MONETARY POLICY REPORT

March 2015

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

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*/ The statistical cutoff date of the *Monetary Policy Report* was 25 March 2015.

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 Report* 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 Basic Constitutional Act, 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 26 March 2015 for presentation to the Senate on 30 March 2015.

The Board

SUMMARY

In recent months, annual inflation has exceeded forecasts, so it persists above 4%. The baseline scenario of this *Report* also considers a slower return to the target range than was forecast in December. The depreciation of the peso continues to be the main factor behind the price dynamic, which, coupled with indexation and a tighter than expected labor market drove the core measure CPIEFE from 4.3% to 4.7% annually between November and February. However, the lower oil price in the international market and its pass-through to domestic prices helped reduce annual growth in CPI inflation, which went from 5.5% in November to 4.4% in February.

The latest inflation figures have taken the market by surprise, as it had taken a markedly downward position regarding the evolution of prices, even below the December *Report's* forecast. The market has revised its inflation expectation for late 2015 to somewhat above 3%, the same as inflation one year ahead. Expectations two years ahead remain at 3%. Output and expenditure, meanwhile, have evolved as foreseen in December. Consistently with this scenario and with the Board's communication, market expectations for the monetary policy rate (MPR) have eliminated further cuts and in some cases point at a cycle of increases beginning by the end of 2015.

The external environment and related risks are still defined, to a large extent, by the impending monetary normalization process in the United States. The changes in perspectives about when this process will begin and how fast it will unfold have had significant effects on global financial markets. By contrast, in the Eurozone and other developed and emerging economies, monetary policy has become more expansionary, largely in response to lower headline inflation and reduced medium-term prospects. This picture of lower inflation contrasts with the situation in Chile and Latin America in general.

Increased relative strength of the U.S. economy has triggered a significant appreciation of the dollar. In the past few weeks this trend has shown important swings, associated with information on the U.S. conjuncture and the Federal Reserve (Fed)'s communication, which has reflected in big movements in many currencies. The Chilean peso, for one, traded at $640 to the dollar, to later approach $620 at the statistical closing of this *Report.*

The peso depreciation cycle that began in 2013 stands out as the longest in a decade, and has occurred in a context of gradual economic slowdown rather than in an abrupt downturn. This is one of the main factors behind inflation remaining above 4% for so long. The data indicates that the pass-through

coefficient of the exchange rate to inflation has been in line with historical patterns, although in the upper part of available estimates.

Meanwhile, the peso depreciation has had different timing than most emerging or commodity exporting economies. The earlier adjustment in Chile, in terms of both private expenditure and monetary policy reaction, meant that for most of 2014 the Chilean currency was one of the most depreciated in the world. Later on, as the rest of the emerging economies entered a sharper adjustment cycle, those differences narrowed and the peso even appreciated in multilateral terms. Actually, as of March, the real exchange rate (RER) is somewhat above its average for the past two decades.

Domestic activity has evolved in line with December's projections, although 2014 ended with a slightly higher growth rate than projected then: 1.9%. Revisions to figures published earlier and fourth-quarter indicators of somewhat stronger expansion explain this result. Partial first-quarter data continues to show moderate annual growth in output, but certainly higher than it did in mid-2014.

On the demand side, no major developments are observed with respect to the end of 2014. Discounting specific factors, consumption and investment continue to show weak performance. Durable consumption and investment in machinery and equipment continue to post low or negative annual increases, and their levels, although they ceased to fall, show no clear signs of a recovery. However, the stronger boost coming from fiscal spending is worth noting, particularly in public investment, and the positive effect of the peso depreciation on the productive performance of some tradable sectors.

The labor market continues to show greater strength than previously foreseen. The unemployment rate, despite some marginal increases, is still low. Even though this seems to conflict with the state of the business cycle, there are some structural factors that might explain why unemployment rates are below their historic averages, such as changes in the demographic composition of the labor force. Annual growth in salaried employment rose again in the past few months, although job creation in the most cycle-sensitive sectors has remained low. Nominal wages continue to grow at a strong pace, partly because of their widespread indexation to past inflation.

Our projections in the baseline scenario are that GDP growth in 2015 will outperform that of 2014, reaching a figure between 2.5% to 3.5% annually, the very same range depicted in the December *Report.* Thus, the economy will continue to grow below its estimated medium-term growth, which the Board places between 4% and 4.5%. This projection also assumes that in the first half of the year the economy will grow near the average of the last few months, with a recovery process that will become more notorious towards the end of 2015.

This projection assumes that our trading partners' growth in 2015 and 2016 will be higher than in previous years. The terms of trade will improve, aided by a fall in oil prices that will more than offset the copper price adjustment. In the baseline scenario, the copper price will average US$2.8 per pound in 2015 and

ECONOMIC GROWTH AND CURRENT ACCOUNT

	2013	2014	2015 (f)
	(annual change. percent)		
GDP	4.2	1.9	2.5 - 3.5
National income	3.6	1.9	3.5
Domestic demand	3.7	-0.6	2.5
Domestic demand (w/o inventory change)	4.6	0.5	2.2
Gross fixed capital formation	2.1	-6.1	1.2
Total consumption	5.5	2.5	2.5
Goods and services exports	3.4	0.7	3.4
Goods and services imports	1.7	-7.0	2.4
Current account (% of GDP)	-3.7	-1.2	-0.3
Gross national saving (% of GDP)	20.6	20.3	21.5
Gross national investment (% of GDP)	24.3	21.4	21.8
GFCF (% of nominal GDP)	23.8	22.0	21.5
GFCF (% of real GDP)	26.1	24.0	23.7
	(US$ million)		
Current account	-10,125	-2,995	-650
Trade balance	1,820	7,767	9,700
Exports	76,477	75,675	70,350
Imports	-74,657	-67,908	-60,650
Services	-3,402	-3,757	-4,500
Rent	-10,730	-8,857	-7,700
Current transfers	2,187	1,851	1,850

(f) Forecast.

Source: Central Bank of Chile.

2016, while the Brent and WTI crude oil will be at US$62 and US$55 per barrel over the same period.

It is also assumed that the exchange rate depreciation will further boost the tradable sectors, and that the lower fuel prices will help reduce business costs and improve household income. Monetary policy has added substantial impulse in recent quarters and is on a significantly expansionary phase. Fiscal policy will also contribute to growth in expenditure, particularly for investment.

These projections rely critically on the assumption that business and consumer expectations pick up. According to incoming data, although indicators are still in negative territory, some recovery can be seen. Information gathered in the *Business Perceptions Report* points at expectations of limited performance of businesses in 2015, with investment plans involving primarily capital replenishment. Furthermore, the CBC survey again revised investment plans down.

As for inflation, in the baseline scenario the CPI continues to converge to the target, but remains above 4% annually still for some months, to approach 3% over the course of 2016. Expectations for the CPIEFE are that it will come close to 3% during 2016 and hover around that figure until the end of the projection horizon.

This trajectory considers that the pass-through of the peso depreciation of recent months to prices will be in the upper part of historic patterns; that real wages will be adjusted in line with productivity; and that output gaps will remain over the projection horizon. For the RER, the methodological assumption used is that it will remain near its current level, since it is now within the range believed to be consistent with the state of the business cycle and its long-term fundamentals. As for the MPR, market expectations show differences in its 2015 evolution. Survey respondents think that it will be held at 3% throughout the whole year, to be raised during 2016. Asset prices, however, point at it beginning to rise in the second quarter of 2015. As a working assumption, it is considered that the MPR will follow a path running slightly above the one implicit in the surveys.

The baseline scenario reflects those events that are believed to be the most likely to occur with the information at hand at the closing of this *Report*. There are risks, however, which, if materialized, may reshape the macroeconomic outlook and, therefore, may alter the course of monetary policy.

On the external front, there are several elements that might trigger new episodes of volatility in world financial markets, with considerable effects on credit costs, the exchange rate, and the short-term inflation outlook. On one hand, any important surprise regarding the timing or speed with which the Fed will raise the policy rate may cause significant volatility in global financial markets, pushing up the interest rates and further appreciating the dollar. This couples with an abrupt portfolio re-composition, given the low level of long-term rates and high stock prices in the United States. On the other hand, there is the situation that some emerging economies are experiencing, whose macroeconomic scenarios could complicate more if the prices of their

INTERNATIONAL BASELINE SCENARIO ASSUMPTIONS

	Avg. 00 - 07	Avg. 10 - 12	2014	2015 (f)	2016 (f)
	(annual change, percent)				
Terms of trade	8.2	4.2	-1.4	1.4	-0.2
Trading partners GDP (*)	3.6	4.6	3.3	3.4	3.8
World GDP at PPP (*)	4.2	4.0	3.3	3.5	3.8
World GDP at market exchange rate (*)	3.3	3.2	2.7	2.9	3.3
Developed economies' GDP at PPP	2.6	1.8	1.7	2.2	2.5
Emerging economies ' GDP at PPP	7.4	5.9	4.6	4.5	5.0
External prices (in US*)	4.6	5.2	-0.9	-6.0	1.6
			(levels)		
LME copper price (UScent/lb)	154	368	311	275	285
WTI oil price (US$/barrel)	44	89	93	51	58
Brent oil price (US$/barrel)	42	101	99	58	65
Gasoline parity price (US$/m³) (*)	367	742	731	503	521
Libor US$ (nominal, 90 days)	3.6	0.4	0.2	0.6	1.9

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

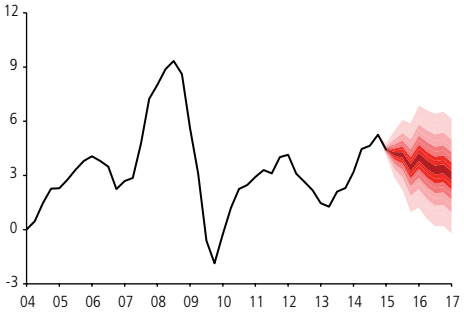
Source: Central Bank of Chile.

INFLATION

	2013	2014	2015 (f)	2016 (f)	2017(f)
	(annual change, percent)				
Average CPI inflation	1.8	4.4	4.0	3.6	
December CPI inflation	3.0	4.6	3.6	3.2	
CPI inflation in around 2 years (*)					3.0
Average CPIEFE inflation	1.2	3.6	4.2	3.3	
December CPIEFE inflation	2.1	4.3	3.4	3.0	
CPIEFE inflation in around 2 years (*)					2.8

(f) Forescast.
(*) Corresponds to the projected inflation for the first quarter of 2017.
Source: Central Bank of Chile.

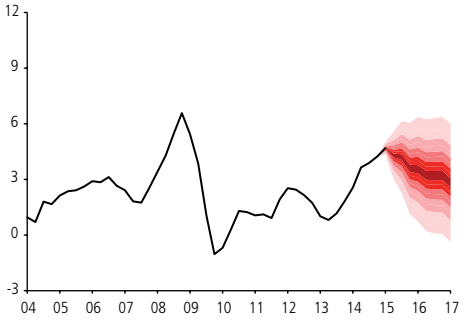
CPI INFLATION FORECAST (*)
(annual change, percent)



(*) 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 risks on inflation as assessed by the Board. The baseline scenario uses as a working assumption that the policy rate will follow a path running slightly above the one implicit in the surveys.

Source: Central Bank of Chile.

CPIEFE 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 risks on core inflation as assessed by the Board. The baseline scenario uses as a working assumption that the policy rate will follow a path running slightly above the one implicit in the surveys.

Source: Central Bank of Chile.

commodities remain low for some time. In Latin America this risk is more severe, as it may be compounded with complex economic and political factors. In addition, high fiscal and current account deficits persist, rendering the necessary adjustments more difficult and costly. This is not the case in Chile, whose political framework has allowed for a timely macroeconomic adjustment in the last year and a half.

One must also consider the geopolitical conflicts in the Middle East and parts of Europe. In the latter, Greece stands out with its progress in reaching agreements to finance its debt. It may also be that the recovery process becomes stronger in the Eurozone, giving a stronger boost to the global economy and Chile. Similarly, it may be that the positive effect of lower oil prices on the global economy exceeds forecasts and/or that oil prices remain low. On the other hand, there remains the risk of slower growth in China and its implications on the price of copper. The state of the Chinese financial system and real estate sector are the main focus of attention.

Domestically, the main risk has to do with the evolution of inflation, particularly because of the sustained exchange rate depreciation and its accumulated effect on costs. This, in a context where margins seem to have narrowed due to the high annual growth in nominal wages and because in some sectors the pass-through from the fuel price drop has been limited. Accordingly, the materialization of an external risk scenario that generates another significant depreciation of the peso may have strong effects on the short-term inflation outlook, whose magnitude will depend on the economy's phase of the cycle.

Furthermore, it is also possible that despite the better performance of domestic output and expenditure compared to previous quarters, private expectations do not improve enough to stimulate an increase in spending, especially in investment. Conversely, a scenario where expectations recover more strongly than projected would enable a faster economic recovery. The same would happen if the increase in national income has greater effects on expenditure, in a context of strong external accounts.

After evaluating all these risks, the Board estimates that, although domestic risks have moderated, the risk balance fot output is still downward biased. Whereas for inflation, it is unbiased.

In recent months, inflation has exceeded expectations, and in the baseline scenario of this *Report* it will remain above 4% still for some time. Domestic activity has picked up, although the prospects for growth are still bounded because of weak domestic private expenditure. Monetary and fiscal policies have cooperated to lay the foundation of a more consolidated recovery. Private expectations have remained in pessimistic territory, but with a marginal recovery. The Board has kept the monetary policy rate at 3% and has stated that any future changes to it will depend on the evolution of internal and external macroeconomic conditions, and their implications for the inflation outlook. At the same time, it has reaffirmed its commitment to conduct monetary policy with flexibility so that projected inflation stands at 3% over the policy horizon.

MONETARY POLICY DECISIONS IN THE LAST THREE MONTHS

BACKGROUND: DECEMBER 2014 *MONETARY POLICY REPORT* AND MEETING

In the last few months of 2014, inflation increased more than projected, in a context of lower-than-expected output growth. The high inflation, which brought annual CPI variation to 5.7% in October, largely stemmed from the sharp nominal depreciation of the peso. Toward the end of the year, there were also some isolated events that temporarily contributed upward pressure. Domestic output and demand continued to ease, and the growth outlook for 2015 had been revised downward, despite the strong monetary and fiscal stimulus and even stronger impetus from overseas.

In this context, the Board had reduced the monetary policy rate (MPR) to 3% and continued to signal that future adjustments would depend on the evolution of internal and external macroeconomic conditions and their implications for the inflation outlook.

The baseline scenario in the December *Monetary Policy Report* considered that inflation would end the year somewhat below 5% and would descend to around 3% by mid-2015. Expectations pointed to a faster reduction in inflation in 2015, which would then remain around 3% in the two-year horizon. The projection in the *Monetary Policy Report* was based on assumptions that the pass-through of the recent peso depreciation to prices would follow historical patterns; that wages would adjust in line with productivity; and that the output gap would be stable over the forecast horizon. In this context, the Board estimated that output growth would be in the range of 2.5 to 3.5% in 2015, which was higher than the 2014 estimate, but down from the last *Report* due to lower actual data, a less dynamic international scenario and a forecast of tighter domestic spending. It was thought that the economy's fast, strong adjustment in 2014, the financial situation of economic agents (which was somewhat tighter, but still perceived as adequate), the increase in public investment and the presence of a strong monetary stimulus together, provided a favorable environment for a dynamic economic recovery, to the extent that consumer and business confidence improved in the coming months.

For the world economy, the baseline scenario considered a somewhat less dynamic outlook, but growth was expected to be higher in 2015 and 2016 than in 2014, with favorable external conditions.

The baseline scenario reflected the events with the highest probability of occurrence based on the available information as of the cutoff date of that *Monetary Policy Report*. However, there were risk scenarios that could, if they materialized, change the macroeconomic environment and, therefore, the course of monetary policy. After evaluating the alternative scenarios, the Board considered that the risk for inflation was balanced, while the risk for output was skewed downward.

Internationally, the risks described in previous *Reports* remained current. One key source of risk involved when and how fast the U.S. Federal Reserve would begin to increase its benchmark rate and how that would affect the price of financial assets. The risk of increased market volatility had risen as a result of the discrepancy between private expectations and the Federal Reserve's announcements, as well as the divergence of monetary policy in the main developed economies. There were also risks stemming from the weak performance of the Chinese economy, financial system and real estate sector, and the possibility of a sharper slowdown in the Eurozone.

