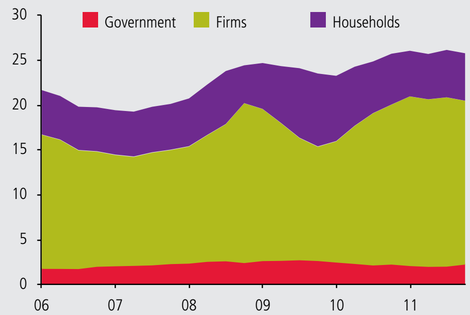

Source: Central Bank of Chile.

Firms increased their savings steadily from mid-2007 to late 2010, from 6% of GDP to almost 16%, thanks to better terms of trade. Since early 2011, however, the firms sector has recorded a drop in the savings rate, which recently reached 13% of GDP.

Government savings were high until the financial crisis, with rates around 10% of GDP. The countercyclical fiscal policy applied in 2009 substantially reduced public savings. Despite a recovery in the last two years, savings are still below the levels seen before the international recession.

[1]/ This calculation takes into account adjustments to prices, but not volumes. For 2012, the assumed prices are US$ 2.80 per pound for copper and US$ 80 per barrel for oil.

**FIGURE III.9**
Investment by economic agent
(percent of GDP, accrued in a moving year)




Source: Central Bank of Chile.

Investment, in turn, has increased steadily starting in 2010, growing from 23% to almost 26% of GDP. This increase is primarily explained by the investment of firms (figure III.9). The expansion of investment has been underpinned by the outlook for the economy as a whole and by favorable financing conditions, stimulated by the countercyclical monetary policy applied in response to the international crisis, among other factors. An additional stimulus was generated by the reconstruction efforts following the earthquake and tsunami of 27 February 2010, while high copper prices have promoted strong growth of investment in mining since 2010 (box III.1).

# IV. PRICES AND COSTS

*This chapter examines recent trends in the main components of inflation and costs, identifying different sources of inflationary pressures and their probable future behavior.*

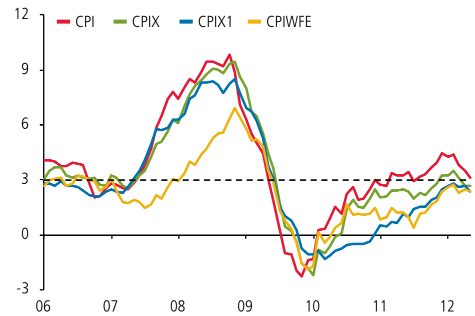
## RECENT INFLATION TRENDS

In the past few months, annual CPI inflation has returned to the target range, while the core measures have been somewhat below 3% (figure IV.1 and table IV.1). The lower actual figures and the drop in the oil price in international markets have ameliorated the short-term inflation risks. There are still medium-term risks, however, due to the tight domestic markets.

Between March and May, the prices of fuels, nonperishable foods and services continued to explain the bulk of inflation. However, the decrease in electricity rates, passenger fares and fresh fruit and vegetable prices lowered inflation in those months, and both the CPI and the core measure—namely, the CPI without foodstuffs and energy (CPIWFE)—recorded low monthly rates. Thus, in the last three months, the CPI totaled 0.2%, and core inflation 0.1% (versus 1.1% and 1.5%, respectively, in March) (figures IV.2 and IV.3).

With regard to food prices, fresh fruits and vegetables ceased to be an important factor in month-on-month inflation, and they are once again following their normal seasonal patterns. Meat has not continued to rise, as in the second half of 2011, and in some cases it has even fallen. The remaining foodstuffs have also contributed less to inflation in recent months, which is in line with reductions in the external market. The prices of agricultural products, measured through the GSCI index, are currently almost 30% below the peak hit in early 2011 (figure I.4). Furthermore, the outlook for the next two years has been adjusted downward, in the face of a lower world growth forecast.

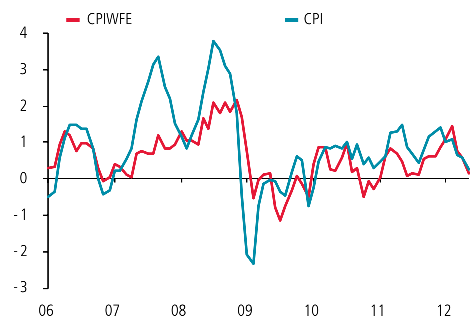
**FIGURE IV.1**
Inflation indicators (*)
(annual change, percent)




(*) For definition, see glossary.

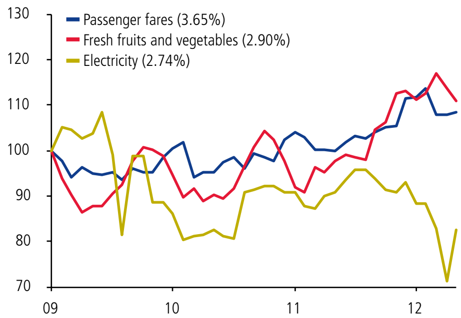
Sources: Central Bank of Chile and National Statistics Bureau (INE).

**FIGURE IV.2**
Monthly inflation
(accrued in three months, percent)




Source: National Statistics Bureau (INE).

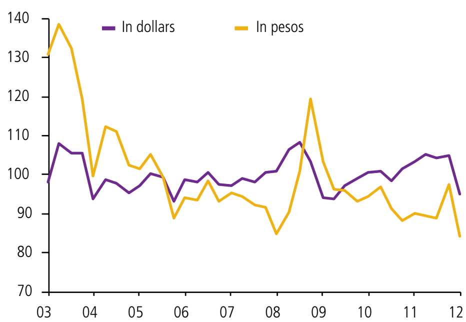
**FIGURE IV.3**
Components of inflation (*)
(index: Jan.2009 = 100)




(*) The share in the CPI basket is listed in parentheses. The price of passenger fares is the average of train, urban, highway and air transport services. Bus and subway fares are not included.

