FINANCIAL STABILITY REPORT

Second Half 2014



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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 closing date for this Financial *Stability Report* was 21 November 2014.

PREFACE

As established in its Basic Constitutional Act, the Central Bank of Chile must "safeguard the stability of the currency and the normal operation of internal and external payments." To carry out these tasks, the Central Bank of Chile is vested with diverse legal powers, such as extending emergency credit and determining regulations in matters affecting the financial system and international trade operations.

The Central Bank's focus in the area of financial stability is centered mainly on the proper functioning of the system and the Chilean economy's access to international financial markets. The Central Bank's tracking of financial stability is complementary to that undertaken by the specialized supervisory entities; it serves as an independent element of analysis with respect to the supervisors' powers and functions in relation to the entities subject to their oversight.

The objective of the *Financial Stability Report* is to provide information, on a half-yearly basis, on recent macroeconomic and financial events that could affect the financial stability of the Chilean economy, such as the evolution of the indebtedness of the main credit users, the performance of the capital market, and the ability of the financial system and the international financial position to adapt sufficiently to adverse economic situations. In addition, the *Report* presents the policies and measures that support the normal operation of the internal and external payment system, with the objective of promoting general knowledge and public debate with regard to the Bank's performance in fulfilling this function.

The Board

SUMMARY

The unfolding of the process of US monetary policy normalization could lead to episodes of financial volatility. The end of Federal Reserve's asset purchase program in late October proceeded smoothly. However, uncertainty remains about when the Fed will begin raising the fed funds rate, by how much and how the market will react. The expansionary policies have contributed to the current environment of low risk premiums and low volatility. Therefore, any unexpected news could affect financial conditions—as in May 2013—, increasing the cost of funding in international markets, reversing portfolio flows and depreciating the currencies of emerging economies. The start of a new round of quantitative easing by the European Central Bank and the recent announcements from the Bank of Japan in the same direction could reduce the likelihood and potential impact of these episodes of volatility, depending on how these unconventional policies will ultimately reflect in global financing conditions.

The slowdown in emerging economies could result in reduced capital flows, because this would make it less attractive as an asset class, particularly in Latin America. A scenario in which the recent drop in commodity prices is prolonged or intensified, or where doubts resurge about China's growth, could trigger this kind of events. This outlook could become more complex if at the same time the United States should raise the long-term rate, thus increasing the cost of international funding.

An increase in the cost of international funding could put upward pressure on local long-term interest rates. The decline of long-term international and local interest rates has motivated bond issuance in both markets and boosted domestic demand for fixed-income mutual funds. While local rates have not responded only to changes in international rates—reflecting also the local monetary policy actions— a rise in international interest rates push the cost of corporate financing up. At the same time, it could trigger portfolio rebalancing by the investors, thereby reinforcing the increase in interest rates and generating some volatility in the markets.

As of the second quarter, the financial position of the Chilean corporate sector showed no significant change from the end of 2013, while remaining highly leveraged and with low profitability by historical standards. Still, it maintains a slightly upward trend for the total firms' debt to GDP ratio. In the context of slower economic growth, it cannot be ruled out that more recent data—unavailable at the statistical closing date of this Report—could post not so favorable results. Meanwhile, the depreciation of the exchange rate has not entailed a significant impact in the profitability of currency-mismatched firms.

In the housing market, prices continue to rise, while the vacancy rate has increased for office space. Market indicators point a dynamic growth in housing prices in the Metropolitan Region, with still strong demand —despite the current phase of the business cycle—and low inventory levels. Changes in these factors could result in a slowdown in prices, so past trends must not be extrapolated into investment decisions and project financing in the sector. On the commercial real estate, and in line with the last Report, the entry of new projects in the office-space market has given way to a higher vacancy rate, which could go further up if the supply continues to grow.

Households show higher indebtedness—associated mainly to mortgage loans—, although their financial burden is stable in line with lower interest rates. The low unemployment level and the change in composition of banks' loans towards households less exposed to the business cycle, as described in previous Reports, have resulted in stable bank payment indicators, despite the cyclical weakness of recent quarters. Still, it is important to bear in mind that the labor market may deteriorate, reducing the payment capacity of households.

The slower growth in commercial and consumer loans is consistent with the evolution of the economy. In the commercial portfolio, the reduction in both interest rates and credit flows suggests that demand factors are dominant. Part of the lower demand for bank financing is due to debt being replaced by bond issuance. The Bank Lending Survey (BLS) of last September shows that both supply and demand factors have tightened from earlier periods, but the change is bigger on the demand side. Consumer loans show mixed evidence, validating both supply and demand factors.

Banks' financial indicators remain healthy while stress tests show that capital levels are sufficient to accommodate the materialization of a severe stress scenario. While the banking industry saw increased profitability most recently, this was driven by the temporary effect of higher inflation rate. The interest margin has remained stable during 2014 and is still the largest contributor to the system's profitability. Solvency levels permit to absorb the materialization of a severe stress scenario, which combines a sharp drop in output, a depreciation of the peso and a reversal of the yield curve. While the impact of such a scenario entails a decrease in profits similar to that if the last Report, the higher initial profits allow banks to obtain a positive closing ROE in this scenario.

Bond issuance, both locally and externally, has helped to diversify the sources of bank financing. The lower financing costs have favored debt issues in local and foreign markets, extending the duration of liabilities. However, some banks remain highly dependent on wholesale sources, which may be a significant vulnerability to episodes of changes in portfolio decisions by these investors or greater volatility of these flows.

In summary, the current financial situation of firms and households is somewhat less adequate than it was in previous years, so their capacity to deal with a deterioration in the domestic and international macroeconomic environment has dwindled. Thus, it is necessary for agents to properly evaluate their borrowing and lending decisions.

I. EXTERNAL ENVIRONMENT AND FINANCIAL RISKS

The international markets have been focused on the normalization of monetary policy in the United States, as that process could trigger new episodes of volatility and a deterioration in external financing conditions. In addition, there is an unusual difference between monetary policy in the U.S. and in other developed countries, while the emerging world continues to experience a persistent downturn.

EVOLUTION OF THE BASELINE SCENARIO

Volatility indicators remain low, although there have been some episodes of turbulence in recent months.

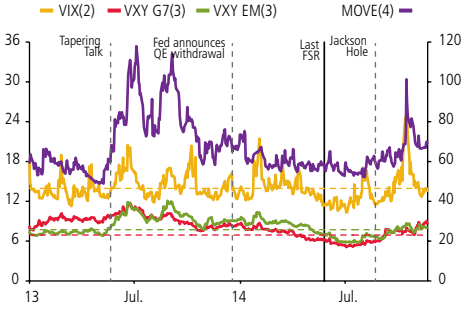
The international financial markets have been fairly calm over the past few months, in a period in which the U.S. Federal Reserve (the Fed) concluded its asset purchase program, the growth outlook for Europe deteriorated, and the ongoing geopolitical conflicts had a moderate impact (figure I.1). This stability has coincided with a greater appetite for risk among investors. Thus, over US$300 billion in high-yield bonds have been issued in the United States so far this year (85% of 2013 issues). This has favored portfolio flows to emerging markets, which have recovered from the reversal of mid-2013 (figure I.2). Volatility indices increased sharply in October, however, but the increases were short-lived and did not have specific origins.

The monetary policy of the main developed economies, as well as the growth and inflation outlook, continues to diverge.

In October, the Fed concluded its asset purchase program, after doubling the size of its balance sheet relative to November 2008[1]/. The monetary authority is now expected to begin the process of normalizing its conventional monetary policy. The exact date of the first increase in the Federal Funds rate is uncertain, and projections vary among market participants, but it is generally expected to start sometime in mid-2015.

[1]/ Since the announcement of the first asset purchase program by the Fed (November 2008), the Fed's balance sheet has increased to US$4.500 trillion dollars.

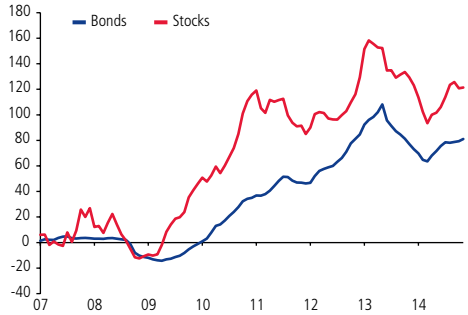
FIGURE I.1
Financial market volatility (1)
(percent; index)



(1) The dashed lines indicate the series average in 2014 (through 20 November).
(2) VIX: implied volatility in one-month S&P 500 options.
(3) VXY: currency volatility index based on turnover-weighted foreign exchange forward options.
(4) MOVE: implied volatility index of one-month U.S. Treasury bonds, weighted by options, at 2, 5, 10 and 30 years.

Source: Bloomberg.

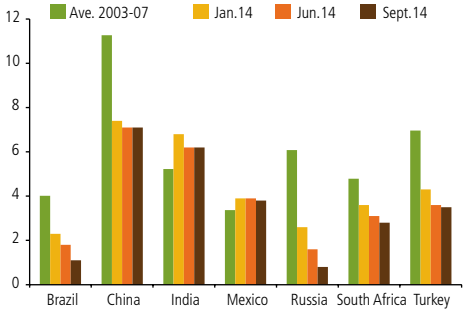
FIGURE I.2
Portfolio inflows to emerging economies (*)
(US$ billion)



(*) Sample of investment fund portfolio inflows to emerging Asia, emerging Europe and Latin America. Data through 19 November 2014.

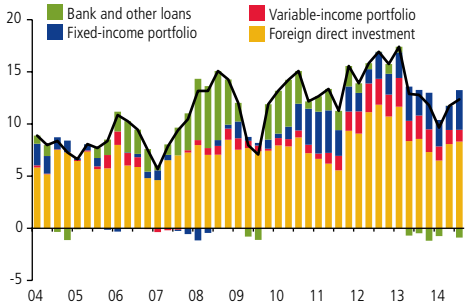
Source: Central Bank of Chile, based on data from Emerging Portfolio Fund Research.

FIGURE I.3
Growth outlook in 2015
(percent)



Sources: CEIC and Consensus Forecasts.

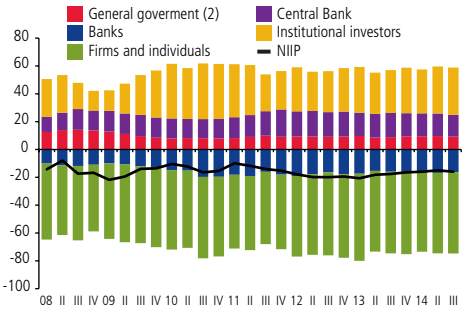
FIGURE I.4
Gross capital inflows to Chile (*)
(percent of GDP)



(*) Accumulated annual flow.

Source: Central Bank of Chile.

FIGURE I.5
Net international investment position
(percent of GDP) (1)



(1) GDP at a constant real exchange rate (fixed-base index September 2014 = 100).
(2) Central Government and municipalities.

Source: Central Bank of Chile.

In contrast to the United States, the central banks of Japan and the Eurozone have pursued a more expansionary monetary policy, in response to weak inflation and output data. Japan increased the annual growth rate target for the monetary base, expanded the monthly purchase of government bonds, and tripled investment in exchange-traded funds (ETF). In the Eurozone, the European Central Bank (ECB) announced a plan to buy covered bonds, asset-backed securities (ABS) and possibly sovereign bonds, which would increase its balance sheet by as much as a trillion euros. In addition, the ECB assumed its role as bank supervisor in the Eurozone, under the Single Supervisory Mechanism (SSM). Prior to the SSM implementation date, the banks subject to supervision had to undergo an asset quality review (AQR). In addition, 130 of the largest banks in the European Union (plus Norway) passed the stress tests carried out by the European Banking Authority. Those with a presence in Chile, for the most part, had favorable capital adequacy levels relative to the rest of the Eurozone.