Domestically, a first risk was related to the performance of output and, especially, domestic demand, whose projected recovery had been repeatedly pushed back and revised downward. It was estimated that if the slow growth of spending and output stretched out much longer, it would translate into a more enduring output gap and lower inflationary pressures. A second risk had to do with the possibility that the output gap was smaller than estimated. If so, it would contribute less than projected to slowing down inflation. Low unemployment and high nominal wage growth would intensify that effect.

Given these trends, the Research Division presented only one relevant option at the December Meeting: holding the MPR at 3%. This reflected the need to continue providing the economy with a strong monetary stimulus, which was consistent with

the convergence of inflation to the desired levels within the usual forecast horizon. The alternative of relaxing the monetary stimulus was off the table, based on the persistent high inflation rate in the economy, the recent depreciation of the peso and the evolution of the labor market. In the other direction, there was no evidence that the economy needed an additional monetary stimulus, so the option of additional cuts was also ruled out. The Board unanimously agreed to hold the MPR at 3%.

JANUARY AND FEBRUARY MEETINGS

In January, most of the news was on the international economy. Commodity prices continued to fall, especially oil. Events in Russia and Greece had had a negative effect on financial conditions for emerging economies, whose currencies had depreciated against the dollar. Long-term interest rates had fallen in the developed economies, which helped mitigate the higher sovereign spreads but also increased the risks associated with a sharp reversal in this variable. The lower fuel prices had generated lower inflation and lower inflation expectations at world level, which, together with the increasingly probable implementation of a quantitative easing program in the Eurozone, had contributed to further strengthening the dollar. Given these trends, there was a high probability of increased financial volatility in the short term, as well as new currency depreciations for emerging economies. Nevertheless, recent data suggested that world growth forecasts presented in the *Monetary Policy Report* continued to hold.

Domestically, output had developed in line with projections, in that annual growth rates were low at the end of 2014 but higher than in previous quarters. The stimulus associated with the expansionary monetary policy of recent months seemed adequate, and it most certainly had contributed to achieving a more gradual adjustment process. The labor market had been unexpectedly dynamic, which seemed to at least partially contradict the output data. However, most of the jobs created were self-employment and informal positions without a written contract. In addition, the growth rate of real wages was declining, although the growth of nominal wages had accelerated.

As a result of the sharp drop in fuel prices, CPI inflation was somewhat lower than projected in December, and the inflation forecast was revised downward for year-end 2015. Core inflation excluding food and energy (CPIEFE), which is more related to medium-term inflation trends, had been more dynamic than expected, due in part to the effects of the sharp peso depreciation and in part to the variable's inherent inertia. Annual inflation had adjusted by more than a percentage point in just a few months, largely thanks to the evolution of oil prices.

Based on these trends, the Research Division presented one option: holding the MPR at 3%. The economic climate made it very difficult to forecast inflation and other macroeconomic variables, due to the counteracting effects of low output and the exchange rate trend on inflation; the degree of uncertainty regarding the output gap: the possibility of sudden changes in international financial conditions; and the surprises in the evolution of international fuel and other commodity prices. Moreover, there were no signs that changes would need to be introduced to the MPR path in the short term. The Board thus decided to hold the MPR at 3%.

In February, the international scenario had not changed significantly. Low inflation and growth had led to the start of the quantitative easing program in the Eurozone, and other economies had also decided to expand their monetary stimulus. One exception was the United States, where output and inflation conditions pointed to the approach of a gradual increase in the monetary policy rate. Most currencies had depreciated against the dollar, and despite the worsening of certain geopolitical events, both the financial markets and output had been relatively stable. The oil price had risen since the last Monetary Policy Meeting, but it remained low from a long-term perspective, and all indications were that it would remain around that level for some time.

Domestically, inflation had recorded an upward surprise in January, which was somewhat higher than internal estimates and substantially above market expectations. The CPIEFE was also higher than expected, with a significant increase relative to the estimate in the last *Monetary Policy Report*. This was believed to mainly reflect the exchange rate trend and its greater impact under a potential scenario of a smaller output gap, as suggested by the evolution of the labor market. Although the CPIEFE trend would slow the convergence of total inflation to the target, conditions were consistent with convergence to 3% toward the end of 2015.

Given this climate of higher inflation, in which output had not diverged from the scenario described in the December *Report*, the option of introducing additional MPR cuts did not seem warranted. At the same time, the deviation of inflation was not expected to affect convergence to the target, and the medium-term risks in the output scenario mostly remained low, so the option of increasing the MPR was similarly rejected. Therefore, in line with the discussion at the January meeting and in the December *Report*, the Research Division again proposed a single option: holding the MPR at 3%. The Board decided to hold the MPR at 3%.

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 and the main risks.

The international scenario continues to be determined primarily by the imminent adjustment of the U.S. Federal Reserve's benchmark rate. Changes in the outlook for when the process will start and how it will unfold have affected international financial conditions and impose a degree of uncertainty on their future development. The dollar has continued to appreciate since the last *Monetary Policy Report*, upheld by the solidification of the relative strength of the United States at the global level. World growth forecasts continue to point to a recovery in 2015-2016, although the estimates are more moderate than in December (table I.1).

Commodity prices have fallen, in general, since the last *Report* (figure I.1). Over and above the supply and demand conditions in each market, the appreciation of the dollar has been a common factor. The strength of the dollar in the coming months, on the eve of the initiation of rate hikes in the United States, will contribute to keeping these prices low in the short term. The copper price fluctuated but generally followed a downward trend, dropping just under 9% since December to trade at around US$2.80 per pound on the cutoff date for this *Report*. Going forward, the price fundamentals are mixed. On one hand, the growth outlook for China has eased, and the accumulation of inventories on the exchange is high. On the other, the balance is projected to be tight in this market. In the baseline scenario, the copper price is expected to average US$2.80 per pound in 2015 and 2016.

Oil remains low from a long-term perspective, although prices have fluctuated somewhat. In late January, the WTI price hit US$45 per barrel—the lowest level of the last six years. There were repeated positive surprises in U.S. inventories, given that production has remained dynamic despite the closing of oil platforms, which resulted in an accumulated price drop of 30% since December. The baseline scenario reduces the price forecast for 2015-2016. In contrast, gasoline rose nearly 4% since December, mainly due to problems in some refineries in the United States.

In terms of output, the United States continued to post a favorable performance. However, the most recent data have been slightly less positive than expected, suggesting that the economy could be less dynamic in the first quarter of this year. Consumer spending continues to be the main driver, supported by improvements in the labor market, household disposable income—which has

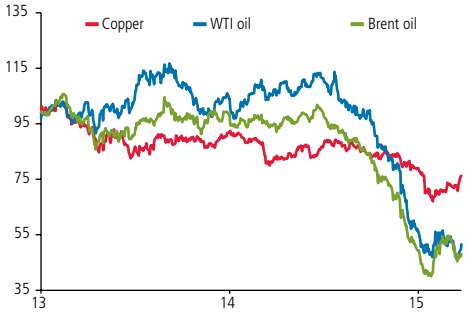
TABLE I.1
World growth (*)
(annual change, percent)

	Avg. 90-99	Avg. 00-07	2012 (e)	2013 (e)	2014 (f)	2015 (f)	2016 (f)
World at PPP	3.1	4.2	3.0	3.1	3.3	3.5	3.8
World at market FX rate	2.7	3.3	2.5	2.4	2.7	2.9	3.3
Trading partners	3.1	3.6	3.4	3.5	3.3	3.4	3.8
United States	3.2	2.7	2.3	2.2	2.4	3.0	3.0
Eurozone	1.6	2.2	-0.7	-0.4	0.9	1.5	1.9
Japan	1.5	1.7	1.7	1.6	0.0	1.1	1.5
China	10.0	10.5	7.7	7.7	7.4	7.0	6.7
India	5.8	7.1	4.7	5.0	7.0	7.2	7.3
Rest of Asia	5.6	5.1	3.8	3.9	3.6	4.2	4.6
Latin America (excl. Chile)	2.8	3.5	2.7	2.3	0.7	0.8	2.1
Commodity exporters	2.7	3.1	2.5	2.2	2.6	2.4	2.6

(e) Estimate.
(f) Forecast.
(*) See glossary for definitions.

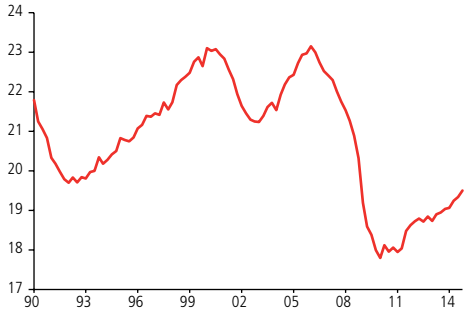
Sources: Central Bank of Chile, based on a sample of investment banks, Consensus Forecasts, International Monetary Fund and the statistics offices of each country.

FIGURE I.1
Commodities
(fixed-base index: January 2013 = 100)



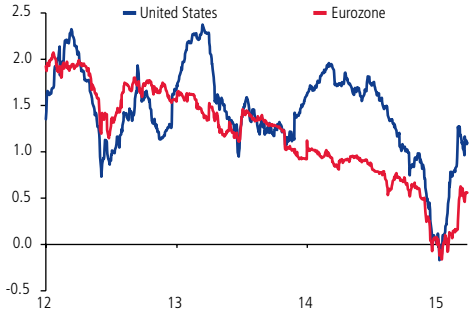
Source: Bloomberg.

FIGURE I.2
Gross fixed capital formation in the United States
(percent of GDP)



Source: Organization for Economic Cooperation and Development.

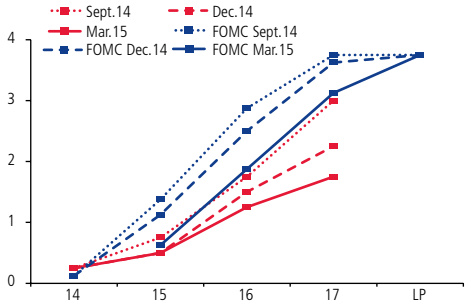
FIGURE I.3
Inflation expectations two years ahead (*)
(annual change, percent)



(*) For the United States, breakeven inflation; for the Eurozone, expectations derived from the swap curve.

Source: Bloomberg.

FIGURE I.4
Expectations for the Fed funds rate (*)
(percent)



(*) Red lines: expectations measured by interest rate futures; blue lines: forecast by the the Federal Open Market Committee (FOMC) at the indicated meetings.

Sources: Bloomberg and U.S. Federal Reserve.

also promoted saving—and consumer confidence. In February, unemployment declined to 5.5%, and job creation remained dynamic. These trends, combined with low mortgage rates, have favored the real estate market.

Investment has been more moderate. Gross fixed capital formation has not exceeded 20% of GDP in six years, despite historically low interest rates and the strong monetary stimulus in this economy in recent years (figure I.2). Foreign trade worsened, due to the strong dollar and tight external demand.

With regard to inflation, annual CPI inflation was zero in the United States in February. Market expectations have risen in light of the favorable economic data, in particular in the labor market (figure I.3). The U.S. Federal Reserve (the Fed) is getting close to starting to normalize its benchmark rate, and most economic agents expect the process to begin in the second half of this year. The press release from the Fed's last meeting contributed to reducing the difference between the Fed and the market in terms of the speed of the adjustment (figure I.4).

Despite this recent alignment, the divergence in expectations for the speed of rate normalization could trigger sharp corrections in the financial markets. In particular, a faster normalization could put upward pressure on short- and medium-term yields. The impact on long-term rates, which are currently at historical lows worldwide, is less certain. It is debatable how much of this low level stems from term spread compression and how much from a structural factor tied to a lower long-term level of these rates. Regardless, a significant increase in long-term rates in the United States would clearly affect the cost of financing for the rest of the world's economies, especially emerging economies, and cause an even greater appreciation of the dollar than already recorded.

In other developed economies, monetary policy has become more expansionary in reaction to the lower inflation scenario (table I.2). The European Central Bank (ECB) launched a quantitative easing plan, which exceeded expectations. The plan includes the purchase of sovereign bonds starting in March and continuing for 18 months or until inflation returns to a path in line with the annual target of 2%. The announcement of the program provided a boost to the inflation outlook in the Eurozone (figure I.3), although inflation rates were still negative in February. The main concern centers on core inflation, which is at historical lows. Surprise rate cuts were also made in Canada, Denmark and Switzerland—which also eliminated its minimum exchange rate.

Output has been more stable in the Eurozone since the late 2014. Annualized quarter-on-quarter growth was 0.9% in the fourth quarter (0.7% in the third), led by Germany (annualized quarter-on-quarter growth of 2.8% in the fourth quarter; 0.3% in the third). In much of the region, private consumption and the external sector were the main drivers of growth, propped up by lower energy costs and the depreciation of the euro, respectively. Preliminary data for the first quarter indicate that Germany will continue to lead the bloc. As of January, industrial production and retail sales increased in annual terms, the latter boosted by improvements in consumer expectations and the labor market. Business confidence (IFO) has risen steadily since late 2014.

In Spain, output continued to strengthen, increasing 1.4% in 2014 after three years of declining. Domestic demand was more dynamic in the fourth quarter of 2014, in both consumption and investment, especially equipment. In contrast, a large share of the disappointing performance of Italy and France in the period can be explained by fixed investment.

The more favorable recent data for the Eurozone raised the growth forecast for the region. The region's economic performance is subject to some risks, however, given the political climate. In Greece, for example, the new government's promises to put an end to the austerity policies, which were a condition of access to financial rescue programs, has opened the possibility of default and exit from the bloc. Although the Greek authorities relaxed their stance and agreed to extend the rescue plan, fears about the country's lack of liquidity have intensified in recent weeks.

Japan maintained its unconventional stimulus plan, in line with the economy's weak performance. Annualized quarter-on-quarter growth was 1.5% in the fourth quarter (–2.3% in the third), which suggests that domestic demand is still feeling the effects of the VAT increase last April. Private investment contracted again, in the midst of declining business expectations at the margin, especially in services, where expectations returned to negative territory. Net exports were among the main contributors to growth, held up by the depreciation of the yen.

The growth forecast for the emerging world is lower than in the last *Report*, largely due to the impact of lower commodity prices. This is especially visible in Latin America, where the commodity boom facilitated the formation of significant fiscal imbalances in some economies (box I.1). In Brazil, for example, the authorities are applying a range of adjustments to improve public finances. These measures have lowered the growth outlook, as have the drought and the possibility of electricity rationing, the investigations into corruption at Petrobras and the tighter monetary policy. Market expectations currently predict that Brazil will contract 0.7% in 2015, which is a primary factor in regional forecasts (figure I.5).

In Mexico, the government announced fiscal spending cuts in response to lower tax revenues stemming from the drop in the crude oil price. In Peru, a countercyclical fiscal policy has helped smooth the cycle, but there are still risks stemming from the high current account deficit.

Despite the weak performance in Latin America, the high inflation in the bloc and concerns about the effects of the coming rate hikes in the United States have limited the space for countercyclical monetary policy adjustments. The main economies exhibit a contractionary bias. Brazil raised its policy rate, and Mexico is expected to apply increases in the future to contain its currency depreciation, after already implementing a foreign exchange intervention. In Peru, in contrast, the authorities have reduced the policy rate, among other measures, and have continued to intervene in the foreign exchange market.