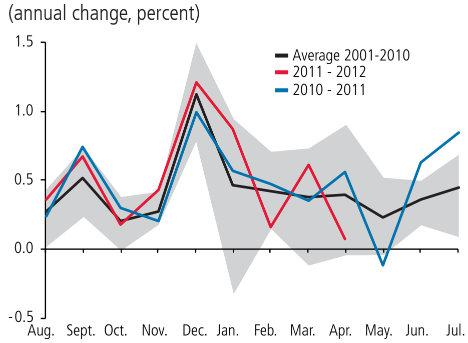
Sources: Central Bank of Chile and National Statistics Bureau (INE).

**FIGURE IV.4**
Imported consumer goods prices (IVUM)
(index: 2003–2012 = 100)




Source: Central Bank of Chile.

**FIGURE IV.5**
Nominal wages: IREM (*)
(annual change, percent)




(*) For definition, see glossary. The gray area identifies the minimum and maximum recorded between 2001 and 2010 for the indicated months.

Sources: Central Bank of Chile and National Statistics Bureau (INE).

**TABLE IV.1**
Inflation indicators (*)
(annual change, percent)

| | | CPI | CPIX | CPIX1 | CPIEFE | CPIT | CPINT | CPIG | CPIS |
|---|---|---|---|---|---|---|---|---|---|
| 2011 | Jan. | 2.7 | 2.0 | 0.5 | 0.8 | 1.2 | 4.8 | 1.0 | 4.8 |
| | Feb. | 2.7 | 2.1 | 0.4 | 0.9 | 1.2 | 4.7 | 0.9 | 4.8 |
| | Mar. | 3.4 | 2.4 | 0.7 | 1.4 | 1.8 | 5.5 | 1.6 | 5.6 |
| | Apr. | 3.2 | 2.4 | 0.7 | 1.2 | 1.7 | 5.2 | 1.4 | 5.4 |
| | May | 3.3 | 2.5 | 1.1 | 1.2 | 1.8 | 5.2 | 1.7 | 5.2 |
| | Jun. | 3.4 | 2.4 | 0.9 | 0.9 | 2.3 | 4.9 | 1.9 | 5.4 |
| | Jul. | 2.9 | 1.9 | 1.4 | 0.4 | 2.5 | 3.4 | 2.0 | 4.0 |
| | Aug. | 3.2 | 2.3 | 1.5 | 1.2 | 2.0 | 4.7 | 2.0 | 4.6 |
| | Sept. | 3.3 | 2.1 | 1.5 | 1.2 | 2.5 | 4.3 | 2.4 | 4.3 |
| | Oct. | 3.7 | 2.5 | 1.9 | 1.5 | 2.9 | 4.7 | 3.1 | 4.4 |
| | Nov. | 3.9 | 2.8 | 2.0 | 1.9 | 3.2 | 4.8 | 3.4 | 4.5 |
| | Dec. | 4.4 | 3.3 | 2.5 | 2.4 | 3.8 | 5.2 | 3.9 | 5.1 |
| 2012 | Jan. | 4.2 | 3.2 | 2.7 | 2.6 | 3.6 | 5.1 | 4.0 | 4.6 |
| | Feb. | 4.4 | 3.5 | 2.8 | 2.7 | 3.6 | 5.4 | 4.0 | 4.9 |
| | Mar. | 3.8 | 3.1 | 2.6 | 2.3 | 3.0 | 4.7 | 3.7 | 3.9 |
| | Apr. | 3.5 | 2.6 | 2.7 | 2.5 | 2.4 | 5.0 | 3.5 | 3.5 |
| | May | 3.1 | 2.7 | 2.3 | 2.4 | 1.9 | 4.7 | 2.4 | 4.0 |

(*) For definition, see glossary.

Source: National Statistics Bureau (INE).

The contribution of energy (fuels and electricity rates) to total inflation in the last three months was higher than the accumulation up to the March *Monetary Policy Report*. The price increases in gasoline and liquefied natural gas were partly offset by lower electricity rates. However, the short-term inflation risks have eased as a result of the steep drop in the international price of oil, which is reflected in the price forecasts for the next two years. Between March and June, the Brent oil price and the Gulf of Mexico gasoline price fell almost 20%. The prices of Brent oil futures contracts for the two-year period 2012–2013 are now almost 15% lower, on average, than the forecast in the March *Monetary Policy Report*, taking the last ten business days prior to each report. Fuel prices are thus expected to lower inflation going forward. As emphasized in March, Chile has high energy prices relative to a sample of OECD countries, especially in the case of electricity[1]/.

As mentioned, the CPI excluding foods and energy increased 0.1 percentage point between March and May. This was determined by inflation in services (55% of the CPIWFE), which increased 0.7 percentage point in the period, versus a contribution of –0.7 percentage points from goods inflation (45% of the CPIWFE). Both rates were lower than the available figures on the closing date of the March *Monetary Policy Report*.

[1]/ For more details, see Box IV.2 in the *Monetary Policy Report* of March 2012.

The changes in goods prices were largely determined by clothing and home furnishings. This coincided with a marked drop in imported consumer goods prices (IVUM) in the first quarter of the year, whether measured in dollars or pesos (figure IV.4). The depreciation of the peso in the second quarter could cause an increase in domestic prices, which could be offset to the extent that the appreciation of the dollar at the international level reduces the prices of imported goods.

With regard to services, passenger fares other than combined services (bus and metro fares) decreased substantially between March and May. These fares had risen sharply in the last quarter of 2011, so the drop represents a normalization of prices. The prices of other services, such as health care, rent, education and recreation, contributed to the increase in services inflation in the last three months, but their price performance was within the range of normal.