The emerging economies have slowed, especially in Latin America. External financing conditions remain mostly favorable, however.

China is still at risk of a sharper economic slowdown, and nonbank credit continues to record dynamic growth. Other important emerging economies (such as Indonesia, Russia, South Africa, Turkey and Brazil), as well as some smaller Latin American countries, are immersed in the downward phase of the economic cycle (figure I.3).

With regard to external financing conditions, long-term interest rates continued to fall, in general, in the second half of the year, while spreads remain narrow from a historical perspective. This reflects investors' increased appetite for risk, low inflation expectations and a lower medium-term growth outlook in the developed world.

In Chile, gross capital inflows increased in 2014, due to greater fixed-income portfolio investment and foreign direct investment (FDI).

Locally, gross capital inflows increased over the course of 2014, from 9.6 to 12.4% of GDP between the first and third quarters of the year[2]/. Fixed-income portfolio flows were 3.8% of GDP in the third quarter, the highest level since 2011, in line with the record external bond issues by the corporate and banking sectors (chapter II).

The variable-income component decreased from 1.4 to 1.1% of GDP, as in other emerging economies, and at a lower magnitude than reported in the last *Financial Stability Report* (FSR). Internal estimates show that the drop in these flows was led by investors with a more procyclical profile, which have increased their share as seen in international markets. Because variable income is one of the less stable components of the financial account, the heightening of this trend could result in greater volatility of external financing.

[2]/ For the purpose of comparison, the balance-of-payments data included in this section correspond to the last moving year.

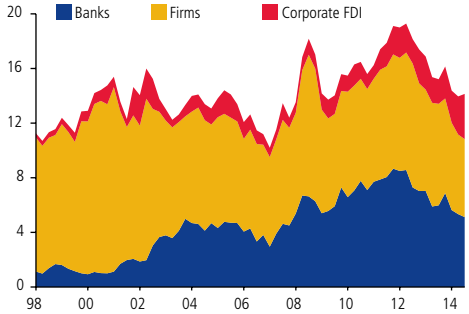
FDI flows rose to 8.3% of GDP in the third quarter of this year (6.5% of GDP in the first quarter), explained by a larger capital share, which was partially offset by a drop in reinvested earnings. FDI continues to lead the composition of external liabilities (figure I.4).

External liquidity and solvency indicators remained stable.

The net debit international investment position (NIIP) remained around 16% of GDP in the third quarter of 2014. This reflects an increase in the net credit position of institutional investors, which was offset by the increase in the net debit position of the corporate and banking sectors (figure I.5).

Residual short-term external debt (RSTED) declined slightly, to levels around 14% of GDP in the third quarter, with a larger contribution from corporate FDI (figure I.6). Relative to international reserves, RSTED reached a ratio of 87% in the third quarter of 2014.

FIGURE I.6
Residual short-term external debt (RSTE), by institutional sector (*)
(percent of GDP)



(*) Excluding general government and Central Bank debt, which represent 0.1 and 0% of GDP, respectively.

Source: Central Bank of Chile.

MAIN EXTERNAL THREATS TO FINANCIAL STABILITY

A sudden increase in volatility and a strong reversal in asset prices are the main external risk factors for the emerging world and the Chilean economy.

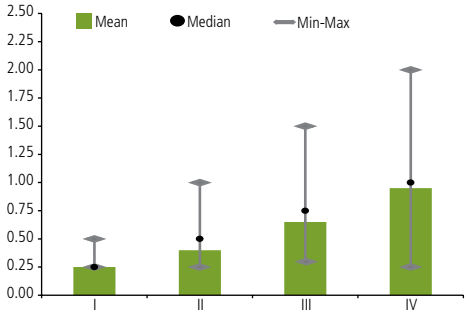
The materialization of these risks could trigger a significant capital outflow from emerging economies, an increase in domestic long-term interest rates and a currency depreciation—especially in countries with a floating exchange rate regime.

It would also imply tighter external financing conditions, which could reinforce the slowdown process in the emerging world. This, in turn, could lead to a deterioration in their growth outlook and an intensification of capital outflows, thereby generating a vicious circle for these economies.

One factor that could touch off episodes of higher volatility is the timing and, especially, the dynamics of the increase in the Federal Funds rate.

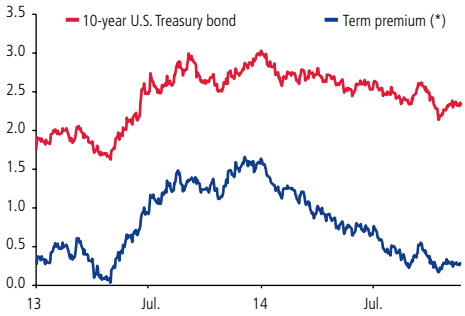
While the increase in the Fed Funds rate is expected to start in mid-2015, there is no consensus on the exact date. However, a much more important risk is related to the speed with which this process unfolds, rather than the precise timing of the onset (figure I.7). In fact, the market and the Fed differ significantly in terms of their expectations of the level that the Fed Funds rate should reach in two years time, with the Fed's projections being the higher of the two.

FIGURE I.7
Expectations for the Fed Funds rate in 2015
(percent)



Source: Bloomberg.

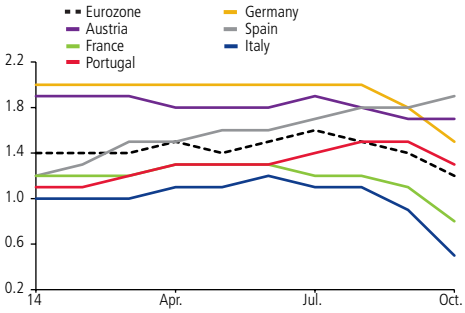
FIGURE I.8
Interest rate on 10-year U.S. Treasury bond
(percent)



(*) Estimated by the New York Federal Reserve using the model proposed in Adrian et al. (2013).

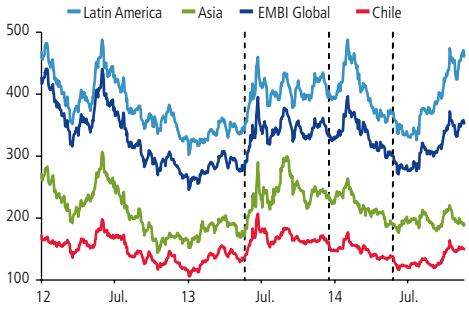
Source: New York Federal Reserve.

FIGURE I.9
Europe: Growth expectations in 2015
(percent)



Source: Consensus Forecasts.

FIGURE I.10
Spread on sovereign bonds issued overseas (1)(2)
(basis points)



(1) EMBI values at the end of each month.

(2) Vertical dashed lines in chronological order indicate: (i) first indications of monetary stimulus withdrawal (Tapering Talk); (ii) start of monetary stimulus withdrawal; and (iii) statistical closing date of last FSR.

Source: Bloomberg.

Given these differences, there could be an increase in the term premium implicit in U.S. long-term rates—which are at historically low levels (figure I.8)—leading to an increase in internal and external financing costs.

In the Eurozone, while bank stress tests and asset quality reviews were generally successful, the risk of deflation in a context of low growth prospects could reverse these results (figure I.9).

With regard to the world growth scenario, there is still a risk of a sharper slowdown in some important emerging economies.

Although a more intense downturn in China would have severe consequences for the emerging world, including Chile, as of the statistical closing date of this FSR, the possibility of this risk materializing has not changed substantially. The same applies to the probability of a more intense slump in the emerging bloc. As discussed previously, the effects on the domestic economy would come from both the real and financial sides—on the real side, from lower external demand and the negative impact on commodity prices; on the financial side, from increased risk aversion in emerging markets, which would raise sovereign credit spreads and trigger a capital outflow from these economies.

Chile has a number of mitigating factors against the materialization of an external scenario featuring higher global risk aversion, but it is not immune to the effects.

As mentioned in the last FSR, Chile's macroeconomic fundamentals compare favorably with other emerging economies. This is reflected in the low level of public debt, the large share of FDI in external liabilities and, most recently, the reduction of the current account deficit[3]/.

In the period immediately after May 2013, the nominal exchange rate was the domestic variable that had the strongest reaction to the volatility in the external financial markets. In contrast to other economies, long-term interest rates fell. Similarly, while Chile's external financing costs continue to be explained by global risk factors, their sensitivity has fallen (box I.1). Thus, the turbulence in October 2014 translated into a moderate rise in the EMBI-Chile relative to other emerging markets (figure I.10).

[3]/ For more information, see the *Financial Stability Report*, First Half 2014, box I.1.

BOX I.1
GLOBAL FACTORS AND THE SOVEREIGN CREDIT SPREAD

Introduction

This box documents the transmission channel through which global financial shocks are transmitted to the Chilean sovereign credit spread (EMBI). The results suggest that the link is mainly through the term premium on the international long-term interest rate.

This transmission channel is important, because while the interest rate on ten-year U.S. Treasury bonds (UST10y) has been low in the recent period, this has coincided with the compression of its term premium component. Thus, the possibility of a sharp reversal in response to volatility cannot be ruled out (chapter I), since this component can be related to the fluctuations of the global financial cycle[1]/.

Importance of global factors

The sensitivity of the EMBI to measures of risk aversion and other global factors—usually summarized in the VIX and the UST10y—has been empirically tested in numerous studies[2]/. In general, the studies conclude that these factors are relatively more important for explaining the sovereign credit spread trend in economies with strong fundamentals (for example, the debt level, growth and credit ratings) than in countries with weak fundamentals.

In particular, Longstaff et al. (2011) estimate that global factors explain around 60% of the variance in Chile's sovereign credit spread. This reflects the high correlation between the EMBI-Chile and the VIX, since the correlation with the UST10y is lower. This last result changes, however, after the global financial crisis of 2008–2009, when there is a higher correlation between the EMBI-Chile and the UST10y[3]/.

Empirical specification

In addition to estimating a simple linear regression of the EMBI-Chile against domestic and global factors[4]/, we study the differentiated impact of the term premium[5]/. and the neutral interest rate of the UST10y.

The specification also includes the real growth of the economy (IMACEC) and the terms of trade (approximated by the ratio between the copper price and the oil price), given the Chilean economy's strong dependence on commodity price cycles[6]/.

The estimation uses monthly data from May 1999 to October 2014. All the variables are expressed in logarithms, except for interest rates and the growth of the Imacec.

Results

The results indicate that the EMBI-Chile is highly sensitive to measures of global risk aversion (VIX)[7]/. The estimated elasticity to the UST10y is negative, which contradicts the estimates in the literature for emerging market economies[8]/.

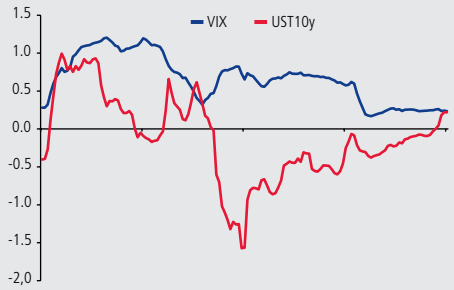
This apparent contradiction could be largely due to the fact that the empirical work was carried out before the crisis. When the specification is estimated for the pre-crisis period, the elasticity to the UST10y is positive and significant.

[1]/ Equivalently, the degree of global risk aversion (Obsfeldt, 2014; IMF, 2011).
[2]/ Baek et al. (2005); García-Herrero et al. (2006); González-Rozada and Levy-Yeyati (2008); Hartelius et al. (2008); Bellas et al. (2010); Longstaff et al. (2011).
[3]/ Estimates show that up to the period before 2010, the elasticity to the UST10y of a large sample of emerging market economies was close to one, on average.