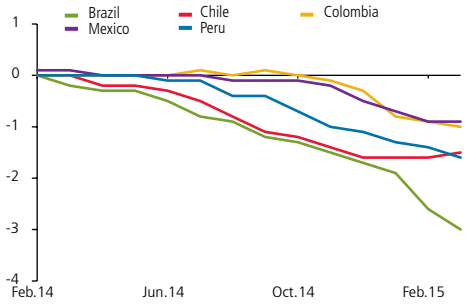
In the rest of the emerging world, the inflation scenario has been the opposite. Thus, there have been so more expansionary monetary policy measures. China implemented a surprising reduction in its benchmark rate in March, among

TABLE I.2
MPR in selected economies
(basis points; percent)

	Period change		
	In 2014	In 2015	Level
United States	0	0	0.25
Eurozone	-20	0	0.05
Canada	0	-25	0.75
United Kingdom	0	0	0.50
Sweden	-75	-25	-0.25
Norway	-25	0	1.25
Australia	0	-25	2.25
New Zealand	100	0	3.50
China	-40	-25	5.35
India	25	-50	7.50
South Korea	-50	-25	1.75
Indonesia	25	-25	7.50
Malaysia	25	0	3.25
Thailand	-25	-25	1.75
Russia	1150	-300	14.00
Hungary	-90	-15	1.95
Czech Republic	0	0	0.05
Poland	-50	-50	1.50
Israel	-75	-15	0.10
Turkey	-375	-75	7.50
Brazil	175	100	12.75
Chile	-150	0	3.00
Mexico	-50	0	3.00
Colombia	125	0	4.50
Peru	-50	-25	3.25

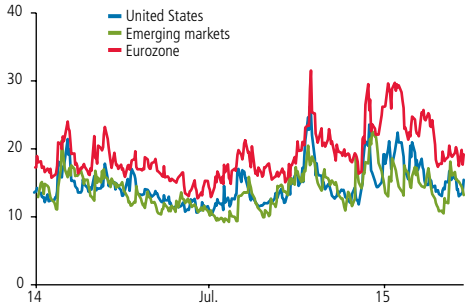
Source: Bloomberg.

FIGURE I.5
Revisions to the 2015 growth forecast
(relative to the forecast in January 2014, percentage points)



Source: Consensus Forecasts.

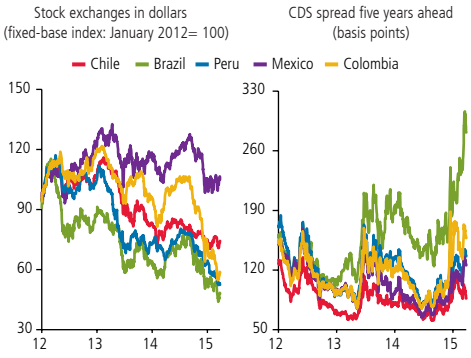
FIGURE I.6
Stock market volatility (*)
(percent)



(*) For the United States: the VIX; for the Eurozone: the VSTOXX; for emerging economies: an estimate of the historical volatility of the MSCI index in dollars.

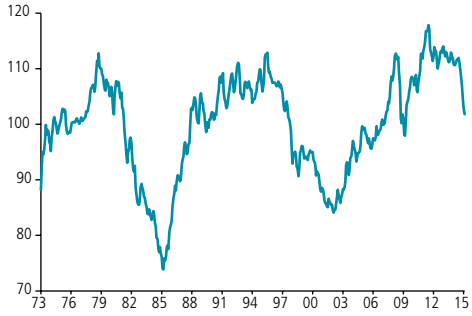
Source: Bloomberg.

FIGURE I.7
Financial markets in Latin America



Source: Bloomberg.

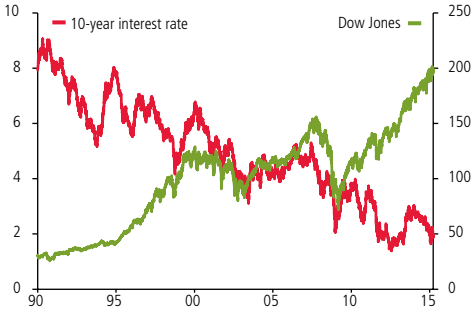
FIGURE I.8
Real multilateral dollar (*)
(fixed-base index: 1973-2015 = 100)



(*) An increase indicates depreciation vis-à-vis a basket of the currencies of the main trading partners of the United States.

Source: U.S. Federal Reserve.

FIGURE I.9
U.S. stock market and interest rate
(percent; fixed-base index: 1990-2015 = 100)



Source: Bloomberg.

other measures. The low inflation had raised the real interest rate in recent months, which, together with other factors, could be slowing the recovery of output. China grew 7.4% in 2014, slightly below the official target of 7.5%, and the growth rate slowed toward the end of the year. The growth target for 2015 was therefore lowered to 7.0%. The real estate sector continues to be one of the main drags on growth, as housing prices continued to fall in the first quarter of 2015. Other domestic demand data, such as retail sales and investment in fixed assets, were also disappointing in the period. Consequently, the possibility of new stimulus measures cannot be discarded.

Since the last *Report*, the international financial markets have recorded episodes of higher volatility, which could be exacerbated in the coming months if the Fed's actions surprise economic agents (figure I.6). For now, the effects of events in Greece, Ukraine and Russia have essentially been local. In the emerging world, sovereign and corporate spreads are generally higher than at the cutoff date of the last (chapter II). The greater risk aversion is also seen in the moderation of capital flows. The stock indices registered limited movement, although Latin America recorded a sharper drop, which is mainly explained by Brazil and its complex current situation. This country shows the most deteriorated financial indicators of the region (figure I.7). While long-term interest rates have been mixed in the emerging world, Brazil recorded some of the largest movements: its ten-year rate increased 107 basis points (bp) since December, in line with its tighter monetary policy.

The increased volatility was also seen in the exchange markets, which reflected the progressive strengthening of the dollar as a result of the disparity in the growth outlook of the United States and the rest of the developed world. The strengthening trend was partially dissipated after the Fed's last meeting. In multilateral terms, the dollar has appreciated almost 7% since December (figure I.8). In the same period, the currencies that depreciated the most against the dollar were the Brazilian real, the Turkish lira and the euro (table II.2).

In the developed economies, the stock exchanges improved, in particular in the U.S. markets, which are at historical peaks (figure I.9). This, in part, reflects the low long-term interest rates, which have raised the current value of earnings per share. The latter has reached values that have previously only been seen in advance of crisis events (1929 and 2000). While the discrepancy between the Fed and market expectations has narrowed, there is still a risk of a sharp reversal in fixed- and variable-income financial asset prices. In the Eurozone, the rates on ten-year bonds fell sharply (almost 50 bp in Germany), in relation to the ECB sovereign bond purchase program. At shorter maturities, rates were even more negative than in December.

BOX I.1
PERFORMANCE AND OUTLOOK FOR LATIN AMERICA

The end of the high commodity price cycle and the coming normalization of monetary policy in the United States have resulted in generalized reductions in real and forecast growth in the majority of the emerging economies. Latin America, in particular, has seen a marked deterioration in economic conditions: after expanding around 4.0%, on average, between 2010 and 2013, the region grew just 1.1% in 2014 and is projected to grow 1.4% in 2015[1/]. This box explores some of the factors that explain this trend and how it affects the Chilean economy.

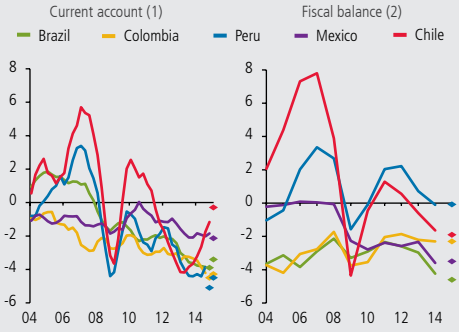
The downgraded outlook for Latin America contrasts with expectations just a few quarters ago. According to consensus forecasts, the 2015 growth forecast for the region has been revised downward by around 2.0 percentage points (pp) since early 2014. In the same period, the growth forecast for China decreased 0.5 pp and for the rest of the emerging economies, just over 1.0 pp.

By country, Brazil recorded the biggest adjustment (–3.0 pp), with the market projecting a contraction of 0.7% of GDP this year, which would be the economy's worst performance since 1990. Next are Chile and Peru, with revisions of about 1.5 pp. Colombia and Mexico have recorded smaller adjustments, which started later but have intensified in the most recent period (figure I.5).

Because Latin America is a net exporter of commodities, the lower commodity prices have been a very significant factor in the regional slowdown. The impact has been felt on several fronts, including a worsening of external financing conditions, a downturn in previously abundant capital inflows, a reduction in fiscal revenues, a moderation of the growth of disposable private income and, especially in mining countries like Chile and Peru, a decline in investment in the sector, whose cycle was peaking.

The deterioration of the terms of trade has also exposed a weaker fiscal position in some of these economies, which increased their public spending when commodity prices were high. Moreover, the current account deficit has expanded in several countries (figure I.10). This constitutes an important source of vulnerability and, for the moment, limits their ability to implement countercyclical policies. The weak financial position of the public and private sectors in these economies is particularly relevant in a scenario of a partial reversal of capital inflows to Latin America and tighter global financial conditions.

FIGURE I.10
Current account and fiscal balance in Latin America
(percent of GDP)



(1) The diamonds indicate 2014 and 2015 forecasts, except for Mexico and Chile where real data are used for 2014.
(2) The diamonds indicate 2015 forecasts.

Sources: Central Bank of Chile, Bloomberg, Consensus Forecasts, Budget Division of the Chilean Ministry of Finance and International Monetary Fund.

Nevertheless, the regional situation continues to be very heterogeneous. Brazil is facing a fairly complex scenario. In the midst of a sharp economic slowdown, fiscal and monetary policies have had to take a procyclical stance in order to improve public finances and reduce inflation. At the same time, the country's credit rating is being questioned, the political/social climate is becoming turbulent and domestic demand has made a sharp correction.

Mexico and Colombia have been strongly affected by the drop in the oil price. These countries receive roughly 30 and 15% of their fiscal revenues, respectively, from this source. The investment outlook has also taken a hit from the lower crude oil price. In both economies, the fiscal deficit and the current account worsened over the past year. Fiscal and monetary policies have not taken a countercyclical stance. The authorities reduced their budgeted expenditures for 2015, and monetary policy has not changed. In Mexico, the policy rate has been at 3% for several quarters, while Colombia reduced its monetary stimulus throughout most of 2013 and 2014. Mexico should benefit more directly from the strong performance in the United States, but these close ties also

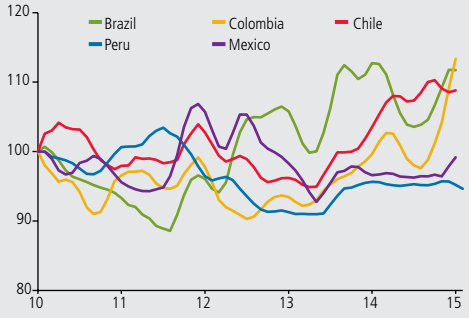
[1/] Estimates include Brazil, Chile, Colombia, Mexico and Peru. The baseline scenario (table I.1) includes a broader sample of countries and excludes Chile. For more details, see the glossary.

make the economy more vulnerable to the effects on the market of the Fed's decisions, as the country's authorities recognize.

Peru, in contrast, displays a more solid fiscal position and has implanted a number of fiscal stimulus measures to revitalize the economy. Monetary policy has started to loosen, with a reduction of 25 bp in its target rate in January. At the same time, the current account deficit is high, and the country's foreign exchange policy limits the space for economic policy.

There are a few mitigating factors that could help the region navigate these turbulent waters. First, most of the countries have increased their exchange rate flexibility considerably, which has allowed them to better absorb the shocks through real currency depreciation (figure I.11). Second, the adoption of monetary policy schemes based on inflation targets provides greater macroeconomic stability. Finally, while several of the economies still have a high exposure to sharp exchange rate fluctuations, the region's financial markets have deepened and are more resilient now than when faced with the 2008 financial crisis.

FIGURE I.11
Real exchange rate (*)
(fixed-base index: 2010 = 100)



(*) An increase indicates depreciation.
Sources: Central Bank of Chile and Bloomberg.

Argentina and Venezuela have different issues. In these countries, the low level of international reserves threatens the sustainability of their exchange rate regimes. Both economies have recorded double-digit inflation, and GDP is projected to contract this year. They also have very restricted access to the international capital markets.

Where is Chile in all this? The Chilean economy does not exhibit any major imbalances in terms of public or private spending. The structural balance rule isolates fiscal policy from cyclical effects and provided substantial savings during the years when the copper price was high. In fact, the fiscal budget for 2015 includes a significant increase in spending, and data from late 2014 show indications of the expansionary effect of fiscal policy. Monetary policy, in turn, entered an expansionary phase in October 2013, well in advance of other countries in the region. This supported the economy as it underwent the necessary adjustment process for facing the new internal and external conditions. The process has implied a strong depreciation of the peso, thereby contributing to containing expenditures on imported goods and improving the productive performance of the tradable sectors. This has helped reverse the current account deficit, which is forecast to be practically zero in 2015. The adjustment in domestic spending to an orientation centered on tradable goods has also contributed to smoothing the labor market adjustment, in a context of a steep reduction in growth.

The cost of this process has been a sharp increase in inflation, strongly influenced by a peso depreciation that has been both larger and more persistent than expected. In the baseline scenario, the exchange rate is expected to stabilize; its effects on inflation will thus tend to diminish, allowing a slow convergence to the inflation target.

All of these factors reduce Chile's external vulnerability. This will be an important factor for facing an international scenario that will be subject to fluctuations related to the impending process of monetary policy normalization in the United States. There are also risks that commodity prices will record additional cuts and that the financial climate in the region will become increasingly tense in the face of greater complications in Brazil.

In sum, the growth forecast for Latin America has deteriorated substantially, due to both the negative impact of lower commodity prices and the reduced or null space for implementing countercyclical policies, given the accumulated imbalances in public and/or private spending. Chile's economic policy framework has given the country a relatively strong position within the region, so the recent growth forecast revision has been less pronounced than for other economies in the bloc. In addition, the macroeconomic adjustment carried out in the last year and a half reveals a healthy economy, with the capacity and instruments for returning to higher growth rates. At the same time, Chile is not immune to the changes in the global economic and financial scenario, and any sharp adjustments in international conditions represent an important risk that must be carefully monitored.

II. FINANCIAL MARKETS

This chapter reviews the evolution of local financial markets in connection with the transmission of monetary policy.

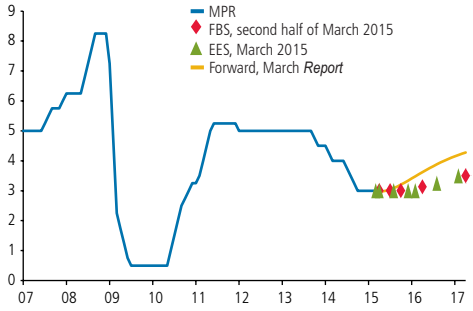
MONETARY POLICY

In the last three months, annual inflation has been higher than forecast in December, and the baseline scenario of this *Monetary Policy Report* projects that it will take longer than expected to return to the target. The market has revised its inflation forecast to over 3% in one year, but the two-year-ahead forecast remains at 3%. Output and demand are in line with projections from late 2014. External conditions and the associated risks continue to be determined, in large part, by the imminent process of monetary policy normalization in the United States. The changes in expectations on when the process will begin and the speed with which it will be implemented have had significant effects on the international financial markets, in particular in terms of currency movements. Consequently, the Board has held the monetary policy rate (MPR) at 3%, signaling that future adjustments would depend on the evolution of internal and external macroeconomic conditions and their implications for the inflation outlook.

The Board's monetary policy statement and the output and inflation data have led to an upward revision of market expectations for the MPR path. Thus, for February the markets had already ruled out the previously projected cuts, and by March they were incorporating the possibility of an increase in the MPR in the second half of this year (figure II.1). According to different measures of expectations, the MPR should be between 3.0% and 3.6% one year ahead (versus 2.75% to 3.1% in the December *Report*) and between 3.5% and 4.3% two years ahead (3.25% to 3.9% in the December *Report*) (table II.1). However, there is some variation in market expectations for the evolution of the MPR in 2015. Expectations derived from financial asset prices point to an increase in the MPR in late 2015. In contrast, the Financial Brokers Survey (FBS) for the second half of March and the Economic Expectations Survey (EES) for March both predict that the MPR will stay at 3% throughout the year and then rise in 2016. As a working assumption, the baseline scenario in this *Report* projects that the MPR path will be somewhat higher than in the surveys.

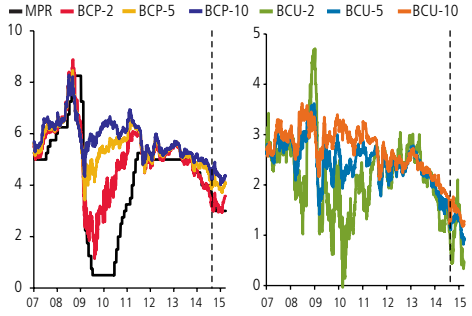
The upward surprise in short-term inflation affected the interest rate structure on Central Bank and Treasury instruments. In particular, the increase in inflation expectations caused UF rates to fall, while peso rates rose at shorter maturities (figure II.2). Comparing the ten business days prior to the cutoff dates for this

FIGURE II.1
MPR and expectations
(percent)



Source: Central Bank of Chile.