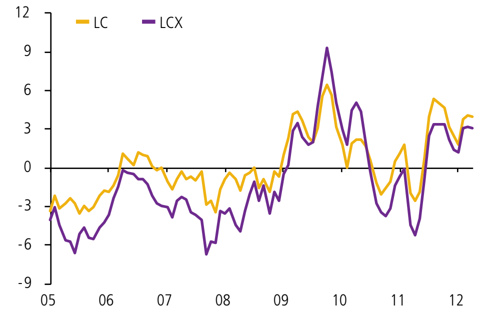
Another important determinant of services inflation is the increase in labor costs. Although it has eased at the margin, the annual growth rate of nominal wages has remained high. Depending on the measure, the annual growth rate was between 6.0% and 7.0% in April (versus 6.5% to 7.5% in February). Adjusted for productivity, nominal unit labor costs continued to grow around the target of 3%. The growth of wages represents an important risk given the tight labor market and the closing of the output gap (figures IV.5 and IV.6).

In a scenario of robust private consumption, the tight labor market could facilitate the pass-through of cost pressures to final prices. Based on the sample of firms that report Uniform Codified Statistical Forms (FECU), operating margins shrank in the retail, transport and services sectors in the first quarter of 2012. According to business contacts, there are signs that this trend continued in the second quarter of the year. The lower margins are largely associated with higher input costs, such as the fuel price hike in late 2011 and the first quarter of 2012, as well as labor costs (figure IV.7). This upward pressure could be partially offset by the reduction in the international prices of certain goods, which expands operating margins. One example is the ratio between food prices in the external market measured in pesos and the prices included in the CPI, which have risen for several months.

## OUTLOOK FOR INFLATION

The lower headline inflation and the drop in commodity prices, especially oil, in international markets have reduced the inflation outlook in the short term. Inflation is thus expected to remain around 3% in the coming months. In the medium term, private expectations remain around the inflation target.

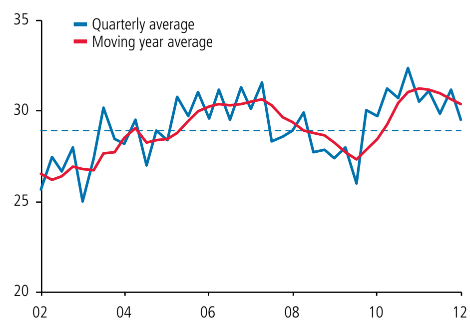
**FIGURE IV.6**
Productivity-adjusted labor costs (*)
(annual change, percent)




(*) For definition, see glossary.

Sources: Central Bank of Chile and National Statistics Bureau (INE)..

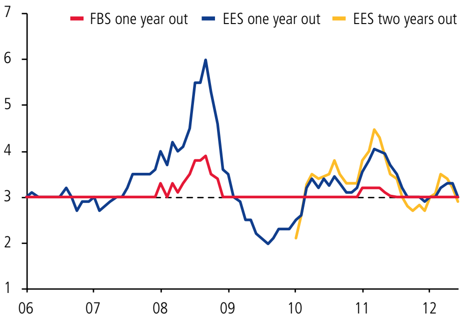
**FIGURE IV.7**
Retail operating margins (*)
(percent)




(*) Ratio between gross earnings and income from sales. Average of the four firms with the largest share of retail trade, weighted by income from sales. Dotted line indicates the average of 2001–11.

Sources: Central Bank of Chile and Superintendence of Securities and Insurance (SVS).

**FIGURE IV.8**
Inflation expectations from market surveys (*)
(percent)




(*) The FBS for the first half of each month.
Source: Central Bank of Chile.

With regard to inflation projections one year out, the Financial Brokers Survey (FBS) decreased to 2.9% (versus 3.4% in the survey for the second half of March), while the Economic Expectations Survey (EES) lowered to 3.0% (down from 3.2% en March). The EES expects the same level for December 2012 (versus 3.5% in March) (figure IV.8). Consumer and business surveys also show a decline. The percentage of people who think that inflation will rise "a lot" in the next twelve months, as measured by the Economic Perceptions Index (IPEC), decreased from 62% in March to 57% in May. In the Monthly Business Confidence Index (IMCE), inflation expectations one year out decreased to 3.7% in May (versus 3.8% in March). Inflation expectations identified in the breakeven inflation rate, derived from average interbank swap rates, have also fallen in the short term; medium-term expectations are similar to the closing date of the last *Monetary Policy Report.*

In the baseline scenario, the Board projects that CPI inflation will fluctuate around 3% over the next two years, and the forecast is also 3% for the end of the forecast horizon, the second quarter of 2014. For the end of this year, annual CPI inflation is projected to be 2.7%, which is slightly lower than was forecast in March.

# V. INFLATION SCENARIOS

*This chapter presents the Board's assessment on the Chilean economic outlook over the next two years, including the analyses performed up to the monetary policy meeting of 14 June 2012. Projections are presented of the most likely inflation and growth trajectories. These are conditional on the assumptions in the baseline scenario, thus the Board's assessment of the risk balance for output and inflation is also provided.*

## BASELINE PROJECTION SCENARIO

The impulse that the Chilean economy will receive from abroad in the next two years will be milder than was forecast in March. Financial tensions in external markets and the likelihood of worst-case scenarios have risen again. This has tightened the external lending conditions somewhat, which is compounded with signs of further weakening of important emerging economies, especially China. Also, despite the drop in the oil price, the terms of trade (ToT) are forecast to be lower than in 2011, both this year and next.

The baseline scenario assumes that Chile's trading partners will grow 3.6% in 2012 and 3.9% in 2013. The contribution of developed economies to global growth will continue to be meager. The Eurozone recession will be more severe than previously estimated, and the rest of the developed economies will continue to grow at a slow pace. In the U.S., conjunctural indicators have been weaker than forecast, and labor market and consumption indicators are yet to show a strong-enough recovery.