[4]/ See González-Rozada and Levy-Yeyati (2008) for a similar specification, based on arbitrage models. For a model that combines structural and regression models, see Doshi et al. (2014).
[5]/ Estimated by Adrian et al. (2013), published and updated periodically on the Federal Reserve Bank of New York website: http://www.federalreserve.gov/pubs/feds/2006/200628/200628abs.html
[6]/ Although the oil price is included, the specification does not consider possible indirect contagion through the sovereign risk of economies exposed to this commodity.
[7]/ The high elasticity to the measure of risk aversion is maintained when other proxies are used, such as high-yield corporate bonds from the United States or emerging countries
[8]/ A negative sign has been found in estimates for developed economies. See García-Herrero et al. (2006) and Doshi et al. (2014).

However, these elasticities could change over time based on changes in investors' perceptions. Estimates using moving windows confirm that there are changes in the sign of the UST10y coefficient (figure I.11). In particular, this parameter has turned positive in the most recent period, in line with expectations for emerging market economies.

FIGURE I.11
Elasticity of the EMBI to the VIX and to the long-term U.S. Treasury bond rate (*)
(estimated coefficient, 36-month moving window)

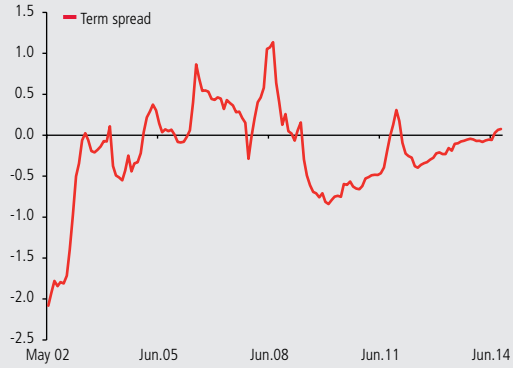


(*) The regression also includes the Imacec in annual percent change and the ratio of the copper price to the oil price in logarithms.

Source: Central Bank of Chile.

Disaggregating the UST10y into the term premium and the neutral interest rate reveals a greater sensitivity to the term premium[9]/. This elasticity also varied over time, with an upward trend in the most recent period (figure I.12).

FIGURE I.12
Elasticity of the EMBI to the term premium for U.S. Treasury bonds (*)
(estimated coefficient, 36-month moving window)



(*)The regression also includes the annual percent change in the Imacec, the ratio of the copper price to the oil price in logarithms and the neutral rate on 10-year U.S. Treasury bonds.

Source: Central Bank of Chile.

[9]/ Longstaff et al. (2011) use a different measure of the term spread and do not find significant results for the CDS for Chile.

Final comments

Given the context of the normalization of global liquidity conditions and risk aversion at historical lows, there is a possibility that periods of significant volatility could trigger a sharp reversal of international interest rates and, in particular, the term premium. This could result in changes in Chile's sovereign credit spread, based on its positive sensitivity to these global factors.

All else constant, if the term premium were to reach the sample peak[10]/, the EMBI-Chile would increase an estimated 70 bp, approximately.

[10]/ That is, an increase in the term spread from 0.3 to 3.2%. The sample peak was recorded in October 2008.

II. LOCAL FINANCIAL MARKETS

The capital markets have continued to be characterized by low financing costs, with interest rates near record-low levels, which have led to more dynamic bond issues.

MONEY MARKET

Financing conditions in the money market in pesos remain loose.

Bank lending rates (prime rates) have fluctuated around 3.5% in recent months, the lowest level of the last four years. This stems from the reduction in the monetary policy rate (MPR), which declined a total of 200 basis points (bp) in the past year, half of which occurred between July and October 2014. In addition, the prime-swap spread at different maturities is below the historical average (figure II.1). Relative to the second quarter of the year, the prime-swap spread at different maturities increased around 20 basis points (bp). This could be related to the disinvestment of the pension funds from time deposits, for around US$2 billion, in order to increase their investments abroad to take advantage of higher relative yields (figure II.2).

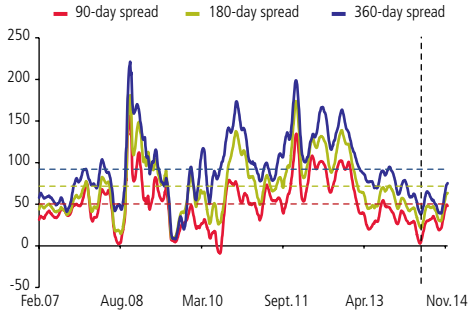
FIXED-INCOME MARKET

Long-term interest rates hit new historical lows, but volatility has increased in recent months.

Long-term sovereign rates are below the levels of the first half of 2014, albeit with fluctuations. Peso-denominated rates have fallen 40 bp, on average, while UF rates have dropped 60 bp, comparing the statistical closing dates of this and the last FSR. In August, the levels were even lower (figure II.3).

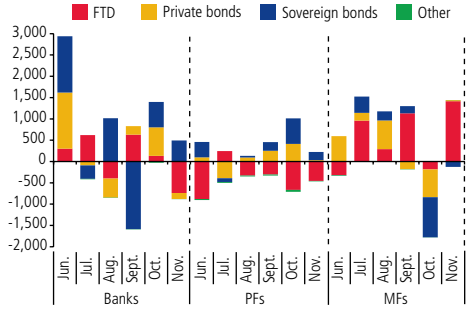
Volatility increased in the third quarter of the year. Specifically, the volatility of the ten-year peso rate was slightly above the 75th percentile of a large sample of countries, which could be associated with the reallocation of fixed-income portfolios by local agents and/or a response to the inflation and growth surprises (figure II.4).

FIGURE II.1
Money market in pesos (1)(2)(3)
(monthly moving average, basis points)



(1) Average interbank prime-swap spread.
(2) Horizontal dashed lines indicate the series average for 2005–2014.
(3) Vertical dashed line indicates the statistical closing date for the FSR in June 2014.
Source: Central Bank of Chile.

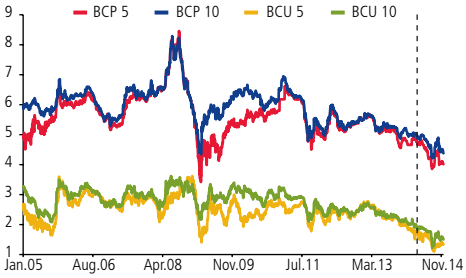
FIGURE II.2
Fixed-income portfolio management and financial intermediation of institutional investors (*)
(change in stock, US$ million)



(*) Data through 14 November 2014.

Source: Central Bank of Chile, based on data from the Central Securities Depository (CSD).

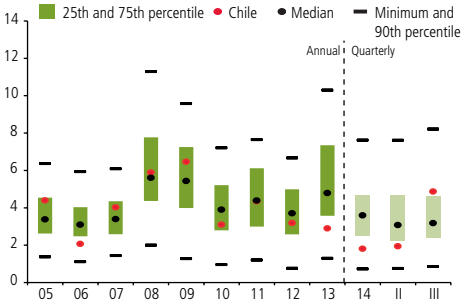
FIGURE II.3
Long-term sovereign bond interest rate (*)
(percent)



(*) Vertical dashed line indicates the statistical closing date for the FSR in June 2014.

Source: Central Bank of Chile.

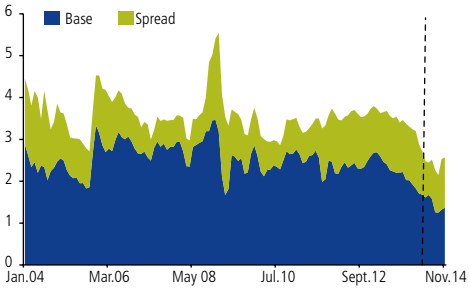
FIGURE II.4
Volatility of 10-year sovereign interest rates (*)
(basis points)



(*) Monthly average volatility calculated as the standard deviation of the daily change in the interest rate level. Includes: United States, Australia, Brazil, Canada, Chile, China, Colombia, Czech Rep., Germany, Hungary, India, Indonesia, Israel, Japan, South Korea, Mexico, Norway, New Zealand, Peru, Poland, Russia, South Africa, Sweden, Switzerland, Taiwan, Thailand, Turkey and United Kingdom.

Sources: Central Bank of Chile and Bloomberg.

FIGURE II.5
Financing costs for firms (1)(2)
(percent)



(1) Based on UF-denominated corporate bonds with a rating of AA and a duration of around 5 years.
(2) Vertical dashed line indicates the statistical closing date for the FSR in June 2014.

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

The low long-term interest rates have translated into lower private financing costs, stimulating bond issues.

The internal rate of return (IRR) on private bonds has decreased substantially in recent quarters, mainly due to a reduction in the base rate (figure II.5). Comparing the values in November 2014 with the start of the year, financing costs for firms have fallen on the order of 70 bp.

The lower cost of debt has favored the issue of bonds in the domestic market. As of November, placements in the primary market approached US$5 billion, the highest level of the last five years. Despite the lower interest rates, debt prepayment has not been significant.

External bond placements by Chilean firms have also been dynamic. As of November, international issues totaled US$11.100 billion. This exceeds the amount issued as of the same date in 2013, the year in which the historical peak was recorded (figure II.6).

These issues, for the most part, have contributed to liability substitution, as well as an increase in assets. They have not produced a significant increase in debt or a worsening of the currency mismatch for this group of issuers (chapter III and box III.1).

Investment in medium- and long-term instruments has also increased.

As a result of the lower interest rates, especially the downward trend of long rates, the assets managed by the type 3 mutual funds (MF3) have increased significantly relative to past years. As of August 2014, they exceeded US$16 billion, thus doubling in less than a year and at times exceeding the assets managed by money market mutual funds (MF1). The latter have grown strongly in the most recent period, which, according to some sources, could be associated with greater liquidity in banks and firms (figure II.7). At the same time, the lower long-term rates have led to a restructuring of investment portfolios by other institutional investors, such as the life insurance companies (box II.1).

There is a risk that the level of local interest rates could rise in response to international volatility.

Over the past few quarters, local and international long-term rates have declined to low levels. Domestically, this reflects not only the movement in the external benchmarks, but also, to a large extent, the change in the domestic macroeconomic scenario and a more expansionary monetary policy.

However, there is a risk that in the event of a reversal of U.S. monetary policy that surprised the markets (chapter I), there could be significant movements in international long-term rates that in turn affect local rates.

This risk becomes more significant on considering the large amounts managed by the MF3, which have a strong exposure to instruments that are sensitive to an increase in long-term rates. These funds offer their shareholders 24 hour liquidity, and a massive withdrawal would amplify the effects on local rates. However, the share of long-term documents held by MF3 funds is limited.

At the same time, as mentioned earlier, local long-term interest rates do not respond solely to movements in their external counterparts, but also react to internal cyclical conditions. For 2015, Chile's average annual growth is expected to be higher than this year, but still below its medium-term potential. Thus, a possible upward shock to interest rates stemming from external factors could have a smaller impact on local rates, if domestic factors are operating in the opposite direction. Internal estimates suggest that expectations of lower economic growth could be a key factor in the current evolution of long rates[1]/ (figure II.8).

STOCK AND FOREIGN EXCHANGE MARKETS

The evolution of the stock market has been somewhat less favorable than in other economies. In the foreign exchange market, the peso depreciation has been greater than for other emerging economies.

Thus far in the year, the local stock market, measured by the IPSA, has recorded an accumulated return of 7.6% in local currency, which is somewhat lower than the returns posted in other countries in the region and other commodity exporters (table II.1). Volatility has been below the average of a sample of emerging countries (figure II.9).