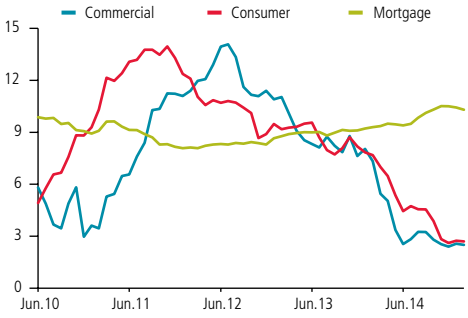
FIGURE II.2
MPR and interest rates on Central Bank of Chile bonds (*)
(percent)



(*) The vertical dashed line indicates the cutoff of the December 2014 *Report*.

Source: Central Bank of Chile.

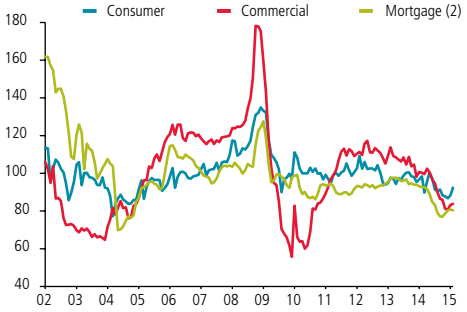
FIGURE II.3
Real annual growth of loans (*)
(percent)



(*) Data for February 2015 are provisional.

Source: Central Bank of Chile, based on data from SBIF.

FIGURE II.4
Lending rates (1)
(fixed-base index: 2002-2015=100)

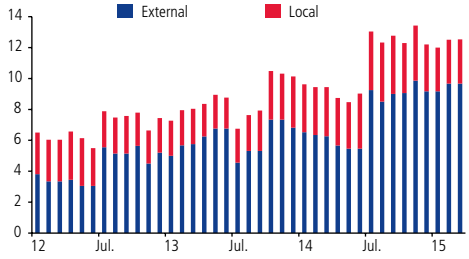


(1) Weighted average rates of all operations in the month.

(2) Mortgage interest rates are in UF.

Source: Central Bank of Chile, based on data from SBIF.

FIGURE II.5
Bond placements by nonfinancial corporations (*)
(US$ billion accrued in 12 months)



(*) The figure for March 2015 includes data through the 25th.

Source: Central Bank of Chile, based on data from Bloomberg and Santiago Stock Exchange.

and the last *Reports*, the interest rates on two-year UF-denominated bonds (BCU) fell 125 basis points (bp), while ten- and five-year BCUs fell between 10 and 50 bp, to new historical lows. At the same time, two-year peso-denominated bonds (BCP) are around 30 bp higher than in December. The rates on five- and ten-year BCPs currently range from 4.1 to 4.4% (3.9 to 4.4% in the last *Report*), which is still low from a historical perspective.

TABLE II.1
MPR expectations
(percent)

	December 2015		One year ahead		Two years ahead	
	December *Report*	March *Report*	December *Report*	March *Report*	March *Report*	December *Report*
EES (1)	2.75	3.00	2.75	3.00	3.50	3.50
FBS (2)	2.75	-	2.75	3.13	3.25	3.50
Forward curve (3)	3.10	3.34	3.10	3.62	3.92	4.28
Swap contracts (4)	2.82	3.21	2.82	3.39	3.36	3.94

(1) December 2014 and March 2015 surveys.
(2) Survey for the first half of December 2014 and the second half of March 2015.
(3) Constructed using the interest rates on swap contracts up to one year and interest rates on BCPs.
(4) Constructed using the interest rates on swap contracts up to two years.

Source: Central Bank of Chile.

FINANCIAL CONDITIONS

Local financial conditions reflect both the impact of the monetary stimulus and access to credit in the international financial markets, which remains favorable despite the increased risk in the external environment.

For consumers, lending conditions have not changed much since the last *Report*. According to preliminary data for February, the real annual growth rate of home mortgage loans is similar to the last *Report*, at 10.3% (versus 10.5% in November), and the interest rates on these loans are practically identical to November (+8 bp). In consumer loans, the real annual growth rate is under 3% (figure II.3). The nominal interest rates on these loans have increased 130 bp, on average, since the last Report, but they remain low from a longer perspective (figure II.4). In terms of access to credit, the Bank Lending Survey (BLS) for the fourth quarter of 2014 again reports tighter conditions for consumer and mortgage loans relative to previous periods. On the demand side, banks perceive that the weak demand for consumer loans has started to lift somewhat and, in contrast with recent quarters, applications for mortgage loans have strengthened.

For businesses, the real annual growth rate of commercial loans has been stable at around 2.5%, while the interest rates on these loans increased slightly, by +23 bp on average. The BLS for the fourth quarter of 2014 continues to demonstrate tighter supply than in previous periods. Similarly, in the February *Business Perceptions Report,* the interviewees perceived that requirements imposed for access to credit remainted tight, but banks were charging lower

interest rates. This view is shared by the banks consulted. On the demand side, the weak demand for commercial loans has lifted, with the exception of the construction company segment, where the tight demand intensified relative to the BLS for the third quarter. This coincides with the deterioration in the economic outlook for the sector.

With regard to the other funding sources for firms, placements on the local bond market have been stable in the past few months, and the amounts continue to be high from a longer-term perspective (figure II.5).

External financial conditions have been marked by increased volatility in the international markets and in the perception of sovereign and corporate risk in emerging economies. In the case of Chile, the sovereign spread increased 15 bp, to around 95 bp at the cutoff date of this *Report* (figure II.6). Elsewhere, Brazil and Russia have recorded particularly sharp increases in their sovereign spreads. For Chilean firms that use foreign funding, corporate spreads have fluctuated but are generally somewhat higher than in the last *Report*. Bond placements by nonfinancial corporations in external markets are still high.

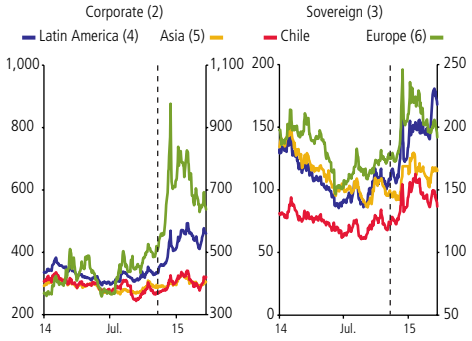
Starting in 2013, the developed stock exchanges have posted a better performance than the emerging markets. Comparing the cutoff dates of this and the last *Reports*, the developed and emerging exchanges rose 4.5 and 2.4%, respectively, measured in local currency. The strong performance of the United States relative to the rest of the world has increased the preference for its assets, which has brought the value of fixed- and variable-income assets to historical peaks (figure II.7). The possibility of a reversal in these prices, in response to the normalization of U.S. monetary policy, constitutes an important risk. The international stock markets were generally relatively calm in the face of the political and/or economic events in Greece, Ukraine, Russia and Brazil, with reactions constrained to the respective local markets. The local stock market posted a less favorable performance of –1.7% in local currency, with some fluctuation.

With regard to the monetary aggregates, the available data for February indicate that M1 (primarily unremunerated bank liabilities) maintained a stable nominal annual growth rate of 15%, with some fluctuation. The annual growth rate of M2 decreased to 7.2% (9.1% in November). Finally, the annual growth rate of M3 was 9.4% (9.8% in November).

EXCHANGE RATE

The greater relative strength of the United States has led to a significant appreciation of the dollar. Since the December *Report*, this trend has fluctuated substantially, due to the interaction of current data on of the U.S. economy and communications by the U.S. Federal Reserve (the Fed). This has been reflected in sharp movements in the majority of the world's currencies. In the case of the Chilean peso, the exchange rate was over $640 to the dollar in mid-March, before falling closer to $620 on the cutoff date of this *Report*.

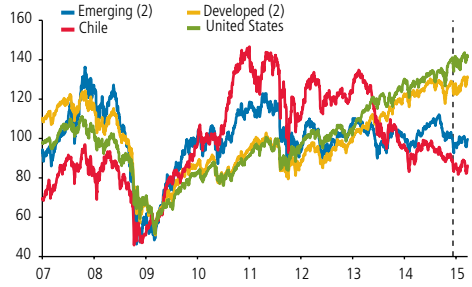
FIGURE II.6
Emerging economy spreads (1)
(basis points)



(1) The vertical dashed line indicates the cutoff of the December 2014 *Report*.
(2) Measured by the CEMBI.
(3) Measured by five-year CDS spreads. Simple average of the countries in each region.
(4) Includes Brazil, Colombia, Mexico, Panama and Peru.
(5) Includes China, Indonesia, Philippines, Thailand and Malaysia.
(6) Includes Bulgaria, Croatia, Czech Republic, Hungary, Russia and Turkey.

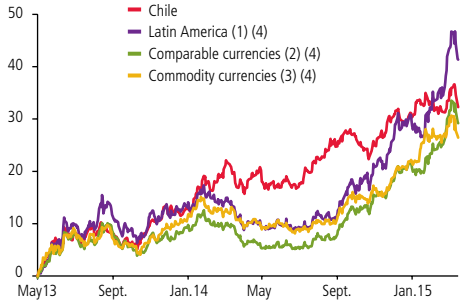
Source: Bloomberg.

FIGURE II.7
Stock markets (1)
(fixed-base index: 2007-2015=100)



(1) The vertical dashed line indicates the cutoff of the December 2014 *Report*.
(2) Morgan Stanley Capital International (MSCT) regional stock indices measured in dollars.
Source: Bloomberg.

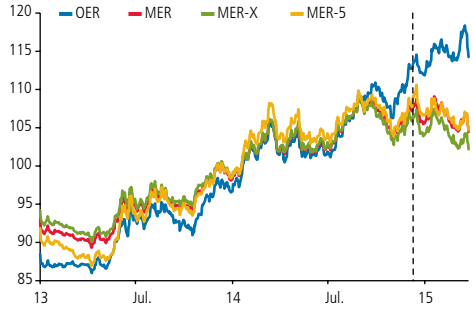
FIGURE II.8
Nominal exchange rate
(accumulated change, percent)



(1) Includes Brazil, Colombia, Mexico and Peru.
(2) Includes Brazil, Colombia, Czech Rep., Israel, South Korea, Mexico, Philippines, Poland and Turkey. Emerging economies and currencies with a floating exchange rate are from Moody's Statistical Handbook (May 2012).
(3) Includes Australia, Canada, New Zealand and South Africa.
(4) Weights for each economy per WEO (October 2014).

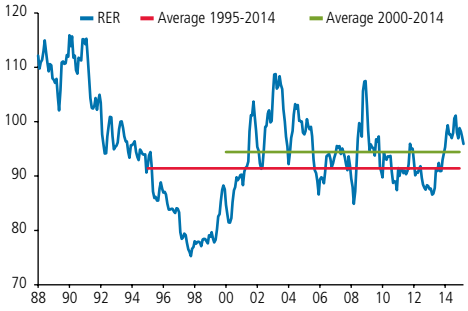
Sources: Central Bank of Chile and Bloomberg.

FIGURE II.9
Nominal exchange rate (1) (2)
(fixed-base index: 02.Jan.2013–25.Mar.2015=100)



(1) See glossary for definitions.
(2) The vertical dashed line indicates the cutoff of the December 2014 *Report*.
Source: Central Bank of Chile.

FIGURE II.10
Real exchange rate (*)
(fixed-base index: 1986=100)



(*) The figure for March 2015 includes data through the 25th.

Source: Central Bank of Chile.

From a broader perspective, the peso has depreciated strongly since May 2013, on the order of 36% (table II.2). A large share of this movement stems from the appreciation of the dollar at the world level. However, the timing of the depreciation has differed in Chile vis-à-vis other emerging economies and commodity exporters. Key factors in these differences include the fast adjustment of domestic spending and Chile's implementation of an earlier, deeper expansionary monetary policy cycle than other comparable economies. Relative to other emerging economies, the peso depreciation was sharper in 2014 (figure II.8). Subsequently, as the rest of the emerging economies entered a more marked adjustment cycle, the differences narrowed, and the peso even appreciated multilaterally, which was most evident in this first quarter of 2015. Thus, relative to the last *Report*, the Chilean peso depreciated 4%, whereas the different multilateral measures recorded an appreciation of 1.4 to 2.6% (figure II.9).

TABLE II.2
Exchange rates against the U.S. dollar (1) (2)
(percent)

	Change in the NER	
Country	**Mar.15 *Report*/ Dec.14 *Report***	**Spot/ Minimum 2013**
Brazil	23.9	62.7
Turkey	15.1	47.4
Colombia	12.8	45.0
South Africa	7.4	40.2
Chile	**4.0**	**35.9**
Sweden	14.5	35.1
Australia	8.2	35.0
Indonesia	6.5	35.0
Czech Republic	14.1	33.9
Hungary	13.8	28.6
Canada	10.6	27.4
Eurozone	15.2	25.7
Mexico	6.4	24.7
Poland	14.1	24.0
Malaysia	6.9	23.7
Peru	4.7	20.7
Israel	1.3	13.9
Thailand	-0.5	13.5
New Zealand	4.0	13.3
United Kingdom	5.5	11.1
Switzerland	1.4	8.3
South Korea	1.0	4.9

(1) A positive (negative) sign indicates depreciation (appreciation) of the currency against the U.S. dollar.
(2) Calculated based on the average of the last ten days before the cutoff date.

Sources: Central Bank of Chile and Bloomberg.

The real exchange rate (RER) fell 3% relative to the last *Report*. Taking into account the nominal exchange rate and parities, the RER was 95.9 in March, where 1986=100; this is above the average of the last two decades (figure II.10). In the baseline scenario used in this *Report*, the working assumption is that the RER will stay around its current level, insofar as it stays within the range deemed consistent with its long-run fundamentals.

III. OUTPUT AND DEMAND

This chapter reviews the recent evolution of demand and economic activity and their short-term outlook, in order to examine possible inflationary pressures.

OUTPUT AND DEMAND

In recent months, output has recorded growth rates above the average for 2014. The National Accounts for that year reported a GDP increase of 1.9% in annual terms, versus a projected 1.7% in the December *Report* (table III.1). This result was driven by the fourth quarter, when output grew 1.8% in annual terms, combined with revisions to the data on previous quarters. Domestic demand contracted 0.6% in annual terms in 2014 (table III.2). The annual growth rate stopped falling in the fourth quarter, after three quarters of increasingly steep annual declines. Thus, the disparity between GDP growth and domestic demand continues to reflect the weak performance of the latter (figure III.1). Consistent with these trends, output continues to be underpinned by the strong performance of the external sector and, toward the end of last year, by increased public spending, mainly in investment.

By economic sector, the non-natural-resource sectors (other GDP) grew 2.2% in annual terms in the fourth quarter (1.3% in the third). Services continued to post the best performance. Public administration and communications increased notably. Some other services, such as personal, financial and transportation services, continue to make a strong contribution to output, with annual growth rates above the aggregate level. The agriculture, livestock and forestry sector, which contracted in the two previous quarters, grew at an annual rate of 4.9% in the last quarter of 2014, which reflects the low basis of comparison stemming from the frosts in the previous growing season. Both construction and trade went from negative annual rates in the third quarter to positive numbers in the fourth. In the case of construction, the substantial increase in building permits was a key factor, together with a low basis of comparison. In manufacturing, the downward trend leveled out somewhat, thanks to the performance of export-oriented segments. Import-substitution segments also performed well, although more moderately.

In the natural resource sectors, the annual growth rate remained low in the fourth quarter. Mining contracted 0.4% in annual terms, mainly because of declining copper ore quality and the seasonal closure of some works. Electricity, gas and water (EGW) grew at an annual rate of 5.7% (3.4% in the third quarter), due to the higher value added of hydroelectricity.