The emerging world has reduced its dynamism. Doubts are raised over the performance of China, whose y-o-y growth has slowed in recent quarters. This combines with conjunctural indicators (e.g., manufacturing output, credit, and confidence surveys) indicating that this deceleration has continued, even more intensely than foreseen some months ago. Other emerging economies have begun to feel the effects of slower growth in China, Europe and the U.S. In particular, the slowdown of larger emerging economies, including Brazil, India and Russia, stands out. Other emerging economies, such as Mexico, Peru and Colombia, look more dynamic, particularly because of still high domestic demand (table V.1). However, on average, world growth in 2012 and 2013 will not differ significantly from the average of the past decade. This result is heavily influenced by the increased weight of China in the global economy.

The financial tensions, the persistently poor performance of the developed world, and the signs of slowdown in emerging markets have brought down commodity prices and are expected to continue to do so in the projection horizon. For copper, prices of US$3.55 and US$3.40 per pound are forecast for 2012 and 2013,

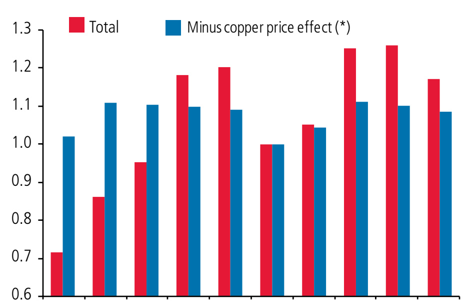
**TABLE V.1**
International baseline scenario assumptions

| | 2010 | 2011 (e) | 2012 (f) | 2013 (f) |
|---|---|---|---|---|
| | (annual change, percent) | | | |
| Terms of trade | 19.4 | 0.5 | -6.9 | -1.5 |
| Trading partners' GDP (*) | 6.2 | 4.1 | 3.6 | 3.9 |
| World GDP at PPP (*) | 5.3 | 3.8 | 3.2 | 3.6 |
| World GDP at market exchange rates (*) | 4.2 | 2.8 | 2.5 | 2.8 |
| External prices (in US$) | 5.8 | 10.1 | 0.6 | 2.4 |
| | (levels) | | | |
| LME copper price (US¢/lb) | 342 | 400 | 355 | 340 |
| WTI oil price (US$/barrel) | 79 | 95 | 92 | 87 |
| Brent oil price (US$/barrel) | 80 | 111 | 107 | 97 |
| Gasoline parity price (US$/m$^3$) (*) | 598 | 803 | 802 | 717 |
| Libor US$ (nominal, 90 days) | 0.3 | 0.3 | 0.5 | 0.5 |

(*) For definition, see glossary.
(e) Estimate.
(f) Forecast.

Source: Central Bank of Chile.

**FIGURE V.1**
Terms of trade
(index, 2008=1)




(1) Estimates use as benchmark the 2008 average price at the London Stock Exchange. No other potential effects on price or quantity are considered. For the period 2003-2007 provisional calculations are made using balance of payments data.

Source: Central Bank of Chile.

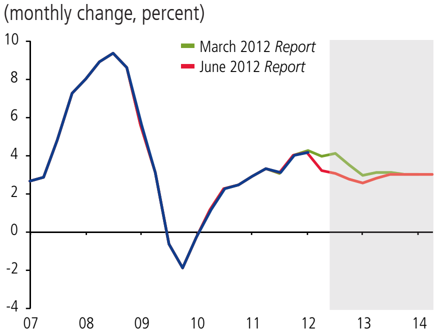
**TABLE V.2**
Economic growth and current account

| | 2009 | 2010 | 2011 | 2012 (f) |
|---|---|---|---|---|
| | (annual change, percent) | | | |
| GDP | -1.0 | 6.1 | 6.0 | 4.0 - 5.0 |
| National income | 0.5 | 13.1 | 6.1 | 3.3 |
| Domestic demand | -5.7 | 14.8 | 9.4 | 5.2 |
| Domestic demand (w/o inventory change) | -2.5 | 10.2 | 10.2 | 5.5 |
| Gross fixed capital formation | -12.1 | 14.3 | 17.6 | 7.4 |
| Total consumption | 0.8 | 9.0 | 7.9 | 4.8 |
| Goods and services exports | -4.5 | 1.4 | 4.6 | 3.9 |
| Goods and services imports | -16.2 | 27.4 | 14.4 | 4.9 |
| Current account (% of GDP) | 2.0 | 1.5 | -1.3 | -3.1 |
| National saving (% of GDP) | 22.2 | 25.1 | 23.4 | 22.2 |
| GFCF (% of nominal GDP) | 21.7 | 21.5 | 23.2 | 24.2 |
| GFCF (% of real GDP) | 21.9 | 23.6 | 26.2 | 26.9 |
| | (US$ million) | | | |
| Current account | 3,518 | 3,269 | -3,221 | -8,000 |
| Trade balance | 15,360 | 15,324 | 10,792 | 5,000 |
| Exports | 55,463 | 70,897 | 81,411 | 79,300 |
| Imports | -40,103 | -55,572 | -70,619 | -74,300 |
| Services | -2,010 | -1,806 | -2,417 | -2,200 |
| Rent | -11,395 | -14,765 | -14,015 | -13,000 |
| Current transferss | 1,563 | 4,515 | 2,418 | 2,200 |

(f) Forecast.

Source: Central Bank of Chile.

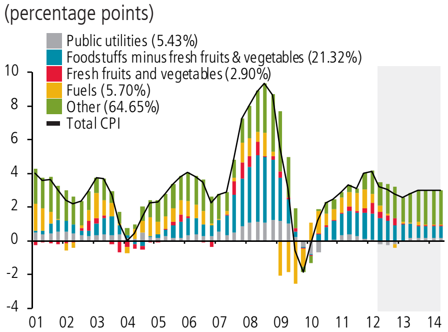
**FIGURE V.2**
CPI inflation forecast
(monthly change, percent)




(*) Gray area, as from second quarter of 2012, shows forecast.