TABLE II.1
Comparison of stock market returns (1)
(percent, local currencies, returns to date)

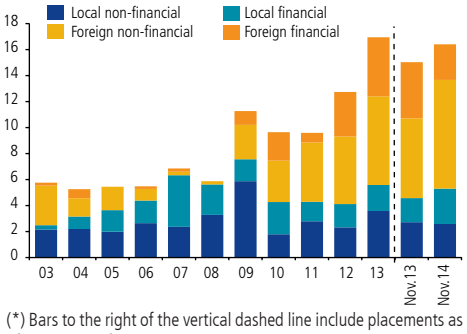
Period	Chile	Latin America	Commodity exporters	Developed	Emerging
2012	3.4	5.9	9.7	12.2	27.8
2013	-14.9	-16.1	11.4	14.4	-1.0
2014 (2)	7.6	9.2	9.2	5.4	11.1
1T	2.1	-0.5	4.9	3.1	1.6
2T	2.1	9.2	3.3	2.6	6.2
3T	1.9	6.2	-0.7	-1.7	0.7

(1) The following countries are included in the indices. Latin America: Argentina, Brazil, Colombia and Peru. Commodity exporters: Australia, Canada, New Zealand and Norway. Developed economies: France, Germany, United Kingdom and United States. Emerging economies: Croatia, Czech Rep., Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, South Africa and Turkey.
(2) The change between 20 November 2014 and 1 January 2014.

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

[1]/ The full model is based on rate parity, so it includes the external rate (ten-year T-bond), the EMBI and expectations variables (depreciation, MPR and growth).

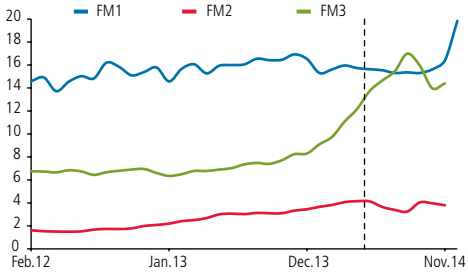
FIGURE II.6
Corporate bond placements (*)
(US$ billion)



(*) Bars to the right of the vertical dashed line include placements as of November of each year.

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

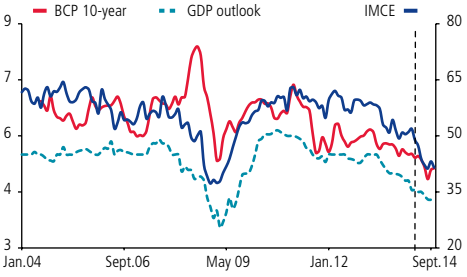
FIGURE II.7
Mutual fund assets (1)(2)
(US$ billion)



(1) Type of fund:
MF1: Investment in debt with a maturity of 90 days or less.
MF2: Investment in debt with a maturity of 365 days or less.
MF3: Investment in medium- and long-term debt.
(2) Vertical dashed line indicates the statistical closing date for the FSR in June 2014.

Source: Superintendence of Securities and Insurance (SVS).

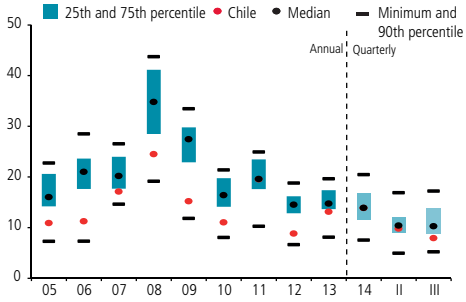
FIGURE II.8
Long-term sovereign rate and economic growth expectations (1)(2)
(percent, index)



(1) Growth expectations approximated by the question on GDP in 24 months in the Economic Expectations Survey (EES) and the Monthly Business Confidence Index (IMCE).
(2) Vertical dashed line indicates the statistical closing date for the FSR in June 2014.

Source: Central Bank of Chile.

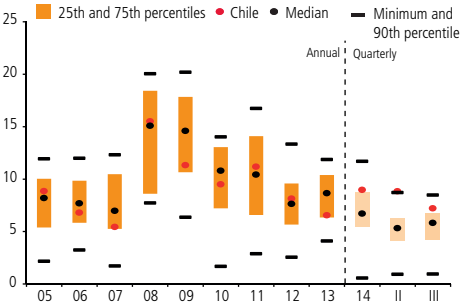
FIGURE II.9
Stock market volatility in emerging economies (*)
(annualized percent, in local currency)



(*) Monthly average volatility calculated as the standard deviation in a 20-day moving window of the daily change in the stock index. Includes: Brazil, Chile, China, Colombia, Czech Rep., Hungary, India, South Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa and Turkey.

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

FIGURE II.10
Exchange rate volatility (*)
(annualized percent)



(*) Monthly average volatility calculated as the standard deviation in a 20-day moving window of the daily change in the exchange rate. Includes: Australia, Brazil, Canada, Chile, China, Colombia, Czech Rep., England, Eurozone, Hungary, India, Indonesia, Japan, South Korea, Malaysia, Mexico, New Zealand, Norway, Peru, Philippines, Poland, South Africa, Turkey and Vietnam.

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

The peso has fluctuated strongly in recent months, mostly in the range of $550 and $600 between the statistical closing dates of this and the last FSR. In that period, nominal depreciation was 8%. Thus far in the year, accumulated depreciation has been 14%, which is higher than the currencies of other countries in the region and other commodity exporters (table II.2). In Chile, the global phenomenon of a strong dollar has been exacerbated by less favorable internal cyclical conditions and a more expansionary local monetary policy. Compared with the first half of the year, volatility is in the upper end of the range for a sample of comparable countries (figure II.10).

TABLE II.2
Comparison of foreign exchange market returns (1)
(percent, local currencies, returns to date)

Period	Chile	Commodity exporters	Latin America	Dollar index
2012	-7.6	-4.3	-3.0	-0.6
2013	9.8	8.4	8.8	0.3
2014 (2)	14.0	6.1	7.5	7.3
1T	4.6	-1.7	-0.3	0.0
2T	0.4	-1.0	-1.8	-0.4
3T	8.3	7.6	6.8	7.7

(1) The following countries are included in the indices. Commodity exporters: Australia, Canada, New Zealand and Norway. Latin America: Brazil, Colombia, Mexico and Peru.
(2) The change between 20 November 2014 and 1 January 2014.

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

BOX II.1
LIFE INSURANCE COMPANIES: INVESTMENT PORTFOLIO ANALYSIS

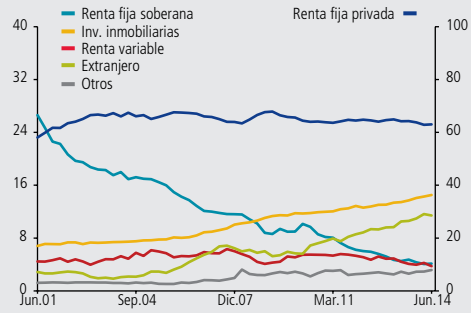
This box describes the reorientation of the investment portfolio of the life insurance companies (LIC) and identifies the associated future risks and mitigating factors. The LICs manage assets equivalent to 20% of GDP, which makes them one of the main institutional investors in Chile[1]/. Furthermore, due to the maturing of the pension system, their importance in terms of the size of assets managed is expected to increase in the coming years.

The return offered by their main product (life annuities) has been under pressure in the past decade, due to the steady reduction in long-term sovereign rates in Chile. This has led to a restructuring of their investment portfolios in order to obtain higher returns.

The life annuities offered by the LICs impose a yield target on the investment portfolio. This pressure has been exacerbated by the lower long-term interest rates and pressure from competition (namely, scheduled withdrawal plans in the AFP pension system), intensifying the search for high-yield assets in this industry.

The main changes in the investment portfolio are a lower exposure to local sovereign bonds, which plunged from 29 to 4% of the total portfolio between 2000 and 2014, and an increase in other investments. The latter, on average, have less market liquidity and higher relative risk, as in the case of real estate investments and foreign investments (figure II.11).

FIGURE II.11
Portafolio de inversiones de las CSV (*)
(porcentaje)



(*) Inversiones no incluyen inversiones con cuenta única de inversiones (CUI).
Fuente: Banco Central de Chile en base a información de la SVS.

Although the share of investments in local private fixed-income instruments (corporate and bank bonds) has been relatively stable over the past few years, exposure in this segment has shifted toward bonds with a higher credit risk. Thus, bonds with a risk rating of less than AA have increased from 23 to 39% of total investments between 2007 and 2014 (table II.3).

TABLE II.3
Inversiones en renta fija según clasificación de riesgo (*)
(porcentaje)

Período	2007	2008	2009	2010	2011	2012	2013	2014
Renta fija privada nacional								
AA o superior	77.0	70.4	67.8	70.7	67.5	64.5	61.3	61.3
A	18.8	23.4	27.2	25.1	26.3	28.7	28.6	29.9
BBB o inferior	4.2	6.2	5.0	4.2	6.1	6.8	10.1	8.8
Renta fija extranjera								
A o superior	46.1	31.2	28.3	25.0	19.7	14.4	9.0	8.4
BBB	41.7	58.0	44.6	44.4	49.0	61.2	61.9	62.7
BB o inferior	12.2	10.8	27.1	30.6	31.3	24.4	29.1	29.0

(*) A diciembre de cada año. Datos 2014 corresponden a junio.
Fuente: Banco Central de Chile en base a información SVS.

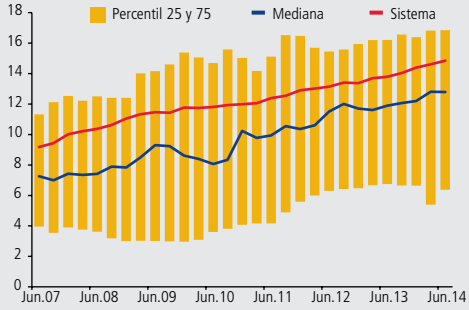
[1]/ By size of assets (US$50.000 billion), the LICs are the second largest nonbank financial industry, after the pension funds, and they are a natural supplier of long-term funds in the local financial market.

Foreign investments increased from 3 to 11% of the portfolio between 2005 and 2014. Of the total, the majority is invested in fixed-income instruments (86%) with an international risk rating of BBB (63%). Most of the bonds are denominated in dollars, and they are generally covered with cross-currency swaps, so that their flows are expressed in UFs, thereby avoiding a mismatch in the companies' liabilities.

Real estate investments, which include office rentals, increased from 8 to 15% of the portfolio between 2007 and 2014 (figure II.12). Income from rental properties is sensitive to the vacancy rate of the buildings. According to information reported by the LICs, this rate has been increasing over the past few quarters, which is consistent with the vacancy rate trend in the premium office market reported in this FSR (chapter III)[2]/. This factor, combined with changes deriving from the tax reform in the area of real estate investments, has put pressure on the life insurance companies' income.

One mitigating factor associated with these investments has to do with their accounting valuation, which uses the lower of historical cost or commercial appraisal[3]/. Data reported by the LICs indicate that the market value of their real estate investments is as much as 30% over the book value.

FIGURE II.12
Inversiones inmobiliarias (*)
(porcentaje de las inversiones)



(*) Inversiones no incluyen inversiones con cuenta única de inversiones (CUI).
Fuente: Banco Central de Chile en base a información de la SVS.

In sum, in a scenario of low interest rates on sovereign bonds, the LICs have restructured their portfolios toward investments with higher yields, greater relative risk and lower market liquidity. This has allowed them to meet the contractual commitments of the life annuities and to try to be relatively competitive for the new flow of pensioners who might opt for this pension scheme.

However, the extension of this low-rate scenario could intensify the search for higher returns. This is especially relevant under the current conditions, with compressed external spreads and a real-estate market characterized by rising vacancy rates.

[2]/ This risk was noted by the IMF in June 2014, in the Article IV consultation (IMF, 2014a).
[3]/ The historical cost is adjusted for inflation and depreciation. The appraisal value corresponds to the lower of two appraisals, which must be performed at least once every two years.