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

	Share	2013				2014			
	2014	I	II	III	IV	I	II	III	IV
Agriculture, livestock and forestry	2.7	3.8	3.2	-0.2	2.0	2.9	-5.6	-3.4	4.9
Fishing	0.3	-18.3	-16.1	-13.3	-16.4	21.8	34.0	10.7	3.4
Mining	11.2	9.4	3.1	9.0	2.6	1.2	4.8	0.0	-0.4
Manufacturing	11.3	1.8	0.7	2.7	-0.9	0.2	-0.7	-0.7	-0.1
EGW	2.3	12.6	9.7	6.9	10.2	1.3	9.4	3.4	5.7
Construction	7.3	5.0	5.1	5.0	0.8	3.1	1.1	-1.4	3.2
Trade	8.0	7.9	7.0	7.8	4.7	2.2	-0.4	-0.2	0.7
Restaurants and hotels	1.8	4.2	3.4	4.3	0.6	1.0	0.3	0.9	0.9
Transport	4.2	7.2	6.3	3.3	0.3	3.4	1.5	1.3	3.1
Communications	1.8	6.2	6.7	9.8	8.1	7.6	7.5	5.7	5.8
Financial services	5.1	8.6	6.6	5.8	3.7	3.9	2.2	2.2	3.6
Business services	13.9	1.7	2.6	2.6	3.5	3.4	2.1	1.2	0.9
Housing services	5.2	2.2	1.8	1.6	1.5	1.6	1.7	1.8	1.8
Personal services (2)	11.7	5.9	4.9	4.2	4.8	3.4	3.7	4.6	3.9
Public administration	4.6	3.6	3.1	4.9	3.8	3.3	3.0	2.7	5.4
Total GDP	**100.0**	**5.4**	**4.0**	**4.8**	**2.8**	**2.7**	**2.1**	**1.0**	**1.8**
Other GDP (3)	**77.5**	**4.4**	**4.0**	**4.1**	**2.7**	**2.8**	**1.4**	**1.3**	**2.2**
Natural resource GDP (3)	**13.9**	**9.2**	**3.4**	**8.1**	**3.7**	**1.6**	**6.4**	**0.9**	**0.7**

(1) Preliminary data.
(2) Includes education, health and other services.
(3) See glossary for definitions.

Source: Central Bank of Chile.

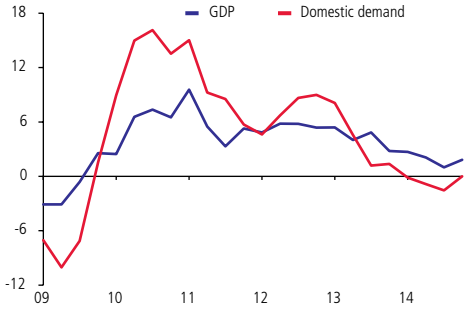
TABLE III.2
Domestic demand (1)
(share in GDP; real annual change, percent)

	Share	2013				2014			
	2014	I	II	III	IV	I	II	III	IV
Domestic demand	98.5	8.1	4.6	1.2	1.4	-0.1	-0.9	-1.5	0.0
Domestic demand (excl. change in inventories)	99.1	7.6	7.3	3.9	0.6	2.1	-0.2	-1.4	1.5
Gross fixed capital formation	22.0	11.4	11.7	-0.2	-10.9	-4.9	-7.8	-12.1	0.5
Construction and other works	14.9	6.5	7.3	6.8	2.3	3.0	0.1	-1.6	2.2
Machinery and equipment	7.2	20.2	19.0	-9.5	-28.2	-19.3	-21.4	-29.6	-3.1
Total consumption	77.1	6.3	5.9	5.3	4.5	4.4	2.3	2.0	1.8
Private consumption	64.2	6.9	6.3	5.4	5.1	3.9	2.2	1.9	1.0
Durable goods	6.2	15.6	14.7	14.4	12.5	3.6	-1.5	-3.9	-4.6
Nondurable goods	26.4	7.2	6.3	4.6	4.4	4.1	1.2	1.6	0.6
Services	31.6	4.9	4.7	4.3	4.1	3.7	3.6	3.3	2.7
Government consumption	12.9	3.0	4.3	4.7	1.7	8.2	2.6	2.3	5.5
Change in inventories (2)	-0.6	1.7	1.1	0.4	0.5	0.0	-0.2	-0.3	-0.6
Goods and services exports	33.8	0.0	5.8	11.1	-2.5	4.1	-0.4	-2.6	1.7
Goods and services imports	32.3	7.1	7.3	0.4	-6.3	-4.7	-9.4	-9.8	-3.9
Total GDP	**100.0**	**5.4**	**4.0**	**4.8**	**2.8**	**2.7**	**2.1**	**1.0**	**1.8**

(1) Preliminary data.
(2) Ratio of the change in inventories as a percent of GDP, at average prices of the previous year, accrued in a moving year.

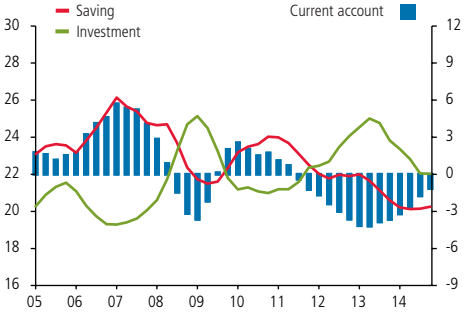
Source: Central Bank of Chile.

FIGURE III.1
Growth of GDP and domestic demand
(real annual change, percent)



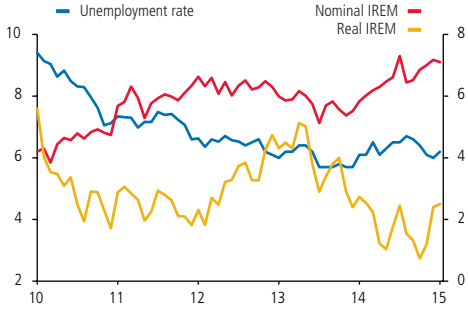
Source: Central Bank of Chile.

FIGURE III.2
Current account (*)
(percent of GDP)



(*) Accrued in a moving year.
Source: Central Bank of Chile.

FIGURE III.3
Unemployment rate and nominal and real wages
(percent; annual change, percent)



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

Domestic demand remained weak in the fourth quarter. Total consumption recorded a slightly lower growth rate, since government consumption did not fully offset the continued decline in private consumption. The contraction of durable goods intensified, to –4.6% in annual terms in the fourth quarter, while nondurables grew more slowly at 0.6% annual. Services consumption recorded a smaller decline in its growth rate, consistent with the dynamic performance of services in output.

Gross fixed capital formation recorded its first positive annual growth rate after several consecutive quarters of decline, although the trend did not change significantly. This reflects both a low basis for comparison and higher fiscal spending on this item: 0.5% annual (–12.1% in the third quarter). This was especially evident in the annual growth rate of the construction and works component. Machinery and equipment contracted, but not at the double digits of previous quarters.

The strong adjustment of domestic spending and the positive effect of the peso depreciation on exports have led to a considerable reduction in the current account deficit, which was 1.2% of GDP in 2014 (3.7% in 2013). This was composed of a trade surplus of US$8.5 billion in 2014, versus US$2.0 billion in 2013 (figure III.2). Structurally, imports dropped sharply, while exports were stable, despite the lower prices.

DETERMINANTS OF SPENDING

The evolution of domestic demand continues to reflect the uneven behavior of its determinants. On one hand, consumer and business expectations remain in negative territory, although there have been some improvements at the margin. Private job creation remains weak. The real annual growth of bank loans was stable or fell slightly, and the nominal depreciation of the peso continued to raise the price of imported goods and reduce the real income of families through higher inflation. On the other hand, the unemployment rate has stayed close to its historical low, and nominal wages continue to grow at high annual rates. The interest rates on bank loans are also low from a historical perspective.

With regard to the labor market, the unemployment rate increased marginally (6.2% in the moving quarter ending in January), but it is still near the lowest level of the last few years. Nominal wages continued to grow strongly, while real wages have recovered to higher annual growth rates, given the lower year-on-year inflation of the last few months (figure III.3).

The evolution of the labor market has been stronger than would be expected based on the phase of the economic cycle, which raises some uncertainty about the state of the output gap. However, some cyclical factors need to be taken into account when analyzing these data. First, the low unemployment rate reflects, in part, the high growth of mining employment in recent years (figure III.4), which in turn reflects the strong investment cycle in the mining sector. Second, employment is also up in the agricultural sector (with a low basis of comparison from the previous year) and the public sector. Finally, there are some structural factors that point to a lower unemployment rate than in

past decades. In particular, the population under 24 years of age has a smaller weight in the labor force, while the population over 50 accounts for a larger share (box III.1).

Over and above these factors, the National Statistics Institute (INE) indicates that since mid-2014, wage job creation has been dominated by part-time jobs and informal jobs without a contract and, in some cases, without benefits (figure III.5). This points to a relative decline in job quality, which helps explain the limited growth of private consumption in recent months.

Real labor income, which followed a steep downward trend in the past year, began to show higher annual growth rates in the most recent period. This mainly reflects a larger contribution from real wages, rather than job creation. The growth of labor income exceeded that of private consumption, which suggests an increase in household savings.

The real annual growth of bank loans was stable or fell slightly, even though interest rates remain low from a historical perspective.

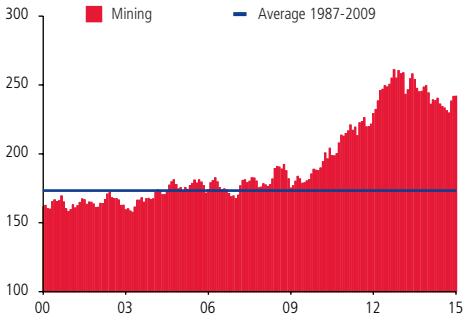
Business and consumer expectations are still in negative territory, although they have improved somewhat at the margin, albeit with fluctuations. This is more evident in business expectations (IMCE) than consumer expectations (IPEC) (figure III.6). For the IPEC, the increase centers on the positive assessment of whether to buy durable goods (mainly household items, as opposed to cars and houses). For the IMCE, the assessment of inventories is less negative, although they are still considered high (figure III.7).

SHORT-TERM OUTLOOK

For 2015, the Board estimates an annual growth rate in the range of 2.5 to 3.5%. The first half is expected to be similar to the average growth of the last few months, while the second half should see higher annual GDP growth. This projection is based on the conclusion of the domestic adjustment, stronger results from fiscal spending, the positive effect of the lower oil price on household income and the recovery of consumer and business expectations. Moreover, monetary policy has provided a significant stimulus in recent quarters, and the peso depreciation has boosted the performance of some tradable sectors. According to the Economic Expectations Survey (EES), market expectations have risen marginally in the last three months, estimating annual growth in 2015 of 2.8% in March (2.7% in December). For 2016, the EES estimates growth of 3.5%.

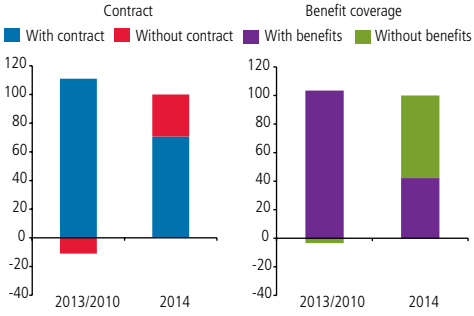
Aggregate consumption indicators available in January point to a degree of stabilization. Retail sales (IVCM) recovered slightly in December and January, although the increase was not generalized and largely rested on the strong growth of nondurable goods such as clothing and footwear. However, there was a drop in this type of imports in February. In contrast, durable goods continued to record a weak performance. In the automotive sector, sales fell around 30% in annual terms in January and February (ANAC), and car imports

FIGURE III.4
Mining employment
(thousands of people)



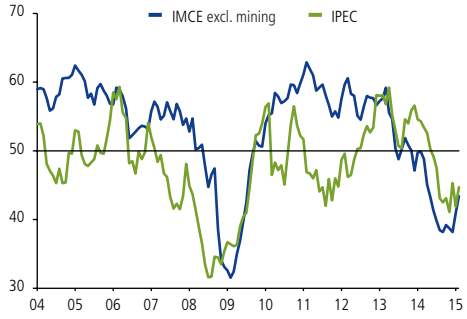
Source: National Statistics Institute (INE).

FIGURE III.5
Quality of wage employment
(share of total employment growth, percent)



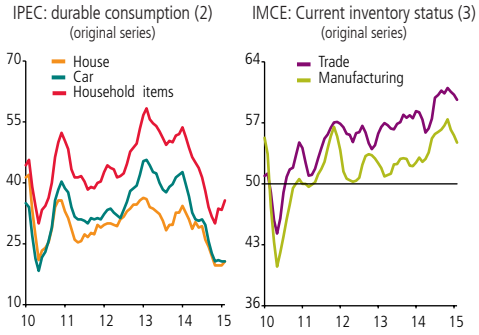
Source: National Statistics Institute (INE).

FIGURE III.6
Business and consumer expectations (*)
(original series)



(*) A value over (under) 50 points indicates optimism (pessimism).
Sources: Adimark and Icare/Universidad Adolfo Ibáñez.

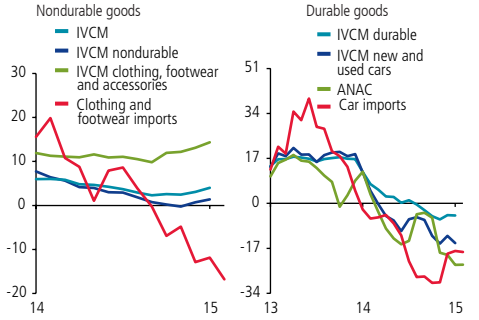
FIGURE III.7
Perception indicators (1)
(original series)



(1) Quarterly moving average.
(2) Percent of affirmative responses to the following questions: Do you think this is a good time or a bad time to buy: (i) a house, (ii) a car, (iii) household goods like furniture, a refrigerator or a range?
(3) A value over (under) 50 points indicates optimism (pessimism).

Sources: Adimark and Icare/Universidad Adolfo Ibáñez.

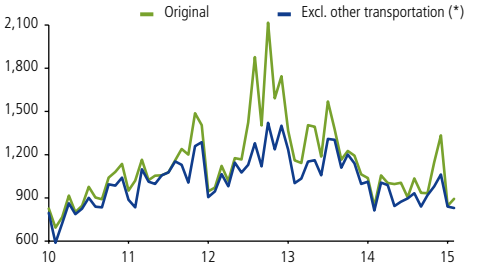
FIGURE III.8
Consumption indicators (*)
(annual change, percent)



(*) Quarterly moving average. Imports and ANAC (National Automobile Association of Chile) use data through February. The IVCM uses data through January.

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

FIGURE III.9
Capital goods imports
(US$million)



(*) Excluding airplanes and other uncommon transportation vehicles, such as trains, helicopters and ships.

Source: Central Bank of Chile.

continued to decrease (figure III.8). Thus, goods imports, in general, continued to decline in annual terms.

With regard to private investment, some indicators demonstrate a degree of stability, supported by low basis of comparison. Capital goods imports grew 6% annual in February, but there was a contraction of 18.7% in January and a drop of 4.5% in the fourth quarter (figure III.9). The latter had to do with some unusual imports in December. The Capital Goods and Technological Development Corporation (*Corporación de Desarrollo Tecnológico y de Bienes de Capital, CBC*), which measures investment intentions, revised its 2015 forecast downward, mainly due to mining investment, confirming expectations of a lower level than in 2014. Construction activity, measured by the IMACON, fell 1.5% in annual terms in the fourth quarter, including a reduction of 2% annual in December. Sales of cement and other materials (CChC) and construction employment also decreased in annual terms in January.

In contrast to the null growth of private investment, public investment spending is expected to continue to increase strongly. It was over budget in 2014, at 106%.

According to the February *Business Perceptions Report*, the majority of the interviewees expect growth in 2015 as a whole to be similar to or somewhat higher than last year, with a better performance in the second half. In line with the trend of the past few quarters, investment plans indicate a reduction in the size of investments and a strong focus on capital replacement. A dynamic public investment plan is expected for the year, although doubts remain about its implementation, and there is a relative consensus that the effects would not begin to be felt until the final months of 2015.

BOX III.1
FACTORS BEHIND THE LOW UNEMPLOYMENT RATE

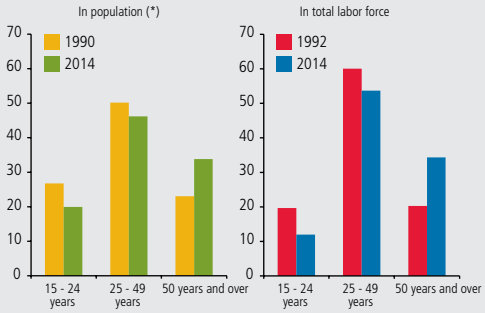
The labor market has been surprisingly strong in the last year, given that output and domestic demand have been markedly less dynamic. Throughout the year, the unemployment rate has remained low from a historical perspective, and nominal wages have grown at a high annual rate. This box discusses some structural changes in the labor force that help explain some of the lower observed unemployment.