Sources: Central Bank of Chile and National Statistics Bureau (INE).

**FIGURE V.3**
Contribution to annual CPI inflation (1) (2)
(percentage points)




(1) Gray area, as from second quarter of 2012, shows breakdown of forecast inflation in the baseline scenario.
(2) In parentheses, share in CPI basket.

Sources: Central Bank of Chile and National Statistics Bureau (INE).

respectively (US$3.7 and US$3.6 in March). For WTI crude oil, price forecasts are revised to US$92 and US$87 in 2012 and 2013, respectively (both somewhat above US$105 in March). The ToT will post a lower level in 2012 than in 2011, but similar to the March forecast. This is so because the declines in the prices of copper and other exportables, like wood pulp, are offset by the fall in the price of oil (figure V.1).

The lower price of commodities, the decline in headline inflation and the appreciation of the dollar in external markets mean that external inflation relevant to the Chilean economy (EPI) will be less than was forecast in March for this year and next.

In Chile, y-o-y growth in domestic demand and output in the first quarter exceeded March's forecasts. However, in quarter-to-quarter terms, there was a slowdown with respect to late 2011, with output growing at trend rates. Partial second-quarter data shows that the pace of expansion is steadily slowing. In the baseline scenario, output is foreseen to decelerate further during the second half because of the worsening external scenario. The economy's average growth during that period would be closer to 4%. At any rate, in the third quarter of this year there will be five business days less than in the same period of 2011, which will subtract around one percentage point off the quarter's y-o-y growth. Accordingly, the baseline scenario foresees that in 2012 GDP will grow between 4.0% and 5.0%, which is the same range forecast in March (table V.2). This growth in output will not drift substantially away from the trend, which the Board continues to estimate at 5% (Box V.1). Thus, output gaps will remain closed throughout the projection horizon.

On the domestic demand side, the baseline scenario assumes that private consumption, particularly of durables, will continue to slow its pace of expansion in the coming quarters. This, because of slower labor income growth, less expansionary financial conditions, the effect of increased external uncertainty and the fact that inventory levels are already high. Investment will continue to post good growth rates, although, as has been common in the past few quarters, with a stronger momentum from the inertial construction and infrastructure component, than from the more volatile machinery and equipment component. Actually, the latter is foreseen to grow annually in 2012 significantly less than in 2011, partly because of the increase in external uncertainty. Thus, a major part of investment growth will obey to the execution of mining investment projects. Accordingly, the investment-to-GDP ratio, measured in real terms, will reach 26.9% of GDP (26.2% in 2011).

The effect of the worsened external scenario will also be visible in inventories. After a substantial adjustment between the third and the fourth quarter of 2011, inventories recovered early in 2012. However, the baseline scenario estimates that in 2012 inventories as a percentage of GDP will vary less than they did in 2011, reflecting the inventory adjustments that enterprises will be carrying out because of the uncertainty coming from abroad. Overall, in 2012 domestic demand will grow less than in 2011, although it will outperform output growth to some extent. Discounting inventory change, domestic expenditure will grow somewhat more.

On the fiscal side, the baseline scenario assumes that the structural deficit will converge to 1% of GDP towards the end of the current Administration, as announced by the authority and in conformity with the Fiscal Responsibility Law.

The current account deficit is forecast to close 2012 at 3.1% of GDP, a little less than predicted in March. Despite the lower expected price for copper and weak external demand, the adjustment to domestic expenditure and the drop in oil prices are behind this smaller deficit. Measured at trend prices, in 2012 the current account would post a deficit of somewhat below 6% of GDP, not very different from the 2011 figure[1]/.

Inflation figures of the past few months have been lower than were foreseen in March. The difference comes from both lower energy prices and lower-than-expected core inflation figures, especially its goods component. Going forward, the trajectory of external fuel prices will mean that these will continue to subtract points off inflation. The baseline scenario foresees headline inflation oscillating around 3% over the next two years, and staying there in the second quarter of 2014, when the present projection horizon ends. Towards year's end, y-o-y CPI variation is estimated to be at 2.7%, less than foreseen in March (figures V.2 and V.3, and table V.3).

As working assumptions, projections assume that the RER, which today is within the range of values believed to be consistent with its long-term fundamentals, will remain fairly horizontal over the next two years. Also, that wages will be adjusted in line with productivity and the inflation target. As regards monetary policy, the baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable (figure 4).

## RISK SCENARIOS

The baseline scenario reflects the events that the Board believes to be the most likely to occur given the information at hand at the statistical closing of the *Report*. There are risks, however, which if materialized, could reshape—significantly, in some cases—the macroeconomic outlook and, thus, the course of monetary policy. On this occasion, after evaluating the alternative scenarios, the Board estimates that the risk balance is downward biased for output, and unbiased for inflation (figures V.5, V.6 and V.7).

The greater risk originates abroad, because of the situation in the Eurozone. This is very complex and the developments of recent months have revived the possibility of more extreme scenarios. Most importantly, economic and financial problems in the region could be worked out in a costly and disorderly manner, for example with Greece leaving the monetary union. Despite its small size within the Eurozone, such an outcome could inflict severe damage on the rest of the world if there is contagion to bigger European economies. The macroeconomic and financial situation of Spain continues to spur doubts, as reflected in the steady increase in its risk premiums. The lack of clarity about the capitalization plan announced for the Spanish banking industry, its difficulties to meet the fiscal targets given the gloomy growth outlook and its impact on its sovereign debt are still source of concern. Similarly, apprehensions have increased about other countries in the region, such as Italy, because of the bulk of its public debt and its slow growth. The coupling of risk premiums in Spain, Italy and France provides evidence of this risk.

[1]/ This estimate considers corrections to prices, not volumes. For 2012, prices of US$2.8 per pound of copper and US$80 per barrel of oil are projected.