III. CREDIT USERS

FIRMS

Firms have increased their debt level in GDP terms. The growth rate of commercial loans has fallen, while external debt continues to grow, mainly in bonds and foreign direct investment (FDI).

In the third quarter of 2014, the debt of firms reached 109% of GDP, nearly 2 percentage points higher than in the first quarter. The trend is similar when the sample excludes Codelco and financial institutions that report their balance sheets to the SVS (figure III.1)[1]/. The growth of total debt is mainly explained by external debt, especially the increase in bonds and, to a lesser extent, FDI, consistent with issues in the last few years and the lower cost of financing (chapter II). Local debt has not contributed significantly to the growth; commercial loans have recorded only a moderate growth rate (statistical appendix).

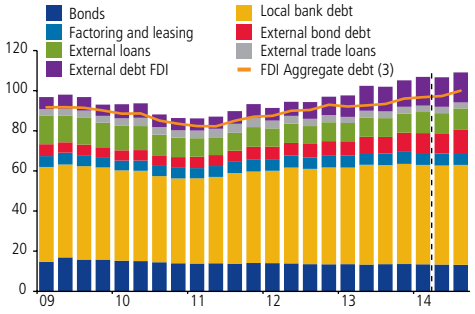
The debt of corporations that report to the SVS remains high from a historical perspective, at around 70% of equity (figure III.2). This debt level has exceed that of other countries in the region and is slightly lower than the developed countries[2]/.

On average, business profitability is lower than in past years.

In June 2014, the return on assets and interest coverage ratio of firms that report to the SVS did not change significantly (figures III.3 y III.4). However, from a longer perspective (5 years), the interest coverage ratio has declined. This mainly reflects lower business profitability, because financial expense has been relatively stable as a share of assets (statistical appendix).

At the country level, average business profitability was lower in 2013 than in previous years (table III.1). Given the lower economic growth, these profitability levels could decline even further, especially for smaller firms, which were more sensitive to the economic cycle in 2009.

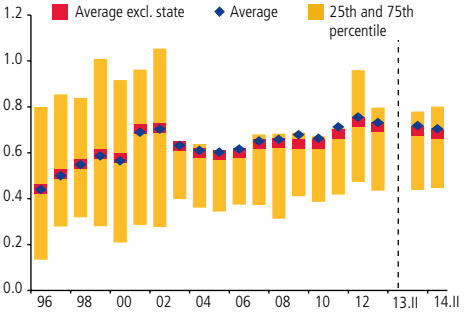
FIGURE III.1
Total debt of firms (1) (2)
(percent of GDP)



(1) Based on firm-level data, with the exception of factoring and leasing.
(2) For more detail on the series, see the statistical appendix.
(3) Does not include SVS financial firms or Codelco.

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

FIGURE III.2
Corporate sector indebtedness (1) (2)
(times)

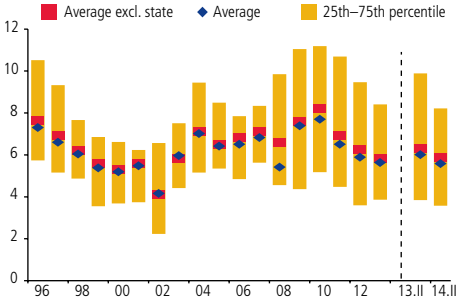


(1) Debt-to-equity ratio.
(2) To the left of the dashed line, data are through December of each year. To the right, through June 2013 and 2014.

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

[1]/ Starting with this FSR, the analysis of indebtedness is based on a broader sample of firms and includes microdata. Therefore, there are some differences with previous debt statistics. For more detail on the change, see Roje and Vásquez (2014).
[2]/ *Financial Stability Report*, First Half 2014, box III.1.

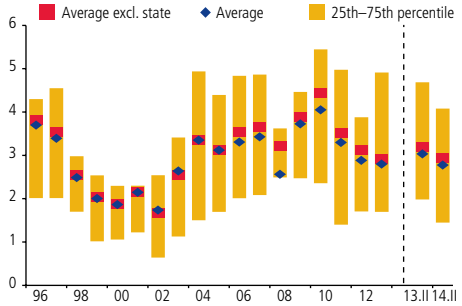
FIGURE III.3
Corporate sector profitability (1) (2)
(percent)



(1) Earnings before interest and taxes in 12 months over total assets.
(2) To the left of the dashed line, data are through December of each year. To the right, through June 2013 and 2014.

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

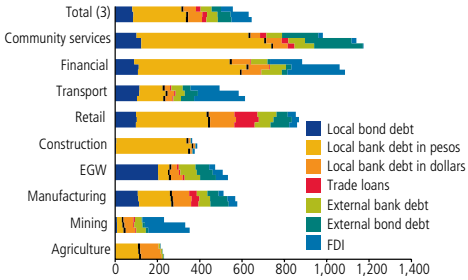
FIGURE III.4
Corporate sector interest coverage ratio (1) (2)
(times)



(1) Ratio of earnings before interest and taxes to annual financial expense.
(2) To the left of the dashed line, data are through December of each year. To the right, through June 2013 and 2014.

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

FIGURE III.5
Indebtedness by source and sector (1) (2)
(UF million)



(1) Annual data for 2012 and 2013; last bar is June 2014.
(2) Debt to the right of the black line is foreign currency debt. Local bank debt is based on aggregate information by sector, according to the SBIF classification.
(3) Simple average of all sectors.

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

TABLE III.1
Business profitability at the country level (1) (2)
(percent)

	2007	2008	2009	2010	2011	2012	2013 (3)
Micro and SMEs							
Average	7.7	7.2	5.9	8.0	7.2	6.8	6.6
25th percentile	-0.1	-1.0	-0.9	-0.6	-0.6	-0.8	-0.9
Median	2.6	3.1	1.9	3.4	2.8	2.8	2.7
75th percentile	10.6	12.5	10.5	11.8	11.0	10.7	10.9
Large							
Average	5.3	3.5	5.1	4.9	4.0	3.5	3.3
25th percentile	0.9	0.2	0.2	0.8	0.3	0.2	0.3
Median	3.0	2.4	2.3	3.2	2.5	2.0	2.4
75th percentile	7.3	6.9	7.7	8.0	8.1	5.7	5.9

(1) Period earnings over total assets (excluding intangible, nominal, temporary and pro forma assets). Values weighted by total assets.
(2) Excluding financial services and mining.
(3) Preliminary data.

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

In the second quarter of 2014, foreign currency debt was almost 45% of the total debt of firms. The mismatch in SVS firms was stable relative to the end of last year.

The use of foreign currency debt varies among sectors. For example, construction has a low dependence on this type of debt, whereas in mining FDI is the main source of financing (figure III.5).

In the second quarter of the year, SVS firms maintained a limited currency mismatch, equivalent to –1% of assets on aggregate (statistical appendix). The share of firms with a mismatch of over 10% of assets, and which are thus more exposed to a peso depreciation, was stable (figure III.6). Internal estimates do not find a direct relation between the currency mismatch of assets and liabilities and the profitability of firms (box III.1).

Payment indicators have deteriorated marginally in recent quarters, especially in sectors that are more sensitive to the economic cycle.

The unpaid installment ratio (UIR), calculated with administrative data, increased slightly in 2014 (figure III.7). This mainly reflects an increase in certain sectors, notably construction (especially civil works) and manufacturing (especially fishing industry).

The recent increase in the UIR corresponds to increases in arrears of more than a year (figure III.8). Here again, the primary sectors involved are construction and manufacturing, as well as retail. In mid-2013, the retail sector recorded a deterioration in the 90- to 180-day segment relative to historical levels. These arrears were not settled, and they are now being reflected in increases in installments that are more than a year past due.

In sum, the corporate sector shows a marginal deterioration in its financial indicators, with a high debt level and low profits relative to historical patterns.

At the same time, aggregate payment indicators have not changed significantly, although some sectors, such as retail, manufacturing and construction, have deteriorated.

REAL- ESTATE SECTOR

New home sales remain high, while the supply has recovered in the most recent period.

Despite easing in the third quarter of 2014, the volume of new home sales in Santiago remains above the average for the 2002–2014 period (figure III.9). In addition, the discontinuance rate is somewhat lower than in 2013. In line with the recent trend, only a small share of these sales is finished houses. However, there has recently been an increase in home sales with an advanced stage of construction and in the production of new houses, which reflects the lower pressure on construction costs and a greater availability of labor.

Market indicators show that housing prices increased steadily in Santiago in 2014.

In Santiago, new housing prices continued to rise, reflecting the reduced supply of houses, combined with robust demand. According to the Chilean Chamber of Construction, new housing prices rose 10% in real annual terms in the second quarter of 2014 (figure III.10). This is two percentage points higher than growth in the same period of last year. This upward trend is consistent with the lower interest rates and still-high construction costs, but it would seem to have not yet incorporated the lower growth of labor income. Also in Santiago, gross profitability has fallen for both houses and apartments, as a result in part of the lower mortgage rates (table III.2).

TABLE III.2
Annual gross profitability of housing in Santiago (1)
(percent)

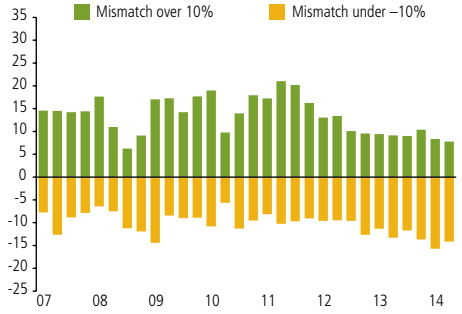
	2007	2008	2009	2010	2011	2012	2013	2014		
	IV	IV	IV	IV	IV	IV	IV	I	II	III
Apartments	7.4	7.1	7.1	7.3	7.2	7.3	6.8	6.8	6.5	6.3
Houses	6.8	6.5	6.8	7.1	7.0	7.0	6.5	6.5	6.4	6.2
Mortgage rates (2)	5.1	6.1	4.6	4.6	4.4	4.5	4.5	4.4	4.2	3.8

(1) Calculated as the annual rental price divided by the sales price.
(2) Average mortgage rates (endorsable and non-endorsable).

Sources: Central Bank of Chile, Portalinmobiliario.com and SBIF.

Mortgage lending conditions have been stable in the past few years (2011–2013). On average, the percentage of bank financing in home purchase remains just over 80%, which is lower than in 2005–2008. The share of income dedicated to mortgage payments has, on average, stayed below 25% (box III.2).

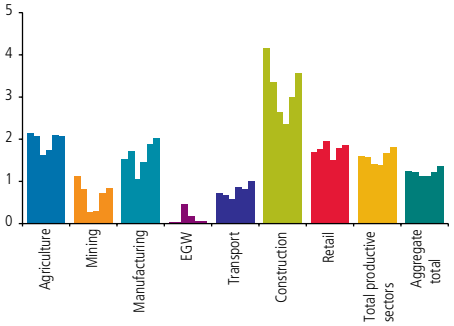
FIGURE III.6
Mismatch of firms in the corporate sector (*)
(percent of total assets)



(*) Based on a sample of firms that report their balance sheets in pesos. The mismatch is calculated as dollar liabilities minus dollar assets, minus the net derivatives position, as a percent of total assets.

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

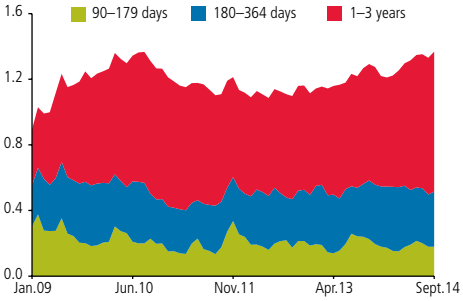
FIGURE III.7
Unpaid installment ratio (1) (2) (3)
(percent of loans)



(1) The detailed sectors are productive sectors; excludes individuals and firms without a sectoral classification.
(2) Data for December of each year since 2009. Data for 2014 are for September.
(3) Does not include contingent loans.