In line with the demographic evolution of other nations, development in Chile has been accompanied by an increase in the average life expectancy and a reduction in the birth rate. This has generated important changes in the age composition of the population. As a percentage of the total population, the share of people over the age of 50 has increased, while the share under the age of 25 has shrunk (figure III.10).

The change in the population composition is reflected in the labor force, where the reduction in the share of people under 25 has been magnified by the increase in average schooling. With this in mind, an analysis of the changes in the composition of the labor force by age group highlights the magnitude of the shift in the shares of youth between 15 and 24 years of age and older adults over the age of 50.

The youth share of the total labor force decreased from 19.7 to 12.0% between 1992 and 2014, which coincides with a notable expansion of university enrollment in this segment of the population (figure III.11). In the same period, the share of people over the age of 50 increased from 20.3% of the workforce to 34.3%.

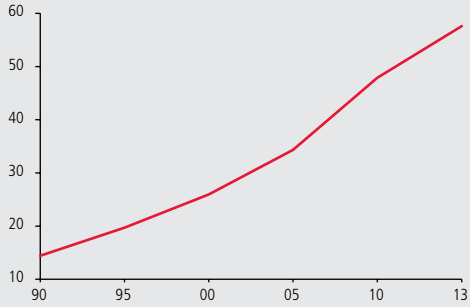
FIGURE III.10
Participation by age group
(percent)



(*) Population age 15 years or over.

Source: National Statistics Institute (INE).

FIGURE III.11
Enrollment in tertiary education in Chile
(percent population age 18 to 24 years)

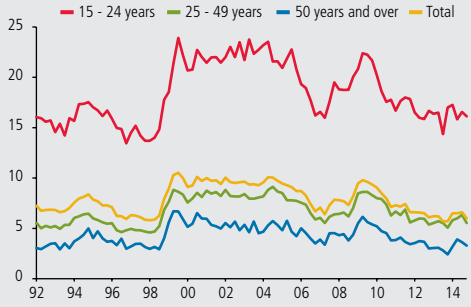


Sources: National Statistics Institute (INE) and Ministry of Education of Chile.

This change in the population composition has important implications for the measure of total unemployment, given that the unemployment rate of workers between 15 and 24 years of age is significantly higher than that of workers over 50 (figure III.12). Thus, by itself, the recomposition of the workforce in favor of the older age group and against the younger group reduces the unemployment rate. This does not take into account the effect of the change in the labor force participation of the different age groups on the unemployment of each group, beyond the fact that the unemployment rate of each age group has tended to decline in recent years.

Furthermore, if the average age of the population rises and the birth rate falls, it is possible that the growth rate of the workforce will decline. The data show that, despite the age recomposition resulting from the aging of the workforce, the annual growth rate of the labor force has not slowed, holding at around 2% since 1992. However, the continuation of these dynamics should cause a drop in the annual growth rate in the future.

FIGURE III.12
Unemployment rate by age group
(percent)

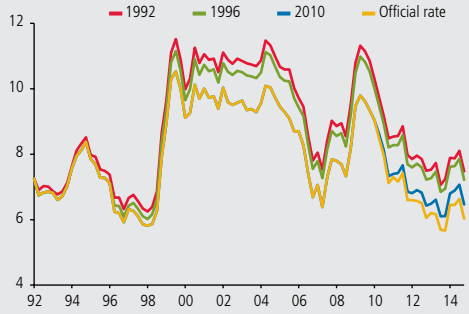


Source: National Statistics Institute (INE).

Albagli and Barrero (2015) estimate the impact of this change based on an exercise that measures the effect of labor force composition on unemployment. For this analysis, the methodology incorporates, on one hand, the labor participation rate in a given base year (1992) and, on the other, the unemployment rate in December 2014 for three population groups. The authors then calculate what the unemployment rate would have been at year-end 2014 if, all else constant, the participation rate of the three groups had remained fixed at the 1992 level.

Under these assumptions, the national unemployment rate would be 1.4 percentage points (pp) higher than the actual rate in December 2014. As a test, the same exercise is carried out for 1996 and 2010, when the aging of the population was in progress. In that case, the unemployment rate would be 1.2 pp and 0.4 pp higher than December, taking 1996 and 2010, respectively (figure III.13).

FIGURE III.13
Estimated unemployment rate: different base years
(percent)



Source: Albagli and Barrero (2015).

Another structural factor that has changed over the past two decades is the increased participation of women in the labor market. Women's participation rate rose from 36.7% in 1992 to 48.4% in 2014, while their share of the total workforce increased from 33 to 41% in the same period. Moreover, the female unemployment rate dropped more than the male unemployment rate in the period. An application of the same exercise described above, with base year 1992, does not reveal any major differences between the estimated and actual unemployment rates in December. If anything, it suggests that the actual unemployment rate should have been 0.1 pp lower.

In sum, the estimates suggest that there are some structural factors—specifically, a lower participation rate among young people and a higher participation rate among older adults—that can partially explain the current low level of the unemployment rate relative to its historical average and its incongruity with the output cycle.

IV. PRICES AND COSTS

This chapter analyzes the recent evolution of the main components of inflation and costs, identifying the current sources of inflationary pressure and their likely evolution in the future.

RECENT EVOLUTION OF INFLATION

The baseline scenario used in this *Report* projects that inflation—which has exceeded the December forecast—will take longer to converge to the target and that the risks associated with this path have increased. In annual terms, the CPIEFE rose from 4.3 to 4.7% since the cutoff date for the last *Report*, while the CPI decreased from 5.5 to 4.4% (still above the target range) largely thanks to the drop in oil prices (figure IV.1 and table IV.1). The evolution of prices also exceeded market expectations, although to a greater degree. Thus, the new inflation scenario has led to an adjustment in short-term expectations, while the two-year-ahead forecast remains at 3%.

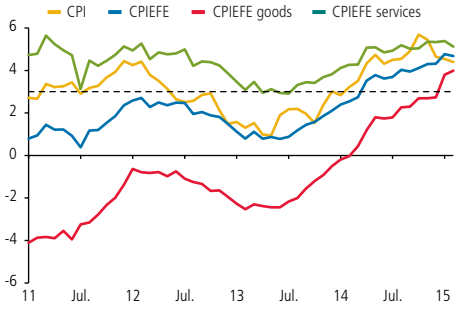
TABLE IV.1
Inflation indicators (1) (2)
(annual change, percent)

	CPI	Food	Energy	CPIEFE	CPIEFE goods	CPIEFE services
2012 Average	3.0	7.7	-0.4	2.2	-1.1	4.6
2013 Jan.	1.6	5.3	-2.7	1.1	-2.3	3.5
Feb.	1.3	3.7	0.1	0.8	-2.5	3.1
Mar.	1.5	3.1	1.2	1.1	-2.3	3.5
Apr.	1.0	3.8	-3.5	0.8	-2.4	2.9
May	0.9	4.9	-6.5	0.9	-2.4	3.1
Jun.	1.9	6.3	0.7	0.8	-2.4	2.9
Jul.	2.2	5.7	4.1	0.9	-2.2	2.9
Aug.	2.2	5.1	3.3	1.2	-2.0	3.3
Sept.	2.0	3.2	3.0	1.4	-1.6	3.4
Oct.	1.5	2.8	-1.6	1.6	-1.2	3.4
Nov.	2.4	4.5	1.5	1.8	-0.9	3.7
Dec.	3.0	4.9	5.5	2.1	-0.5	3.8
2014 Jan.	2.8	4.4	3.2	2.4	-0.2	4.1
Feb.	3.2	5.6	3.8	2.5	0.0	4.3
Mar.	3.5	5.7	5.1	2.7	0.4	4.3
Apr.	4.3	6.4	6.6	3.5	1.2	5.1
May	4.7	6.6	8.8	3.8	1.8	5.1
Jun.	4.3	5.7	7.1	3.6	1.7	4.9
Jul.	4.5	6.2	7.4	3.7	1.8	4.9
Aug.	4.5	6.7	4.1	4.0	2.3	5.2
Sept.	4.9	8.3	5.3	3.9	2.3	5.0
Oct.	5.7	10.2	8.8	4.1	2.7	5.0
Nov.	5.5	8.7	7.7	4.3	2.7	5.3
Dec.	4.6	8.9	-2.0	4.3	2.7	5.3
2015 Jan.	4.5	9.5	-8.1	4.8	3.8	5.4
Feb.	4.4	8.8	-7.3	4.7	4.0	5.1

(1) See glossary for definitions.
(2) Starting in January 2014, calculations are based on the new indices with base year 2013=100, so they may not be strictly comparable with earlier figures.

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

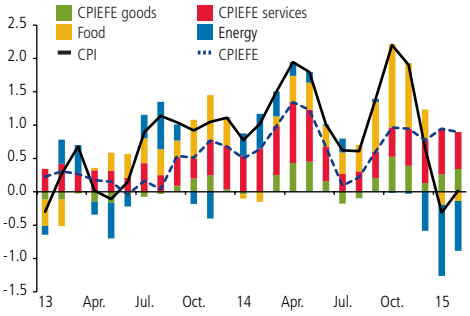
FIGURE IV.1
Inflation indicators (1) (2)
(annual change, percent)



(1) See glossary for definitions.
(2) Starting in January 2014, calculations are based on the new indices with base year 2013=100, so they may not be strictly comparable with earlier figures.

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

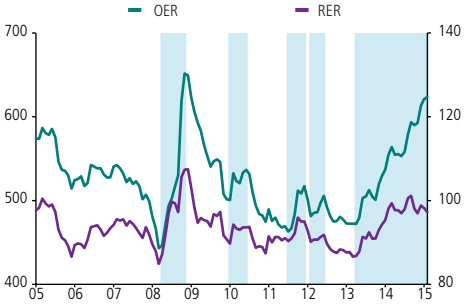
FIGURE IV.2
Contribution to monthly CPI inflation (*)
(accrued in a three-month moving window, percentage points)



(*) Starting in January 2014, calculations are based on the new indices with base year 2013=100, so they may not be strictly comparable with earlier figures.

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

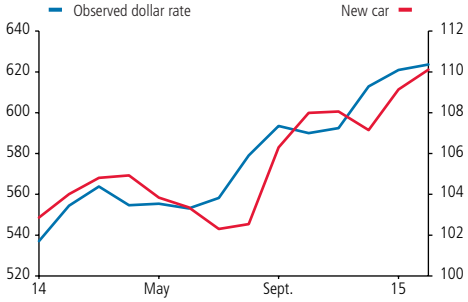
FIGURE IV.3
Exchange rate (*)
(pesos per dollar; fixed-base index: 1986=100)



(*) The shaded areas mark periods of nominal peso depreciation.

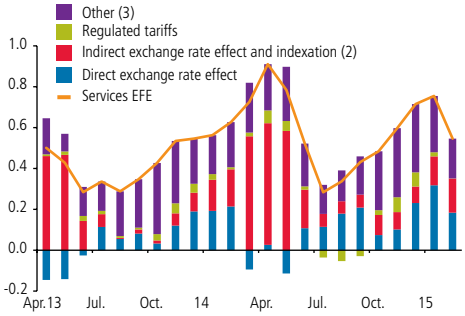
Source: Central Bank of Chile.

FIGURE IV.4
New car prices and the exchange rate
(pesos to the dollar; index)



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

FIGURE IV.5
Contribution of CPIEFE services to monthly CPI inflation (1)
(accrued in a three-month moving window, percentage points)



(1) Based on the new indices with base year 2013=100.
(2) Includes education, health, rental, tolls, insurance and motor vehicle inspection services.
(3) Includes food, recreation, financial, clothing, personal care, housing and other services.

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

Since the publication of the December *Monetary Policy Report*, the CPI accumulated 0.01 percentage points (pp), but this figure hides a drop of 0.4% in December and hikes of 0.1% in January and 0.4% in February, which exceeded market expectations. Another characteristic of the evolution of inflation in this period is that the steep drop in oil prices and the reversal of isolated increases in some fresh fruits and vegetables have offset increases in the CPIEFE (figure IV.2).

In the past three months, CPIEFE inflation contributed 0.9 pp to the CPI. As mentioned in recent *Reports*, the exchange rate explains a large share of the increase in inflation. In the first quarter of 2013, the peso-dollar exchange rate averaged $472; thus far in 2015, it has averaged $624. This represents a total depreciation of nearly 35%. Although the peso has depreciated less than 5% since the December *Report* and appreciated in real terms, this depreciation process stands out for its persistence, which has added substantial uncertainty to price dynamics. In fact, the current episode is the most persistent depreciation of the decade (figure IV.3). The persistence of this phenomenon can help explain its greater impact on prices, and it constitutes a risk when it comes to evaluating the implicit inflationary pressures in the baseline scenario.

The evolution of external price inflation relevant to Chile in dollars has, to some extent, offset the exchange rate effects in local inflation. It is estimated that the external price index (EPI) decreased 1% in 2014, and the 2015 baseline scenario used in this *Report* assumes an additional reduction of 6%. This is mainly due to the appreciation of the U.S. dollar at the global level and the low inflation recorded in several of our trading partners.

In the last three months, 0.34 pp of CPI inflation has come from goods excluding food and energy (CPIEFE). In this case, the exchange rate effect is fairly direct, especially in tradable and imported goods. A clear example is the price of a new car, which has accounted for 0.08 pp of CPI inflation since December (figure IV.4). Another important factor for explaining the increase in goods inflation is related to the Tax Reform. It is estimated that the new taxes on cigarettes, soft drinks and alcoholic beverages will have a total effect of 0.3 pp on the CPI from the date of their entry into effect, which are estimated to have already been reflected in actual inflation data. Cigarettes contributed 0.12 pp between December and February, although this increase could also reflect other cost effects.

Given their weight in the basket, services continue to be the main component underlying CPIEFE inflation, accounting for 0.55 pp of CPI inflation since December (figure IV.5). While in this case it is more difficult to disaggregate the exchange rate effects on local inflation, there are prices that directly reflect the evolution of the exchange rate, such as international air transport.

Other prices indirectly reflect the higher exchange rate and the higher inflation in general. These are services whose cost or price is indexed either to past inflation—so they pick up inflation from a few months back—or directly to the price of the dollar. Thus, between December and February, interurban transportation accounted for almost 0.2 pp of CPI inflation, while indexed

services prices contributed 0.1 pp in the same period. Although the former also has a strong seasonal factor, in this period the increase was greater than what would be expected from that trend. This is probably because the pass-through of the lower fuel prices was limited.

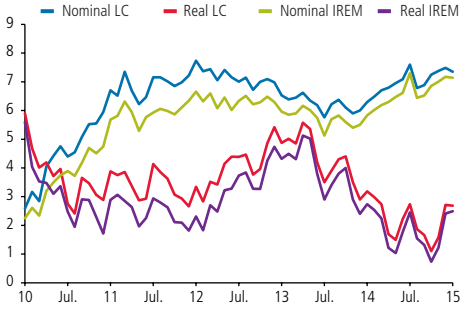
The evolution of EFE services prices is also related to the behavior of nominal wages, although it is difficult to identify the direction of causality between wages and inflation. Wages have continued to record annual increases close to the peak of the last five years, growing 7.1 or 7.3% in January 2015, depending on the measure (figure IV.6). This is largely due to adjustments for past inflation. As mentioned in previous *Reports*, the high growth of wages in a context of low unemployment constitutes a risk when it comes to evaluating the inherent inflationary pressures in the baseline scenario, because it could reflect a lower output gap than implied in the baseline scenario of this *Report*. Estimating the output gap is subject to a high degree of uncertainty, and a lower gap would contribute less to inflation convergence.