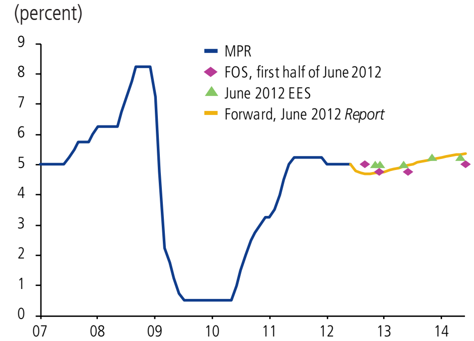
**TABLE V.3**
Inflation

| | 2010 | 2011 | 2012 (f) | 2013 (f) | 2014 (f) |
|---|---|---|---|---|---|
| | (annual change, percent) | | | | |
| Average CPI inflation | 1.4 | 3.3 | 3.3 | 2.8 | |
| December CPI inflation | 3.0 | 4.4 | 2.7 | 3.0 | |
| CPI inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIX inflation | 0.5 | 2.4 | 2.9 | 2.9 | |
| December CPIX inflation | 2.5 | 3.3 | 2.7 | 2.9 | |
| CPIX inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIX1 inflation | -0.7 | 1.3 | 2.8 | 3.0 | |
| December CPIX1 inflation | 0.1 | 2.5 | 3.2 | 2.9 | |
| CPIX1 inflation in around 2 years (1) | | | | | 3.0 |
| Average CPIEFE inflation | 0.5 | 1.3 | 2.8 | 3.0 | |
| December CPIEFE inflation | 1.5 | 2.4 | 3.2 | 3.0 | |
| Core CPIEFE inflation in around 2 years (1) | | | | | 3.0 |

(f) Forecast.
(1) Inflation forecast at the second quarter of 2014.
(2) The CPIEFE (CPI excluding food and energy) is the price index of the consumer basket excluding the prices of foodstuffs and energy. In most OECD economies this index is used as a core inflation measure.

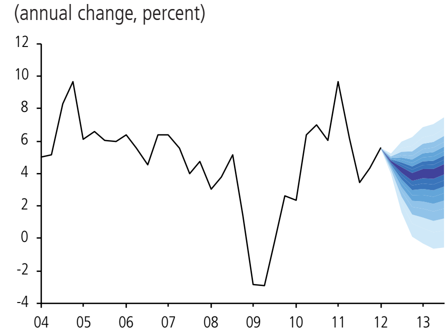
Source: Central Bank of Chile.

**FIGURE V.4**
MPR and expectations
(percent)




Source: Central Bank of Chile.

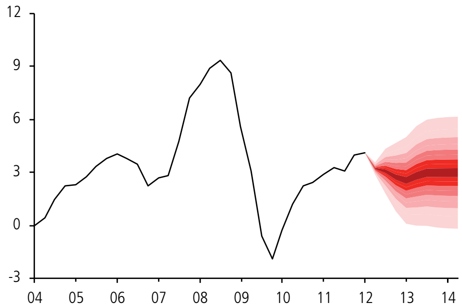
**FIGURE V.5**
Quarterly GDP growth scenarios (*)
(annual change, percent)




(*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the baseline scenario are included. These intervals summarize the risk on growth as assessed by the Board. The baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable.

Source: Central Bank of Chile.

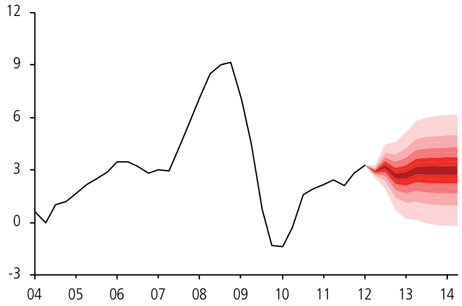
**FIGURE V.6**
CPI inflation forecast (*)
(annual change, percent)




(*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the baseline scenario are included. These intervals summarize the risk on future inflation as assessed by the Board. The baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable.

Source: Central Bank of Chile.

**FIGURE V.7**
CPIX inflation forecast (*)
(annual change, percent)




(*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the baseline scenario are included. These intervals summarize the risk on future inflation as assessed by the Board. The baseline scenario uses as a working assumption that, in the short term, the MPR will remain stable.

Source: Central Bank of Chile.

Also possible is a reversal of current tensions, for instance if there are agreements favoring compliance with the adjustment measures agreed, or new announcements of support by economic authorities in the zone that could buy time to advance in the necessary structural changes.

Other risks have to do with world growth prospects beyond the Eurozone. Doubts persist in the U.S. about how the transition to a sustainable medium- and long-term debt trajectory will proceed. Special attention is due to the possibility that the political difficulties to reach agreements on the fiscal front could trigger the automatic adjustments foreseen towards 2013, hurting its GDP growth. In the emerging world, a sharper and/or longer Chinese slowdown than foreseen in the baseline scenario cannot be ruled out, hindering growth in other economies due to its weight in the global economy, and affecting commodity prices significantly.

Domestically, as aforesaid, medium-term risks for inflation are still present. The growth rate for domestic demand and output has dropped, albeit not as fast as expected. Although the Board estimates that output gaps have not narrowed further, if output again takes up a more dynamic path, there can be pressures pushing inflation up and demanding a monetary policy response. By the same token, domestic demand has outgrown GDP in the last two years, thus widening the current account deficit. Households' saving rate is low compared with earlier years, while corporate savings have decreased in the past year and investment is in record-high levels. If domestic demand becomes more dynamic, it could amplify the current account deficit. This could be dangerous in a scenario of weak world growth, lower copper price and costlier external financing.

The complexity of today's scenario calls for prudent monetary policy making, and at the same time it requires being prepared to address significant risks. The international economy's situation is worrisome and a further worsening could have major effects in Chile. Domestically, some risks persist relating to inflation, and it is the Central Bank's task to be vigilant. The Board monitors the evolution of the external and internal macroeconomic scenario and its consequences on inflation closely, and it reaffirms its commitment to conduct monetary policy in a way such that projected inflation stands at 3% in the policy horizon.