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

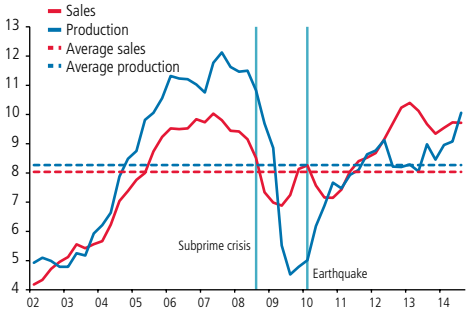
FIGURE III.8
Unpaid installment ratio by length of arrears (1) (2)
(percent of loans)



(1) Excluding individuals and firms without a sectoral classification.
(2) Does not include contingent loans.

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

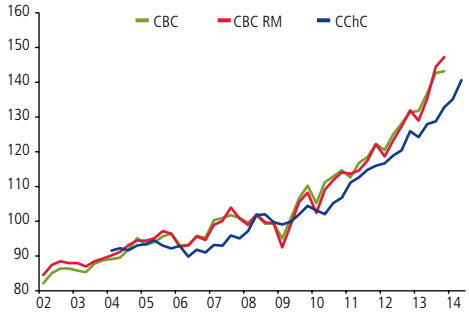
FIGURE III.9
New home production and sales in Santiago (*)
(thousands of units, annual moving average)



(*) Includes gross sales commitments.

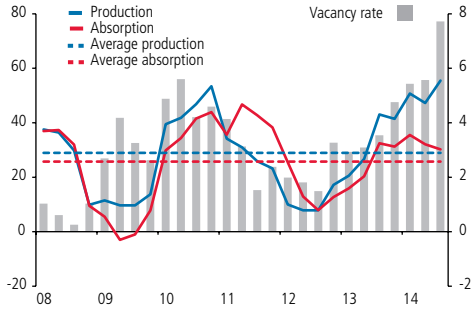
Source: Central Bank of Chile, based on data from GFK Adimark.

FIGURE III.10
Housing prices
(average fixed-base index 2008 = 100)



Source: Central Bank of Chile, based on data from SII and the Chilean Chamber of Construction (CChC).

FIGURE III.11
Class A/A+ offices market
(times, percentage)



Source: Central Bank of Chile, based on data from Global Property Solutions.

Office production continues to widely outpace absorption, increasing the vacancy rate.

In the office market, the available square meters increased significantly, and in the third quarter of 2014 production was almost twice the average for the 2008–2014 period (figure III.11). In contrast, office absorption was relatively stable in the third quarter and below production levels. This caused vacancy rates to swell to the highest level of the past seven years: 7.7% for class A and 9.1% for class B (GPS and CBRE Chile). Other Latin American cities have recorded a similar trend (figure III.12). Market estimates indicate that vacancy rates for class A offices could reach 10% by year-end 2014. In line with this scenario, rental prices dropped in the first nine months of this year, in part reflecting the oversupply on the market and the stronger negotiating power of clients.

Projections for new office projects coming on the market in the next few years have fallen for the first time since 2012. In the first nine months of this year, the projected market entry for 2014 and 2015 dropped by 30 and 15%, respectively. This reflects delays in the initiation and/or final inspection of several projects and a higher share of commercial space in office projects.

In sum, the residential real estate sector continues to show evidence of tighter supply than demand, which has contributed to rising prices. This is not the case in the office sector, where the available supply has increased significantly, affecting vacancy rates and rental prices. The market expects a temporary increase in new home sales in the next year, after the tax reform enters into effect. However, market participants need to bear in mind that these effects could revert in the future, altering the evolution of housing prices.

International evidence shows that the price dynamics of commercial properties tend to be more sensitive to the economic cycle than residential prices (Zhu, 2003; Gyourko, 2009). Thus, weaker economic conditions could lead to new price adjustments, increasing the vulnerability of market agents exposed to this sector.

HOUSEHOLDS

Growth in total household debt declined marginally in the second quarter of 2014, but mortgage debt continued to grow in line with previous rates.

In the second quarter of 2014, total household debt grew 7.3% in real annual terms, which is somewhat lower than previous years. The difference was explained by a smaller increase in bank consumer debt. The annual growth rate of nonbank consumer loans (2.2%) was similar to year-end 2013 (table III.3).

The growth rate of mortgage debt did not change much relative to previous periods, holding at 9.2% in real annual terms in the third quarter. Interest rates on this type of loan are at historically low levels, falling nearly 42 basis points (bp) in the second quarter of 2014 relative to year-end 2013, and then to 80 bp in the third quarter. Mortgage rates are currently on the order of 140 bp below the average for 2002–2008. Nonbank loans grew somewhat less, maintaining a limited share of this type of credit.

Bank consumer debt grew at similar rates in the second and third quarters of 2014 (4.5% in real annual terms), while bank mortgage debt grew at a real annual rate of 10.1%.

TABLE III.3
Household debt
(real annual change, percent)

Index	2010	2011	2012	2013				2014		Growth contribution (1)	Share
	IV	IV	IV	I	II	III	IV	I	II		
Mortgate	7.2	7.0	7.6	8.3	8.4	8.6	8.9	9.2	9.2	5.3	58.4
Bank	9.2	8.0	8.3	8.9	9.0	9.0	9.1	9.4	9.4	4.8	52.5
Nonbank (2)	-5.8	-0.7	2.0	4.0	4.1	5.6	7.4	7.8	7.2	0.4	6.0
Consumer	6.9	7.0	6.8	6.9	7.7	6.8	7.3	6.8	4.8	2.0	41.6
Bank	8.8	13.3	8.9	9.3	9.6	7.7	8.2	7.0	4.4	1.2	25.4
Nonbank	4.7	-7.6	-2.3	-2.9	-1.1	0.0	2.0	3.2	2.2	0.2	9.9
Retailers	6.1	-15.1	-5.6	-7.3	-5.8	-3.2	3.4	6.5	7.3	0.3	4.8
CCAF (3)	3.8	5.2	3.5	3.9	7.3	8.3	4.1	3.8	0.6	0.0	3.5
Cooperatives	2.1	-5.1	-3.3	-3.6	-3.9	-6.5	-5.6	-6.5	-7.5	-0.1	1.6
Other (4)	3.6	18.3	17.8	17.3	16.6	15.7	13.6	12.6	10.3	0.6	6.3
Total	**7.0**	**7.0**	**7.2**	**7.7**	**8.1**	**7.9**	**8.2**	**8.2**	**7.3**	**7.3**	**100.0**

(1) Percent points.
(2) Include securitized mortgage debt.
(3) Family compensation funds (*Cajas de Compensación de Asignación Familiar*).
(4) Includes car financing, student loans, insurance companies and the central goverment.

Source: Central Bank of Chile besed on data from SBIF, SuSeSo and SVS.

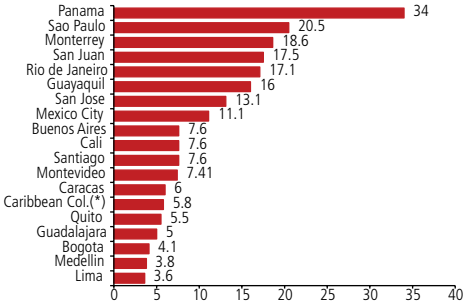
The growth rate of bank consumer debt declined, due to a contraction in the number of debtors.

Between year-end 2013 and the third quarter of this year, the number of people with consumer loans decreased, and the annual growth rate of debtors fell from 2.1% to –1.0% (table III.4). The annual growth rate of the number of people with mortgage loans was relatively stable, at 2.8%. At the same time, the average mortgage debt increased 6.8% in real annual terms, in line with the evolution of home prices.

Despite the lower expansion of debt, the debt-to-income ratio of households increased due to the larger mortgage debt and slower income growth. The financial burden, in turn, was stable.

Household indebtedness—measured by the debt-to-income (DTI) ratio—rose to 59% in the first half of 2014 (figure III.13). Relative to year-end 2013,

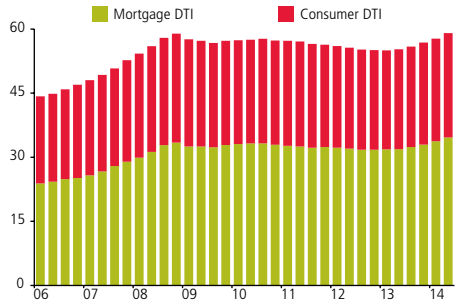
FIGURE III.12
Vacancy rate in Latin America: Class A and B
(percent as of June 2014)



(*) Caribbean Colombia includes Barranquilla, Santa Marta and Cartagena.

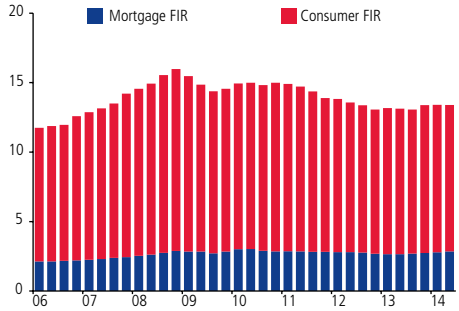
Source: Jones Lang LaSalle (2014).

FIGURE III.13
Household indebtedness
(percent of disposable income)



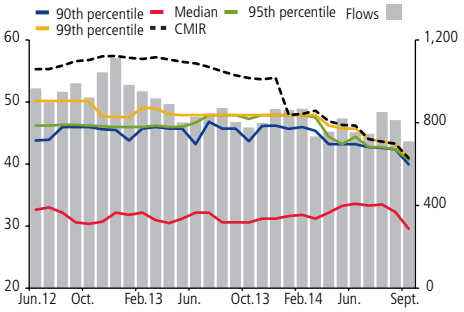
Source: Central Bank of Chile, based on data from SBIF, SuSeSo and SVS.

FIGURE III.14
Household financial burden
(percent of disposable income)



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

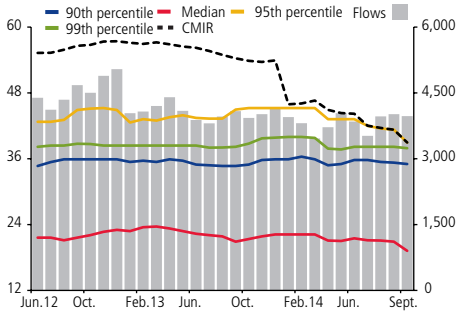
FIGURE III.15
Consumer loan rates and flows, under UF50
(percent, thousands of UF)



(*) Statistics are weighted by amount; periods are adjusted to the month in which the conventional maximum interest rate (CMIR) is changed; flows are normalized by number of business days.

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

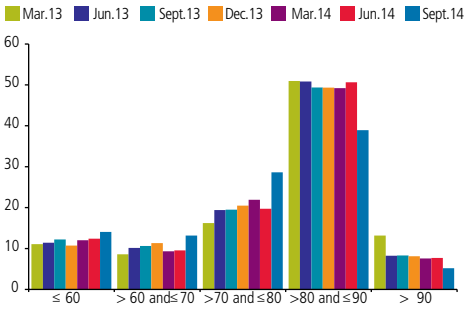
FIGURE III.16
Consumer loan rates and flows, UF50 to UF200 (*)
(annual rate, UF thousand)



(*) Statistics are weighted by amount; periods are adjusted to the month in which the conventional maximum interest rate (CMIR) is changed; flows are normalized by number of business days.