Energy made a negative contribution to inflation in the last three months (0.7 pp), mainly due to the evolution of international fuel prices. After the cutoff for the December *Report*, the oil price continued on its downward trend. The WTI price bottomed out at US$44 a barrel in late January, a price that had not been seen since early 2009. It then fluctuated between US$44 and US$50 a barrel. Taking the average of the last ten business days prior to the cutoff dates of this and the last *Reports*, the WTI price dropped nearly 30%. This trend, together with the fuel price stabilization mechanism (*MEPCO*), has resulted in lower local fuel prices. The exchange rate hike has partially offset the decrease, but fuel prices nevertheless reduced the CPI by one pp between December and February. In the opposite direction, electricity rates rose in February, which reflects the tariff regulation that entered into effect that month. Thus this item added 0.3 pp to CPI inflation since December (figure IV.7).

Food inflation had a significant effect on total inflation in the months leading up to the cutoff of the December *Report*, in particular the price of tomatoes. As projected in the last *Report*, this was a temporary phenomenon that was largely reversed as the supply normalized. Thus, tomatoes reduced inflation by 0.2 pp between December and February. Other fresh fruits and vegetables recorded their regular seasonal price reductions, such that this component contributed –0.3 pp to the CPI during these three months (figure IV.8). Other food prices rose in the period, again reflecting the higher exchange rate. On aggregate, food goods accounted for –0.1 pp of CPI inflation between December and February.

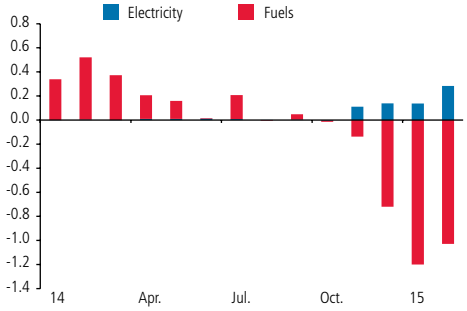
The evolution of margins is important for determining what inflationary pressures are forming. The limited pass-through of the low fuel prices in some sectors could be reflecting increased pressure. In addition, information gathered for the *Business Perceptions Report* suggests that margins could be tighter than a few months ago. Not all firms have passed through to final prices the cost increases deriving from the higher exchange rate. Consequently, the persistence of the current peso depreciation process and the possibility that it could last for some time and/or intensify represent an important risk in the evolution of the inflationary pressures implicit in the baseline scenario.

FIGURE IV.6
Wages (*)
(annual change, percent)



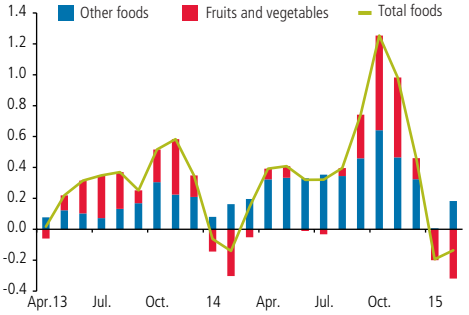
(*) See glossary for definitions.
Sources: Central Bank of Chile and National Statistics Institute (INE).

FIGURE IV.7
Contribution of energy to monthly CPI inflation
(accrued in a three-month moving window, percentage points)



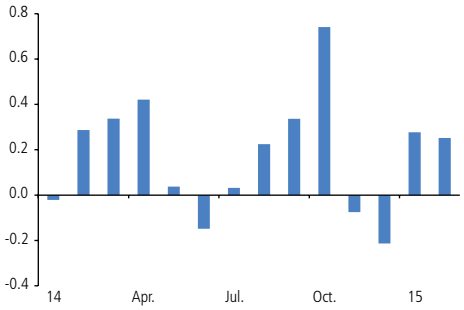
Sources: Central Bank of Chile and National Statistics Institute (INE).

FIGURE IV.8
Contribution of food goods to monthly CPI inflation (*)
(accrued in a three-month moving window, percentage points)



(*) Based on the new indices with base year 2013=100.
Sources: Central Bank of Chile and National Statistics Institute (INE).

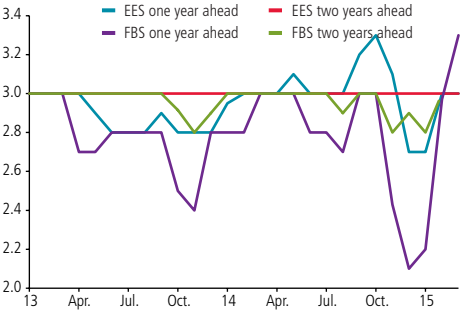
FIGURE IV.9
Surprises in monthly CPI inflation (*)
(percentage points)



(*) Surprises are the difference between actual inflation and expected inflation in the Economic Expectations Survey in the month immediately prior.

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

FIGURE IV.10
Inflation expectations (*)
(annual change, percent)



(*) The FBS corresponds to the survey for the first half of the month, except for March 2015, which uses the survey for the second half.

Source: Central Bank of Chile.

SHORT-TERM INFLATION OUTLOOK

As mentioned, inflation in the last three months has exceeded the forecast in the December *Monetary Policy Report,* and the baseline scenario has pushed back the estimated convergence of inflation with the target. Private expectations have undergone a sharp adjustment, given that they projected particularly low inflation for the first months of this year in late 2014 (figure IV.9).

More specifically, expectations for one year ahead, derived from both surveys and financial prices, have been adjusted upward substantially (figure IV.10). Whereas in December the Financial Brokers Survey (FBS) projected annual inflation of 2.2% one year ahead, the survey for the second half of March raised the forecast to 3.3%. Inflation insurance underwent a similar adjustment in the period. The Economic Expectations Survey (EES) increased from 2.7 to 3.0% one year ahead. Two years ahead, the different measures of expectations remain at 3.0%.

An analysis of the factors that explain inflation in the last three months suggests that a portion of the inflation since the cutoff of the December *Report* is due to specific products or the effects of the Tax Reform. However, as in December, the evolution of the exchange rate has played a key role in the determination of prices. Moreover, a number of the risks in the baseline scenario used in this *Report* could trigger turbulence in the financial markets, which could, in turn, cause even sharper exchange rate fluctuations. A scenario of this type could have very significant effects on inflation, considering that, as mentioned, the depreciation process has persisted for several quarters, margins appear to be tighter and nominal wages continue to grow at high rates. In any case, its impact will also depend on the phase of the economic cycle. The Board will continue to carefully analyze the factors that explain the evolution of inflation and will conduct monetary policy so that inflation will converge to 3% in the policy horizon.

V. INFLATION SCENARIOS

This chapter presents the Board's assessment on the Chilean economic outlook over the next two years. 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

Inflation again brought upside surprises in recent months. This *Report's* baseline scenario assumes that it will continue to approach the target, although at a slower pace than forecast in December. Domestic output and demand, meanwhile, have evolved as expected. The vision remains that the economy will continue to recover, gaining strength towards the second half of the year. The impulse that our economy will receive from abroad is expected to be as foreseen in December, with somewhat lower terms of trade and slower growth of our trading partners. External credit conditions are still foreseen to be less expansionary than they were in 2014, but they will remain favorable from a historic perspective.

In the baseline scenario, the inflation forecast is revised upward, especially for 2015. By components, the biggest changes go to the CPIEFE and foodstuffs minus fresh fruits and vegetables. These revisions consider the upside surprises coming from the latest inflation figures, which were associated to the nominal exchange rate, the Tax Reform, and past inflation. Add to this smaller than forecast pass-through from the oil price decline to some services. Actual data is coupled with the expected effects of the sustained depreciation of the peso and the higher level of past inflation on the price dynamic in the coming months (table V.1).

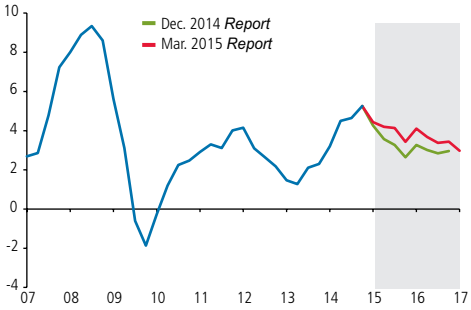
TABLE V.1
Changes in CPI inflation forecast at December 2015

	Jun.14	Sept.14	Dec.14	Mar.15
Initial forecast (1)	3.0	2.9	2.8	2.8
Fuels	0.0	0.2	-0.1	-0.1
Foodstuffs minus fresh fruits and vegetables	-0.1	0.1	0.0	0.4
Fresh fruits and vegetables	0.0	0.0	0.1	-0.1
Electricity rate	0.0	-0.1	0.0	0.1
CPI minus foodstuffs and energy	-0.1	-0.2	0.2	0.5
Final forecast (2)	3.1	2.8	2.8	3.6

(1) Forecast included in previous *Report.*
(2) Forecast included in respective *Report.*

Source: Central Bank of Chile.

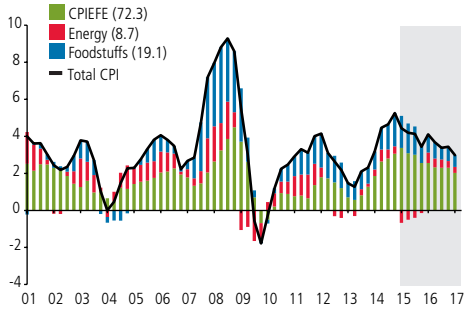
FIGURE V.1
CPI inflation forecast (*)
(annual change, percent)



(*) Gray area, as from the first quarter of 2015, shows forecast.

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

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



(1) Gray area, as from the first quarter of 2015, shows forecast.
(2) In parentheses, share in CPI basket.

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

TABLE V.2
Inflation

	2013	2014	2015 (f)	2016 (f)	2017(f)
	(annual change, percent)				
Average CPI inflation	1.8	4.4	4.0	3.6	
December CPI inflation	3.0	4.6	3.6	3.2	
CPI inflation in around 2 years (*)					3.0
Average CPIEFE inflation	1.2	3.6	4.2	3.3	
December CPIEFE inflation	2.1	4.3	3.4	3.0	
CPIEFE inflation in around 2 years (*)					2.8

(f) Forecast.
(*) Corresponds to the projected inflation for the first quarter of 2017.
Source: Central Bank of Chile.

TABLE V.3
Economic growth and current account

	2013	2014	2015 (f)
	(annual change. percent)		
GDP	4.2	1.9	2.5 - 3.5
National income	3.6	1.9	3.5
Domestic demand	3.7	-0.6	2.5
Domestic demand (w/o inventory change)	4.6	0.5	2.2
Gross fixed capital formation	2.1	-6.1	1.2
Total consumption	5.5	2.5	2.5
Goods and services exports	3.4	0.7	3.4
Goods and services imports	1.7	-7.0	2.4
Current account (% of GDP)	-3.7	-1.2	-0.3
Gross national saving (% of GDP)	20.6	20.3	21.5
Gross national investment (% of GDP)	24.3	21.4	21.8
GFCF (% of nominal GDP)	23.8	22.0	21.5
GFCF (% of real GDP)	26.1	24.0	23.7
	(US$ million)		
Current account	-10,125	-2,995	-650
Trade balance	1,820	7,767	9,700
Exports	76,477	75,675	70,350
Imports	-74,657	-67,908	-60,650
Services	-3,402	-3,757	-4,500
Rent	-10,730	-8,857	-7,700
Current transfers	2,187	1,851	1,850

(f) Forecast.
Source: Central Bank of Chile.

Accordingly, headline inflation should continue to converge to the target, but remaining above 4% annually still for some months, and approaching 3% during 2016 (figures V.1 and V.2 and table V.2). The CPIEFE, meanwhile, is expected to reach 3% during 2016 and stay in the neighborhood until the end of the projection horizon.

This trajectory considers that the pass-through of the peso depreciation of recent months to prices will be in the upper part of historic patterns; that real wages will be adjusted in line with productivity; and that output gaps will remain over the projection horizon. For the RER, the methodological assumption used is that it will remain near its current level, since it is now within the range believed to be consistent with the state of the business cycle and its long-term fundamentals. As for the MPR, market expectations show differences in its 2015 evolution. Survey respondents think that it will be held at 3% throughout the whole year to be raised during 2016. Asset prices, however, point at it beginning to rise in the second quarter of 2015. As a working assumption, it is considered that will follow a path running slightly above the one implicit in the surveys (figure V.3).

In the baseline scenario, GDP will grow between 2.5% and 3.5% annually in 2015, the very same range as in the previous *Report* (table V.3). Thus, the economy will continue to grow below its estimated medium-term growth, which the Board places between 4% and 4.5%. This projection continues to assume that in the earlier part of the year the economy will grow close to the average of the last few months, with a recovery process that will become more notorious towards the end of 2015.

This trajectory is grounded on a stronger external impulse than in 2014. It is also projected that the international oil price will remain low, even lower than forecast in December, so it will help reduce business costs and improve household income. This also couples with the increased dynamism from the peso depreciation to tradable goods, and the significant impulse coming from monetary policy and higher fiscal expenditure, especially in investment, which has already reflected in GDP growth of the fourth quarter of 2014. Finally, a critical point in this projection is that our estimates continue to foresee a gradual improvement in expectations of consumer and business.

Final domestic demand growth —excluding inventories— is revised downward from the last *Report*: 2.2% annually (2.6% in December). This is explained by a slower than expected recovery of both private consumption and investment. In the first case, a reduction in durable consumption must be considered, due to the peso depreciation, together with slower growth in real wages due to the upward correction of the inflation forecast. In investment, there is also the downward revision of the survey of the Capital Goods Corporation to investment plans for 2015. All considered, gross fixed capital formation will reach 21.5% of nominal GDP this year. In turn, our forecast for total domestic demand growth is reduced to 2.5% annually (3.0% in December).

This forecast assumes that gross national savings will rise to 21.5% of GDP in 2015 (20.6% in 2013), mainly because of higher private saving. This is also behind the expected improvement in the current account balance, which is

forecast to be near 0% this year. At trend prices[1]/, the current account also shows a smaller deficit than in previous years: around 2% of GDP (a little over 4% of GDP in 2013). At the trade balance level, the adjustment in the current account is reflected on the reduction in valued imports, owing largely to the lower oil price. Valued exports are also reduced, especially because of the decline in the copper price. All considered, the trade balance improves with respect to December's outlook.

The external scenario continues to foresee stronger global growth for the period 2015-2016 compared to 2014 (table V.4), although with better prospects for advanced economies. This contemplates an upward revision to estimated growth in the Eurozone (+5 tenths of a point for the average of the two-year period 2015-2016), due to the positive effects of the European Central Bank's monetary stimulus plan, somewhat greater growth of trading partners and actual growth data showing some stabilization. A sustained recovery of the United States is still expected. However, prospects for emerging economies are not so favorable. Again the biggest downward correction applies to Latin America, to 0.8% and 2.1% annually for 2015 and 2016. In China, growth is revised downward for 2015-2016, in line with the objective set by the Chinese authorities for this year, and with actual data. Thus, the growth forecast for trading partners is lowered by one tenth of a point for 2015 and 2016, to 3.4 and 3.8%, respectively.

The terms of trade will improve, aided by a fall in oil prices that will more than offset the copper price adjustment. In the baseline scenario, the copper price will average US$2.8 per pound in 2015 and 2016, while the Brent and WTI crude oil will be at US$62 and US$55 per barrel over the same period. The drop in the oil price, but particularly the worldwide appreciation of the dollar, significantly reduces the projected external inflation relevant to Chile, to -6% annually in 2015. On the contrary, it is revised upward for 2016, due to the effects that the currency depreciations may have on each economy's inflation.

RISK SCENARIOS

The baseline scenario reflects those events that are believed to be the most likely to occur with the information at hand at the closing of this *Report*. There are risks, however, which, if materialized, may reshape the macroeconomic outlook and, therefore, may alter the course of monetary policy.

On the external front, there are several elements that might trigger new episodes of volatility in world financial markets, with considerable effects on credit costs, the exchange rate, and the short-term inflation outlook. On one hand, any important surprise regarding the timing or speed with which the Fed will raise the policy rate may cause significant volatility in global financial markets, pushing up the interest rates and further appreciating the dollar. This couples with an abrupt portfolio re-composition, given the low level of long-term rates and high stock prices in the United States. On the other

[1]/ This calculation considers revisions to prices, not volumes. Long-term prices of US$2.85 per pound of copper and US$82 per barrel of oil are assumed.