# BOX V.1
## EFFECT OF THE NEW NATIONAL ACCOUNTS ON THE CALCULATION OF TREND GDP

Updating the methodology for calculating the National Accounts implied a revision of GDP levels and growth rates from 2003 on[2]. Accordingly, this box reviews the calculation of trend GDP that the Board uses as an assumption in the forecasts given in each *Monetary Policy Report*. This calculation serves to estimate the output gap used in the forecast models, in particular to assess the inflationary pressures facing the economy. It is important to bear in mind that the relation to short-term growth is not necessarily direct.

For practical purposes, the output gap that is relevant for inflationary pressures is measured using the output of the non-natural-resource sectors, usually termed *other sectors*. In 2012, these represented approximately 85% of total GDP, and they exclude mining, fishing, and electricity, gas and water (EGW).

Trend GDP for the other sectors is

$$\bar{Y}^R_t = \bar{Z}_t K_t^{1-\alpha} (\Gamma_t \cdot \overline{FT}_t \cdot (1 - \overline{ur}) \cdot \bar{h}_t \cdot \varphi)^{\alpha} \quad (1)$$

where $Y^R_t$ is other GDP, $Z_t$ is total factor productivity (TFP) of the other sectors, $K^R_t$ is the real capital stock of the other sectors, $\Gamma^t$ is an adjustment for labor quality, FTt is the labor force, ur is the unemployment rate, ht is average hours worked, $\varphi$ is the share of workers in the other sectors, and $\alpha$ is the share of other wages in other value added. An overbar indicates trend values of the respective variables.

Total trend GDP is measured as follows:

$$\bar{Y}_t = (\bar{Y}^R_t)^{\zeta_t} (\bar{Y}_t^{RRNN})^{1-\zeta_t} \quad (2)$$

where $\zeta_t$ is the share of other GDP in the total. Trend growth of the natural resources sector is calculated at around 2.7%; the historical average has been approximately 0%. This low growth of natural resource sectors is largely explained by a steady fall in ore grade, which is expected to be offset by greater investment in the sector (Box I.1).

Trend TFP of other sectors is measured as

$$Zt = \frac{Y^R_t}{(U_t \cdot K_t)^{1-\alpha} (\Gamma_t \cdot L^R_t \cdot h_t)^{1-\alpha}} \quad (3)$$

where $U_t$ is a measure of capital utilization, computed as the cyclical deviation of energy generation in the Central Interconnected System (HP filter with $\lambda$ = 1,600); $L^R_t$ is labor in other sectors adjusted for emergency jobs; and $h_t$ is average real hours worked, from INE. To calculate potential TFP, the series $\{Z_s\}^T_{s=1986:1}$, is filtered using an HP filter with $\lambda$ = 10,000. The differences of the filtered series are then computed, with a linear extrapolation from the last value to the fourth quarter of 2020, so that the growth rate in the last period is 1.5[3]. The growth rate is then filtered using an HP with $\lambda$ = 1,600, to obtain the growth rate of trend TFP: $g^z$[4].

[2] For more details, see Box III.1: The New National Accounts, *Monetary Policy Report,* March 2012. Guerrero and Pozo (2012) update the GDP and expenditures series for the period 1996-2003 using the 2008 Benchmark Compilation for the National Accounts.

[3] This value is obtained under the assumption of balanced growth in the long term and with long-term assumptions for the potential growth rate of other GDP of 5.4% and of quality-adjusted labor of 2.5%. The assumption on the long-term growth of TFP is similar to the average of the OECD countries.

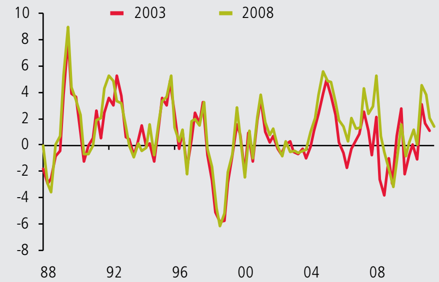
[4] The double filter is used in order to avoid biases in the last observations, which are generated with the usual filters.

The results of the exercise show that the calculation of real TFP growth with the new series is somewhat higher than with the previous National Accounts (figure V.8), but it is not substantially different from the assumption of convergence of the variable in the medium and long terms. For the same reason, the reestimation of TFP does not change the outlook on the future path of trend growth.

With regard to capital, the updating of the capital stock calculation similarly does not have a significant impact on trend GDP[5]/.

Thus, considering the new National Accounts data, the Board estimates that the economy's trend growth remains around 5%. The assessment that the output gap is tight also holds relative to March.

**FIGURE V.8**
Total factor productivity
(annual change, percent)




Source: Central Bank of Chile.

[5]/ Updated calculations of the capital stock from Henríquez (2008), using the 2008 Benchmark Compilation, are available online at http://www.bcentral.cl/estudios/estudios-economicos-estadisticos/pdf/ Actualizacion_SEEE63.pdf.

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# GLOSSARY

**Average interbank interest rate swap:** Derivatives contract between two parties, who carry out an exchange of flows at future dates, between a fixed rate established when the contract is written and a variable rate (fixed-for-floating swap). The variable rate corresponds to the average interest rate in the interbank clearing house (*cámara*), which in turn is derived from the average clearing house index.

**Commodity exporters:** Australia, Canada, and New Zealand.

**CPI without food and energy (CPIWFE):** CPI excluding food goods and products related to fuels and electric energy services, leaving 72% of the total CPI basket.

**CPIX:** Core consumer price index. CPI excluding fuels and fresh fruit and vegetables, leaving 91% of the total CPI basket.