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

FIGURE III.17
Mortgage loan-to-value ratio
(percent of the number of loans granted)



Source: Central Bank of Chile.

TABLE III.4
Household bank debt
(real annual change, percent)

	2011				2012				2013				2014		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III(*)
Mortgage	9.6	9.1	8.7	8.2	8.1	8.3	8.3	8.3	8.9	9.0	9.0	9.1	9.4	9.4	9.8
Debtors	4.2	4.1	3.5	2.6	2.2	2.2	2.3	2.3	2.4	2.4	2.6	2.8	3.0	2.7	2.8
Average debt	5.2	4.8	5.1	5.4	5.7	6.0	5.9	5.9	6.3	6.4	6.2	6.1	6.2	6.5	6.8
Consumer	12.2	13.1	13.8	13.3	11.0	10.7	10.4	8.9	9.3	9.6	7.7	8.2	7.0	4.4	4.6
Debtors	5.2	7.4	7.8	8.1	10.0	9.3	9.1	9.6	7.6	6.5	4.3	2.1	1.4	0.8	-1.0
Average debt	6.6	5.3	5.5	4.8	0.9	1.3	1.2	-0.7	1.5	2.9	3.2	6.0	5.5	3.6	5.6

(*) Data through August 2014.
Source: Central Bank of Chile, based on data from SBIF.

the DTI ratio increased 2 percentage points (pp). Of this expansion, 1.5 pp is explained by the growth of mortgage debt. The household financial burden, relative to disposable income (FIR), was stable at around 14% (figure III.14). The stability of this latter indicator is related to the lower financing costs on mortgage and consumer loans.

Based on the available data at this time, the regulation on the conventional maximum interest rate (CMIR) does not show an impact on credit flows in the banking sector.

The new law on the CMIR entered into effect in December 2013. Since then, the CMIR on non-indexed local currency operations over 90 days fell 13 and 15 pp for the UF0–50 and UF50–200 segments, reaching rates of 40.95 and 38.95%, respectively, in the third quarter of 2014. These reductions are highly significant, but the banking system's credit flows have not been affected (figures III.15 y III.16). Given that this law is still in the implementation phase, new reductions in the CMIR are expected, which could generate some degree of impact due to the large number of operations that are carried out with interest rates between 35 and 40%.

The banking industry reports somewhat tighter lending standards for consumer loans, but no change for mortgages.

The Bank Lending Survey (BLS) for June and September 2014 reported tighter conditions for the supply and demand of consumer loans. For mortgage loans, most of the banks reported no change in lending conditions in September relative to June, although in June conditions had tightened in comparison to March. According to the same survey, loans granted with more than 80% financing had decreased in favor of loans with 70 to 80% financing (figure III.17). Based on a sample of mortgage loan transactions, this figure is in line with the real average between 2004 and 2013, but below the average of 2005–2008 (box III.2).

Non Payment indicators have been mostly stable.

In the second quarter of 2014, the ratio of delinquent to total loans for nonbank suppliers of consumer credit were stable relative to the last quarter of 2013.

While this ratio increased at the margin for retailers, it stayed below the average for 2010–2013. At the same time, the deterioration in this indicator among the Family Compensation Funds (*Cajas de Compensación de Asignación Familiar*) eased in the last year (statistical appendix). Nonpayment indicators for bank consumer and mortgage loans were stable in the same period (chapter IV).

In sum, households show a marginal deterioration in their financial situation, due to increased indebtedness. Although the growth rate of total debt has declined, mainly due to slower growth of consumer debt, the growth rate of mortgage debt is high, in a context of historically low mortgage interest rates and dynamic housing prices. Thus, the debt-to-income ratio has increased, while the financial burden-to-income ratio has been stable. Household payment indicators have not deteriorated thus far, despite the lower economic activity. The low unemployment rate and the banking sector's orientation toward households that are less exposed to the economic cycle are factors that could explain this trend. Nevertheless, the labor market could deteriorate, reducing household payment capacity.

BOX III.1 CURRENCY MISMATCH IN THE NONFINANCIAL CORPORATE SECTOR

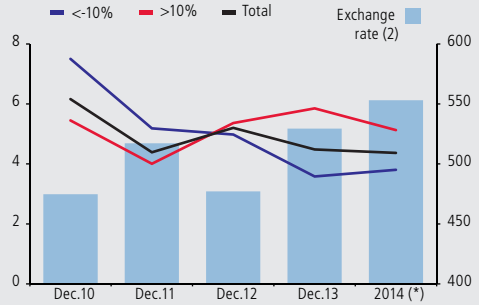
Starting in 2012 there has been an important change in the level of foreign debt issues by local firms. Therefore, a detailed review of the currency mismatch of firms that report to the SVS is in order, especially considering the exchange rate fluctuations[1]/. This box draws on several different sources of information to conduct the analysis[2]/.

Internal estimates suggest that for this group of firms, the peso depreciation has not reduced their return on assets (ROA). First, the accounting impact of the exchange rate on earnings through currency differences is low (0.2% of assets). Second, there is not a direct relation between the currency mismatch and ROA, even in periods with a steep depreciation of the peso.

Nevertheless, firms with a large mismatch could record a bigger impact. Here, one group of interest is firms with a mismatch of over 10%. The share of these firms has been constant in recent years (figure III.6).

The empirical evidence on these firms does not show a robust relationship between a large mismatch, peso depreciation and ROA (figure III.18). The 10% depreciation between 2010 and 2011 corresponded with a reduction in ROA for these firms, but firms with a negative mismatch recorded a similar pattern. The depreciation between 2012 and 2013 suggests a positive relationship between currency mismatch and ROA, contrary to expectations. Finally, the most recent depreciation has coincided with a deterioration in profitability, but the decline has been moderate.

FIGURE III.18
Link between mismatch and earnings (1)
(annual earnings over total assets; pesos to the dollar)

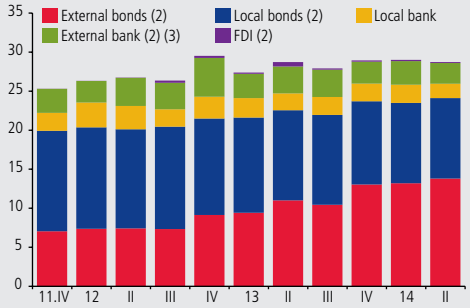


(1) Firms with an extreme mismatch. Measured with a six-month lag; earnings to date.
(2) Average of the last month of each period.

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

The recent external debt issues by the corporate sector[3]/ could be reflected in a higher level of indebtedness for the issuers, together with a larger mismatch. The available data indicate that since late 2011, the indebtedness of these firms has not increased significantly, on either the individual or aggregate level (figure III.19). Furthermore, since mid-2013 external bonds account for an increasing share of total assets, to the detriment of local bonds. This could result in an increased mismatch if the growth of dollar liabilities is not adequately covered[4]/.

FIGURE III.19
Debt of firms issuing external bonds (1)
(percent of total assets)



(1) Excluding the financial sector, mining and state-owned companies from the sample of external bond issuers. Results for 14 issuers.
(2) Converted to pesos using the average exchange rate on the last day of each quarter (including local dollar-denominated bonds).
(3) External bank debt includes multilateral organizations.

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

Among the issuers of external debt, the set of firms that keep their books in pesos issued a total of US$4.375 billion. For the majority of these firms, which together account for 80% of these issues, the currency mismatch did not increase after the debt issue.

In sum, among companies that report to the SVS, the profitability of firms with a currency mismatch did not deteriorate significantly relative to the total sample. This applies even for firms with a larger mismatch. In general, the recent external bond issues have been accompanied by currency hedging, so the firms' mismatch did not increase.

[1]/ Smaller firms are excluded from the sample, which limits the scope of the results.
[2]/ Balance sheets of firms that report to the SVS; SBIF data on local bank debt; and Central Bank data on currency derivatives and external debt.

[3]/ Considers issues between January 2012 and June 2014, which totaled US$7.182 billion.
[4]/ Data are not available on the maturity of currency derivatives, which eliminates rollover risk.

BOX III.2 BANK FINANCING FOR HOME PURCHASES

This box describes the evolution of bank financing, through mortgage loans, for home purchases in 2004–2013. The analysis looks at the loan-to-value (LTV) ratio—that is, the ratio of the amount of the loan to the value of the residential property—at the time of origination, using a sample of actual home transactions[1]/.

LTV distribution

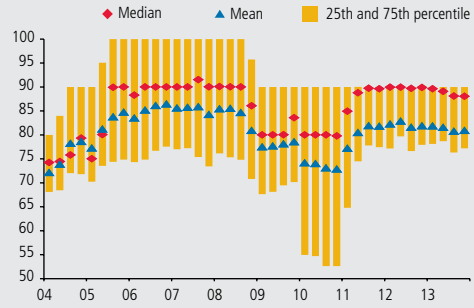
The dynamics of the LTV track the economic cycle. Between the first quarter of 2005 and the second quarter of 2008, bank mortgages financed 86% of the value of the home, on average. As financial conditions began to deteriorate in September 2008, the LTV also entered a downward trend, reaching around 72% in late 2010. The indicator then rose to just over 80% on average in 2011 and was stable at that level through year-end 2013 (figure III.20).

A quarterly analysis of the LTV distribution reveals that in the most recent period, a quarter of mortgages were granted with an LTV of over 90%. In 2005–2008, the same share of transactions involved 100% financing. Currently, the median loan has an LTV of just under 90%, which demonstrates the strong concentration of mortgages with that level of financing. This is consistent with banks own reporting in the Bank Lending Survey (BLS), which indicates that the majority of mortgage loans are granted with an LTV of over 80%.

The data reveal differences in the LTV for different home prices. In general, the LTV is lower and more stable for higher-priced homes (over UF6,000). This trend is seen not only on average, but also at the extremes of the distribution (table III.5). In particular, a quarter of the loans granted for homes over UF6,000 had 90% financing or higher throughout the period under analysis. Among loans for UF1,000 and 2,000, the same share had an LTV of 100% in the period before 2009.

Thus, the large share of mortgages with 100% financing at the aggregate level in 2005–2008 is mainly explained by homes valued at UF1,000 to 2,000. More recently, transactions with an LTV of 100% continue to be concentrated in this price segment, but they account for less than 3% of total transactions (figure III.21).

FIGURE III.20
Loan-to-value ratio
(percent)



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

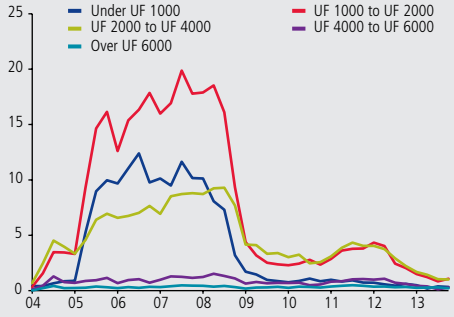
TABLE III.5
LTV by home value
(percent)

Indicator	2004 IV	2005 IV	2006 IV	2007 IV	2008 IV	2009 IV	2010 IV	2011 IV	2012 IV	2013 IV
UF 1000 to UF 2000										
Mean	84.3	90.0	90.4	91.2	86.4	82.8	84.4	85.3	84.5	83.5
25th percentile	76.3	84.9	86.8	88.9	80.0	78.5	80.0	80.5	80.3	80.0
Median	89.4	92.8	95.6	100.0	90.0	87.4	89.5	90.0	90.0	89.6
75th percentile	98.9	100.0	100.0	100.0	100.0	90.0	90.0	90.0	90.0	90.0
UF 2000 to UF 6000										
Mean	81.7	84.0	85.3	85.8	84.0	81.9	83.8	84.4	84.4	82.4
25th percentile	75.0	75.0	79.4	80.0	77.6	76.3	80.0	80.0	80.2	80.0
Median	85.2	90.0	90.0	90.0	90.0	88.4	89.7	90.0	90.0	89.2
75th percentile	91.1	100.0	100.0	100.0	100.0	90.0	90.0	90.0	90.0	90.0
Over UF 6000										
Mean	73.5	74.6	77.0	76.4	74.3	74.0	73.3	76.5	75.0	73.3
25th percentile	61.1	61.5	66.1	65.4	62.9	62.2	60.3	66.2	64.2	63.4
Median	79.2	78.5	80.0	80.0	80.0	79.3	78.5	80.2	80.0	79.9
75th percentile	89.1	90.0	90.4	90.7	90.0	90.0	90.0	90.0	90.0	89.2

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

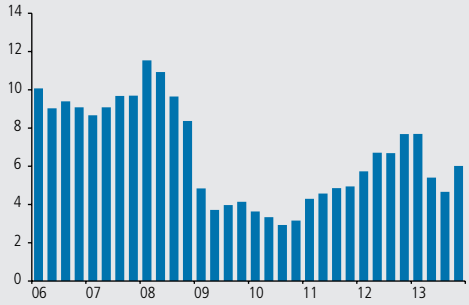
[5]/ The sample only includes operations involving bank financing to individuals.