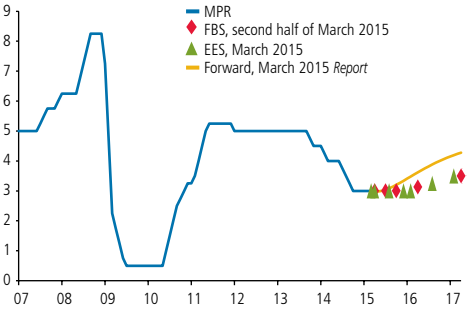
TABLE V.4
International baseline scenario assumptions

	Avg. 00 - 07	Avg. 10 - 12	2014	2015 (f)	2016 (f)
	(annual change, percent)				
Terms of trade	8.2	4.2	-1.4	1.4	-0.2
Trading partners GDP (*)	3.6	4.6	3.3	3.4	3.8
World GDP at PPP (*)	4.2	4.0	3.3	3.5	3.8
World GDP at market exchange rate (*)	3.3	3.2	2.7	2.9	3.3
Developed economies' GDP at PPP	2.6	1.8	1.7	2.2	2.5
Emerging economies ' GDP at PPP	7.4	5.9	4.6	4.5	5.0
External prices (in US$)	4.6	5.2	-0.9	-6.0	1.6
			(levels)		
LME copper price (US$cent/lb)	154	368	311	275	285
WTI oil price (US$/barrel)	44	89	93	51	58
Brent oil price (US$/barrel)	42	101	99	58	65
Gasoline parity price (US$/m^3) (*)	367	742	731	503	521
Libor US$ (nominal, 90 days)	3.6	0.4	0.2	0.6	1.9

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

Source: Central Bank of Chile.

FIGURE V.3
MPR and expectations
(percent)



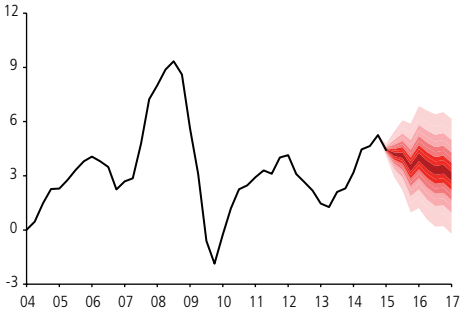
Source: Central Bank of Chile.

FIGURE V.4
GDP growth (*)
(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 risks on growth as assessed by the Board. The baseline scenario uses as a working assumption that the policy rate will follow a path running slightly above the one implicit in the surveys.

Source: Central Bank of Chile.

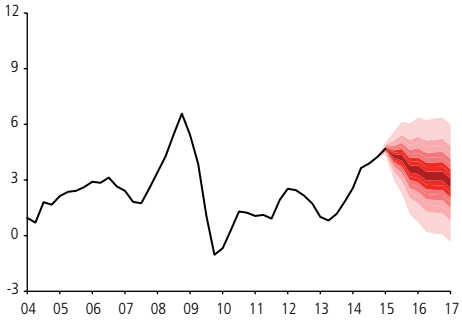
FIGURE V.5
CPI inflation forecast (*)
(annual change, percent)



(*) 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 risks on inflation as assessed by the Board. The baseline scenario uses as a working assumption that the policy rate will follow a path running slightly above the one implicit in the surveys.

Source: Central Bank of Chile.

FIGURE V.6
CPIEFE 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 risks on core inflation as assessed by the Board. The baseline scenario uses as a working assumption that the policy rate will follow a path running slightly above the one implicit in the surveys.

Source: Central Bank of Chile.

hand, there is the situation that some emerging economies are experiencing, whose macroeconomic scenarios could complicate more if the prices of their commodities remain low for some time. In Latin America this risk is more severe, as it may be compounded with complex economic and political factors. In addition, high fiscal and current account deficits persist, rendering the necessary adjustments more difficult and costly. This is not the case in Chile, whose political framework has allowed for a timely macroeconomic adjustment in the last year and a half.

One must also consider the geopolitical conflicts in the Middle East and parts of Europe. In the latter, Greece stands out with its progress in reaching agreements to finance its debt. It may also be that the recovery process becomes stronger in the Eurozone, giving a stronger boost to the global economy and Chile. Similarly, it may be that the positive effect of lower oil prices on the global economy exceeds forecasts and/or that oil prices remain low. On the other hand, there remains the risk of slower growth in China and its implications on the price of copper. The state of the Chinese financial system and real estate sector are the main focus of attention.

Domestically, the main risk has to do with the evolution of inflation, particularly because of the sustained exchange rate depreciation and its accumulated effect on costs. This, in a context where margins seem to have narrowed due to the high annual growth in nominal wages and because in some sectors the pass-through from the fuel price drop has been limited. Accordingly, the materialization of an external risk scenario that generates another significant depreciation of the peso may have strong effects on the short-term inflation outlook, whose magnitude will depend on the economy's phase of the cycle.

Furthermore, it is also possible that despite the better performance of domestic output and expenditure compared to previous quarters, private expectations do not improve enough to stimulate an increase in spending, especially in investment. Conversely, a scenario where expectations recover more strongly than projected would enable a faster economic recovery. The same would happen if the increase in national income has greater effects on expenditure, in a context of strong external accounts.

After evaluating all these risks, the Board estimates that, although domestic risks have moderated, the risk balance fot output is still downward biased. Whereas for inflation, it is unbiased.

In recent months, inflation has exceeded expectations, and in the baseline scenario of this *Report* it will remain above 4% still for some time. Domestic activity has picked up, although the prospects for growth are still bounded because of weak domestic private expenditure. Monetary and fiscal policies have cooperated to lay the foundation of a more consolidated recovery. Private expectations have remained in pessimistic territory, but with a marginal recovery. The Board has kept the monetary policy rate at 3% and has stated that any future changes to it will depend on the evolution of internal and external macroeconomic conditions, and their implications for the inflation outlook. At the same time, it has reaffirmed its commitment to conduct monetary policy with flexibility so that projected inflation stands at 3% over the policy horizon.

BOX V.1
CORE INFLATION MEASURES

Short-term inflation fluctuations are usually related to sharp changes in some prices, whose origin is not closely tied to the economic cycle. Examples include the price of some food goods due to climatic fluctuations or the price of fuels in response to international price movements. Consequently, to evaluate the current and future path of changes in the price level, central banks usually review the evolution of the so-called core inflation indicators, which aim to identify medium-term inflation trends associated with the economic cycle, as these are more likely to respond to monetary policy.

A good core indicator should be able to predict the future path of inflation and, at the same time, be easy to communicate to the public. This does not mean that the inflation forecast is based on the current value of the core measure, but rather that the analysis of the measure provides a better understanding of the trends that are often hidden behind the high volatility of total inflation.

In Chile, the Central Bank monitors a set of core indicators. As in most OECD countries, the main measure is the consumer price index excluding food and energy prices, called the CPIEFE. This box describes the recent evolution of these measures and their relationship with the inflation trend.

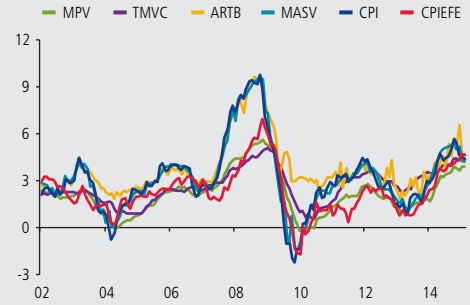
A first set of core inflation measures are the so-called fixed-exclusion measures. In practice, these indicators eliminate from the CPI basket a fixed and predetermined number of products whose prices are particularly volatile or whose fluctuations mostly stem from factors that are exogenous to the economic cycle. The most common examples are indices that remove all or some food and energy prices. Over the years, most central banks—including Chile—have converged to using an index that excludes all food and energy prices, namely, the CPIEFE[1]/.

Another type of core inflation measure uses statistical methods to eliminate from the CPI basket some prices whose fluctuations exceed predefined criteria on volatility or the size of fluctuations, whether positive or negative. In this case, the excluded goods vary from month to month, depending on the changes recorded in their prices. The Central Bank of Chile also uses this type of method[2]/.

The different core inflation measures reproduce the general movements in the total CPI over time. In the presence of shocks, however, the majority of the core measures react more gently, indicating that inflation should return to its previous values once the effects dissipate. Examples include the episodes in 2008–09 and 2011–12, when CPI inflation was strongly affected by the sharp changes in the prices of food goods and/or energy.

In 2013 and part of 2014, the different core inflation indicators demonstrated a generalized upward shift. The rise has eased in recent months, however, and even changed direction in some measures (figures V.7 and V.8). This behavior is consistent with the viewpoint presented in this *Report*, where inflation will remain high for a time and then gradually converge toward the target of 3%.

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



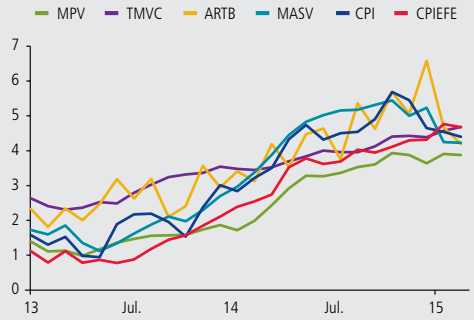
(*) See glossary for definitions.

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

[1]/ Previously, the Central Bank of Chile used other fixed-exclusion measures such as the CPIX and the CPIX1. For more details, see the *Monetary Policy Report*, May 2000, box I.1.

[2]/ More details are available in the *Monetary Policy Report*, September 2003, box IV.1; and the *Monetary Policy Report*, May 2007, box V.1.

FIGURE V.8
Core inflation (*)
(annual change, percent)



(*) See glossary for definitions.

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

More formally, Bertinatto et al. (2015) analyze the relation between the different core inflation measures and medium-term inflation trends, evaluating the predictive capacity of these measures for projecting future inflation. The results show that in the short term (three to six months), the predictive capacity of the core indicators, including the CPIEFE, is not any better than the CPI (table V.5). This finding is not surprising, given that the shocks that affect the price of goods that are removed from the CPI basket to construct the core measures are typically short-term shocks that tend to have large, but temporary effects in the CPI. Examples include increases over and above the normal seasonal changes in fruit and vegetable prices or changes in fuel prices. At longer horizons, however, the core inflation measures usually provide a better interpretation of the future evolution of total inflation.

TABLE V.5
Predictive capacity (1) (2) (3)

	3	6	12	24
CPI	1.24	2.12	3.43	3.79
CPIX	1.66	2.43	3.43	3.68
CPIX1	1.81	2.48	3.41	3.73
CPIEFE	1.90	2.41	3.02	2.90
MPV	1.74	2.20	2.85	3.01
TMVC	1.96	2.27	2.71	2.78
ARTB	1.68	2.26	3.22	3.38
MASV	1.27	2.15	3.42	3.39

(1) The average quadratic error obtained when each indicator is used to forecast annual inflation in 3, 6, 12 and 24 months.
(2) Based on data for the period from January 2002 to February 2015.
(3) See glossary for definitions of the core indicators.

Source: Bertinatto et al. (2015).

With regard to the CPIEFE, the results of the same study show that at one- or two-year horizons, the predictive capacity of this measure is higher than the CPI, and it even does better than some more complex measures based on statistical criteria. The predictive capacity of the CPIEFE also widely surpasses the other core inflation measures, such as the CPIX and the CPIX1.

As the authors point out, prediction errors are generally high, which is not surprising given the volatility of inflation. Therefore, these indicators are used more to identify changes in the inflation trend rather than to predict the exact value of inflation.

The Central Bank of Chile, like the world's main central banks, makes a strong effort to enhance the transparency and effectiveness of its communication. Thus, in addition to providing information on the future dynamics of inflation, the core inflation measures need to be easy to understand and communicate. For the purposes of explaining monetary policy actions, central banks generally choose a core indicator that is widely understood and accepted by the community. The fixed-exclusion measures meet this requirement, including the CPIEFE used in Chile.

Core inflation measures are useful instruments for forecast analysis. The recent behavior of these measures was one of the factors that led the Central Bank to maintain its view that inflation would remain high for longer than expected, when most of the markets expected a strong, fast downward adjustment in this indicator. At the same time, the empirical evidence shows that no analytical instrument will always provide the correct signals, so these measures should be used cautiously and in conjunction with other tools.

GLOSSARY

ARTB: Autoregressive inflation trend with levels. For more details, see Bertinatto et al. (2015).

Average interbank interest rate swap (*promedio cámara*): 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.

Corporate Emerging Market Bond Index (CEMBI): An indicator of corporate risk, published by JP Morgan Chase. Measures the difference between the interest rate paid by dollar-denominated bonds issued by banks and corporations in emerging economies and the interest rate on U.S. Treasury bonds, which are considered risk-free.

CPIEFE: CPI excluding food goods and energy prices, leaving 72% of the total CPI basket.

CPIX: CPI excluding fuels and fresh fruit and vegetables, leaving 91% of the total CPI basket (91% in the December 2008 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.

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

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 1990–2013 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.

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 plus 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.

MASV: Moving average inflation trend. For more details, see Bertinatto et al. (2015).

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 2015, the following countries are included: Argentina, Belgium, Bolivia, Brazil, Canada, China, Colombia, France, Germany, India, Italy, Japan, South Korea, Mexico, Netherlands, Paraguay, Peru, Spain, Switzerland, Thailand, United Kingdom and United States,.

MPV: Trimmed CPI measure that excludes the subclasses with the highest and lowest monthly changes. For more details, see Bertinatto et al. (2015).

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, South Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand.

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.

TMVC: Trimmed CPI measure that excludes the most volatile subclasses. For more details, see Bertinatto et al. (2015).

VIX: Stock volatility index calculated by the Chicago Board of Trade, and the most commonly used measure of general market volatility at the international level. Measures the implicit volatility in S&P 500 options contracts.

World growth at market exchange rate: Each country is weighted according to its GDP in dollars, published in the IMF *World Economic Outlook* (WEO, October 2014). The sample of countries used in the calculation represent around 90% of world GDP. For the remaining 10% average growth is estimated at 1.8% for the period 2014-2016.

World growth: Regional growth weighted by its share in world GDP at PPP, published in the IMF *World Economic Outlook* (WEO, October 2014). World growth projections for 2014-2016 are calculated from a sample of countries that represent about 86% of world GDP. For the remaining 14%, average growth is estimated at 3.5% for the period 2014-2016.

ABBREVIATIONS

BCP: Central Bank bonds denominated in pesos

BCU: Central Bank bonds denominated in UFs

BLS: Bank Lending Survey

EES: Economic Expectations Survey

FBS: Financial Brokers Survey

IMCE: Monthly Business Confidence Index

CPIEFE: CPI excluding food and energy

IPEC: Consumer Confidence Index

MPR: Monetary policy rate

RER: Real exchange rate

OER: Observed exchange rate

REFERENCES

Albagli, E., and A. Barrero. 2015. Tasa de desempleo y cambios demográficos en Chile. Mimeo. Central Bank of Chile. March.

Central Bank of Chile. 2015. Informe de Percepciones de Negocios. February.

Central Bank of Chile. Monetary Policy Report. Various issues.

Barclays Capital. 2015. Global Economics Weekly. Various issues.

Bertinatto, L., W. Gonzalez, I. Meneses and A. Sansone. 2015. Análisis de distintas medidas de inflación subyacente. Mimeo. Central Bank of Chile. March.

Consensus Forecasts. 2015. A Digest of International Forecast. Various issues.

CRU. 2015. Copper Quarterly Industry and Market Outlook. January.

Deutsche Bank. 2015. Macro Forecast. Various issues.

Emerging Portfolio Fund Research. 2015. Global Fund Allocations. http://wwww.epfr.com/.

International Monetary Fund. 2014. World Economic Outlook. October.

International Monetary Fund. 2015. World Economic Outlook: An Update. January.

Food and Agriculture Organization. 2015. FAOSTAT. http://faostat.fao.org/.

International Energy Agency. 2014. World Energy Outlook. November.

International Energy Agency. 2015. Oil Market Report. March.

JP Morgan Chase. 2015. Global Data Watch. Various issues.

U.S. Energy Information Administration. 2014. Annual Energy Outlook. May.

U.S. Energy Information Administration. 2015a. Short Term Energy Outlook. March.

U.S. Energy Information Administration. 2015c. International Energy Statistics. http://www.eia.gov.

Alejandro Zurbuchen S.
LEGAL REPRESENTATIVE

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ISSN: 0716-2219
Santiago, Chile
Agustinas 1180, Santiago, Chile
P. O. BOX 967, Santiago, Chile
Tel.: 56-22670 2000
www.bcentral.cl
bcch@bcentral.cl

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