**CPIX1:** CPIX excluding fresh meat and fish, regulated tariffs, indexed prices, and financial services, leaving 73% of the total CPI basket.

**Credit default swap (CDS):** A derivative instrument that provides insurance against the credit risk of sovereign or corporate debt. The premiums implicit in the cost of this hedge (the CDS spread) are commonly used as a measure of sovereign or corporate risk.

**Emerging Market Bond Index (EMBI):** The main measure of country risk, calculated by J.P. Morgan Chase as the difference between the interest rate on dollar-denominated bonds issued by the government and public companies in emerging economies, and the interest rate on U.S. Treasury bonds, which are considered risk free.

**EPI-5:** EPI using the price indexes of Canada, the Eurozone, Japan, the United Kingdom, and the United States.

**EPI:** External price index, calculated using the wholesale price index (WPI)—or the CPI if the WPI is not available—expressed in dollars, of the countries relevant to Chile (that is, the countries used for the calculation of the multilateral exchange rate, MER), weighted according to their share of Chilean trade, excluding oil and copper.

**GDP, natural resources:** Includes the following sectors: electricity, gas, and water (EGW); mining; and fishing.

**GDP, other services:** Includes the following sectors: financial and business services; residential property; personal services; and public administration.

**GDP, other:** Includes the following sectors: agriculture, livestock, and forestry; manufacturing; construction; retail; transport and communications; financial and business services; residential property; personal services; and public administration.

**Growth of trading partners:** The growth of Chile's main trading partners, weighted by their share in total exports over two moving years. The countries included are the destination for 93% of total exports, on average, for the 1990–2011 period.

**IREM:** Wage index. The average wage paid per hour, weighted by the number of regular hours worked.

**IREMX:** IREM excluding community, social, and personal services, electricity, gas, and water (EGW), and mining.

**Latin America:** Argentina, Bolivia, Brazil, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela.

**LCX:** Labor costs (LC) excluding community, social, and personal services, electricity, gas, and water (EGW), and mining

**LPI:** Local price index of the economies relevant to Chile, calculated using the WPI (or the CPI if the WPI is not available) expressed in the local currencies of the countries considered in the EPI, weighted according to their share of Chilean trade, excluding oil and copper.

**M1:** A measure of the money supply that includes currency in circulation, the value of checking accounts held by the nonfinancial private sector (net of clearing), non-checking demand deposits, and demand savings accounts.

**M2:** M1 plus time deposits, time savings deposits, mutual fund shares with investments in debt instruments with a maturity of up to one year, and deposits with savings and loan cooperatives, less the time deposits of the aforementioned mutual funds and savings and loan cooperatives.

**M3:** M2 pus foreign currency deposits, Central Bank of Chile notes, Treasury bonds, mortgage bonds, commercial papers, corporate bonds, other mutual fund shares, pension fund shares in voluntary savings (AFPs), less mutual fund and pension fund investments in the assets that make up M3.

**MER-5:** MER using only the currencies of Canada, the Eurozone, Japan, the United Kingdom, and the United States.

**MER-X:** MER excluding the U.S. dollar.

**MER:** Multilateral exchange rate. A measure of the nominal value of the peso against a broad basket of currencies, weighted as for the RER. For 2012, the following countries are included: Argentina, Belgium, Brazil, Canada, China, Colombia, France, Germany, Italy, Japan, Mexico, Netherlands, Paraguay, Peru, South Korea, Spain, Switzerland, Thailand, United Kingdom, and United States.

**National income:** Real available gross national income, published in the national accounts.

**Nominal TAB rate:** Reference interest rate (*tasa activa bancaria*) calculated by the SBIF. The weighted average deposit interest rate on indexed operations at 90, 180 and 360 days, which is calculated based on the maximum deposit rate less bank reserve costs.

**Parity price of gasoline:** Reference cost of gasoline imports, calculated on the basis of quotes for similar conditions to Chile, in relevant markets (America, Europe, and Asia). Includes maritime shipping, insurance, duties, and other costs.

**Prime deposit rate:** Interest rate that financial institutions offer their best clients on short- and medium-term deposits.

**Prime-swap spread:** The difference between the prime deposit rate and the average interbank swap rate. Like equivalent measures in other markets (such as the LIBOR-OIS spread), it is used as a benchmark for analyzing funding liquidity conditions in the banking sector.

**RER:** Real exchange rate. A measure of the real value of the peso against a basket of currencies, which includes the same countries used to calculate the MER.

**Rest of Asia:** Hong Kong, Indonesia, Malaysia, Philippines, South Korea, Singapore, Thailand, and Taiwan.

**Swap:** Derivatives contract between two parties, who carry out an exchange of flows at future dates. One of the most common swap contracts is the interest rate swap, in which the parties exchange predetermined flows at a fixed rate, set when the contract is written, for predetermined flows at a variable rate.

**World growth at market exchange rate:** Each country is weighted according to its GDP in dollars, published in the IMF's *World Economic Outlook* (WEO, April 2012). The sample of countries used in the calculation represents around 88% of world GDP. For the remaining 12%, average growth is estimated at 1.7% for the period 2011–2013.

**World growth:** Regional growth weighted by its share in world GDP at PPP, published in the IMF's *World Economic Outlook* (WEO, April 2012). World growth projections for 2011–2013 are calculated from a sample of countries that represent about 85% of world GDP. For the remaining 15%, average growth is estimated at 3.0% for the period 2011–2013.

# ABBREVIATIONS

**BCP:** Central Bank bonds in pesos

**BCU:** Central Bank bonds in UFs

**CPIG:** Consumer price index for goods

**CPINT:** Consumer price index for non-tradables

**CPIS:** Consumer price index for services

**CPIT:** Consumer price index for tradables

**EES:** Economic Expectations Survey

**FBS:** Financial Brokers Survey

**GFCF:** Gross fixed capital formation

**IVUM:** Unit price of imports index

**MPR:** Monetary policy rate

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