FIGURE III.21
Mortgage loans granted with 100% financing
(percent of total transactions)



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

FIGURE III.22
Mortgage transactions with looser lending conditions
(percent of total transactions)



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

Link to other lending conditions

In addition to the percentage of financing in a home purchase, banks use (among other variables) the size of the dividend as a share of the buyer's income—that is, the dividend-to-income (DTI) ratio—as a factor in deciding whether to grant a mortgage loan. In the sample of transactions analyzed, the DTI ratio was stable at under 25% between 2006 and 2013.

Combining these two indicators (LTV and DTI) provides an estimate of the share of transactions subject to looser lending conditions—that is, a large financial burden (DTI over 30%) and a high percentage of bank financing (LTV over 90%). The share of these loans was around 10% in 2006–2008, which is consistent with the high LTV in that period. More recently, the share contracted, representing just 6% of total transactions at year-end 2013 (figure III.22).

In sum, the lending conditions for home mortgages, measured through the LTV and the DTI ratios, have been relatively stable in recent years, at levels below the averages from 2005 to 2008.

IV. BANKING SYSTEM

The annual growth rate of commercial and consumer loans continued to decline. Credit risk indicators are stable, although some banks have a tight provisions coverage ratio. The results of the stress scenario are similar to the last FSR, with some differences stemming from a higher initial profitability.

EVOLUTION

The real annual growth rate of commercial and consumer loans fell to almost 3% in real annual terms, while mortgage loans continued to grow at around 10% in real annual terms.

The lower growth of commercial loans has coincided with the poor performance of investment and output (figure IV.1). On the demand side, construction and mining fell, and services slowed (figure IV.2). On aggregate, individually evaluated loans—related to financing for large firms[1]/—have fallen drastically starting in the second quarter of 2014. This contrasts with group evaluation, which declined in 2013 (figure IV.3).

In consumer lending, the slower growth cut across all banks and was accentuated in specialized consumer divisions. The slowdown was sharpest in the larger loan segment (over UF3,000) (figure IV.4). Mortgage debt continues to grow at around 10% in real annual terms, driven by larger banks.

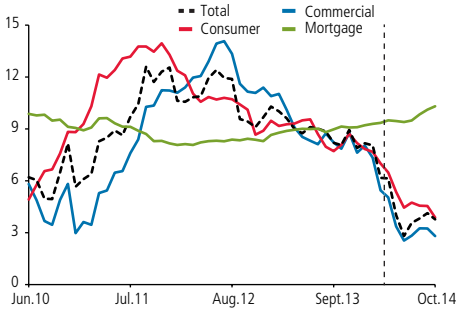
The slower growth of commercial and consumer loans has occurred in a context of more favorable cost conditions, but with tighter access requirements and weaker demand.

The interest rates on commercial, consumer and mortgage loans have fallen significantly in the last year, consistent with a more expansionary monetary policy. Despite this trend, the growth of commercial and consumer credit has continued to decline, reflecting a scenario in which supply conditions have tightened and demand has weakened, as shown in the Bank Lending Survey (BLS) for September 2014.

In the commercial portfolio, the reduction of both interest rates and credit flows suggests that demand factors are dominating, due to the fact that firms have lowered their need for bank financing. The September BLS shows that both supply and demand factors have become tighter than in previous periods, but the change in the latter is more pronounced.

[1]/ This type of evaluation represents almost 80% of bank financing to firms. According to the SBIF definition, individual evaluation is necessary when the loan requires a detailed analysis due to the firm's size, complexity or level of exposure with the entity.

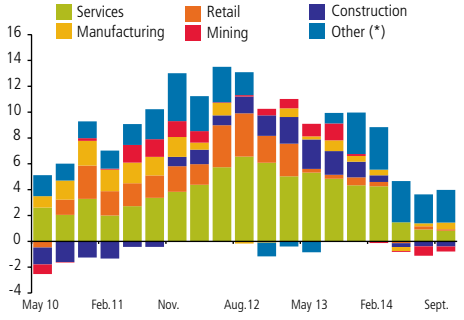
FIGURE IV.1
Growth rate of loans (*)
(percent; real annual change)



(*) Vertical dashed line indicates the statistical closing date for the last FSR.

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

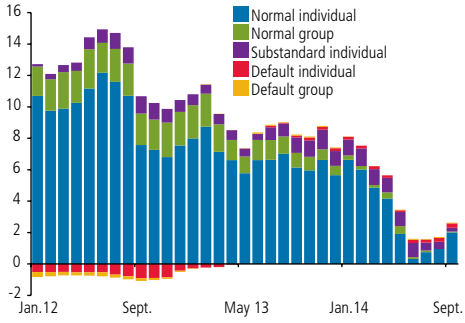
FIGURE IV.2
Growth rate of commercial loans, by economic sector
(percent, real annual change)



(*) Includes EGW; transport, storage and communications; agriculture, livestock, forestry and fishing; and real estate.

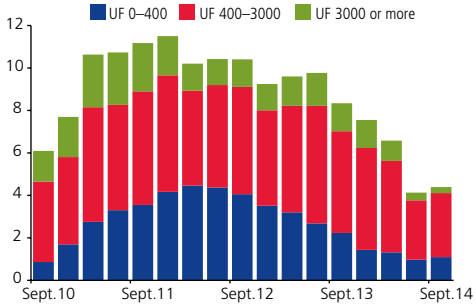
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.3
Commercial loan categories
(contribution to real annual growth; percent)



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

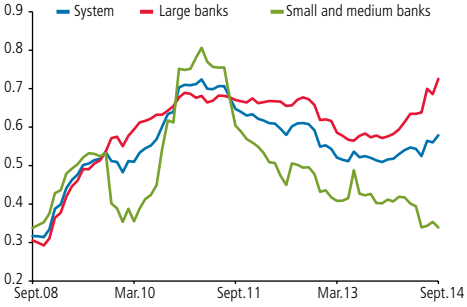
FIGURE IV.4
Growth rate of consumer loans by debt segment (*)
(percent, real annual change)



(*) Includes consumer debt of savings and loan cooperatives supervised by the SBIF. Excludes the Ripley affiliate starting in December 2013.

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

FIGURE IV.5
Commercial portfolio write-offs by bank size
(percent of loans, 12-month moving sum)



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

Credit risk indicators have not changed substantially, although some banks have tight provisions coverage ratio for the commercial portfolio.

On aggregate, the delinquency of the commercial portfolio was stable in 2014 (table IV.1). However, the unpaid installment ratio (UIR) increased marginally in some specific sectors, such as construction and manufacturing (chapter III). Moreover, in recent years there has been a continuous reclassification of loans to higher risk categories based on the banks' individual loan assessment. Thus, the share of the three best (lowest) risk categories (A1–A3) contracted from 48% in December 2012 to 43% in September 2014.

TABLE IV.1
90-day delinquency rate
(percent of loans)

	2010.IV	2011.IV	2012.IV	2013.IV	2014.I	2014.II	2014.III
Commercial (*)	1.7	1.5	1.3	1.5	1.6	1.6	1.6
Consumer	2.3	2.5	2.5	2.2	2.2	2.2	2.2
Mortgage	5.0	4.2	3.9	3.3	3.2	3.2	3.1

(*) Includes foreign trade and contingent loans.

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

Write-offs in the commercial portfolio have increased since the beginning of the year, explained by a significant increase in the larger banks (figure IV.5). At the same time, some banks have a level of provisions that only covers default (figure IV.6). This is especially relevant in banks with a high exposure to the system's main debtors; both delinquent and current (figure IV.7).

In households, consumer and mortgage loan delinquency rates have been stable. Write-offs have decreased, and the provisions level is adequate for the portfolio's delinquency rate.

The profitability of the banking system has risen in the past three quarters, driven by the transitory effect of inflation.

Despite the lower growth of total credit and the slight deterioration of some payment indicators, the profitability of the banking sector has risen over the course of the year. This stems from the increase in the indexation margin due to higher inflation. The interest margin—the main component of income—was stable in 2014, as were the other components of profitability.

Bank funding through bond issues in the local and external markets increased, while the dependence on wholesale funding was stable.

The share of bonds issued both within and outside Chile rose to 23.7% of total banking system liabilities (figure IV.8). While funding through bonds is normally at longer terms—which reduces the maturity mismatch on the banks' balance sheets—the rollover of these funds takes more time than other funding sources, due to placement management.

With regard to wholesale funding, the share of liabilities has not changed substantially, either at the system level or by bank size. The concentration of mutual funds has fallen in the past two years, as the average number of managers rose from 5.5 to 6.5 between 2012 and August 2014.

RISK FACTORS

The lower growth of the economy has not had a significant impact on payment indicators, although there are still risks.

The payment indicators for the consumer portfolio have not changed significantly. This could be due, in part, to the decrease in exposure to lower-income households. In addition, the labor market has not deteriorated despite the lower economic growth, and the unemployment rate remains low. However, an increase in unemployment could have adverse effects.

For the commercial portfolio, average payment indicators have not changed significantly as of the third quarter, although some specific sectors deteriorated. On aggregate, there are no signs of changes associated with the lower output and domestic demand. There is still a risk that these effects could emerge in the coming quarters, and they could be exacerbated if the lower growth persists or deepens. The impact of this risk would vary across institutions, so each bank needs to maintain adequate provisions given its exposure.

The banking system could face periods of volatility in local and external funding sources, due to regulatory changes and the external financial situation.

Despite the favorable changes in local wholesale funding, the strong dependence of medium-sized banks on this market makes them vulnerable to the portfolio movements of these investors. This could imply an increase in their funding costs. In particular, the mutual funds could adjust their investment portfolio as a result of the increase in the limit on exposure by issuer included in the Single Funds Law.

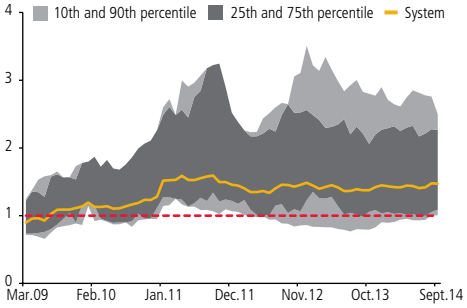
External funding costs could rise due to higher volatility in external financial markets if any of the risk scenarios materialize (chapter I). This would intensify the portfolio adjustments of different market participants, thereby contributing to the volatility of bank funding.

ASSESSMENT OF THE STRESS SCENARIO[2]/

Stress tests show that the banking system maintains a sufficient financial position to absorb the materialization of a severe stress scenario. A higher initial profitability—associated with transitory factors—produced a slightly better result than in the last FSR.

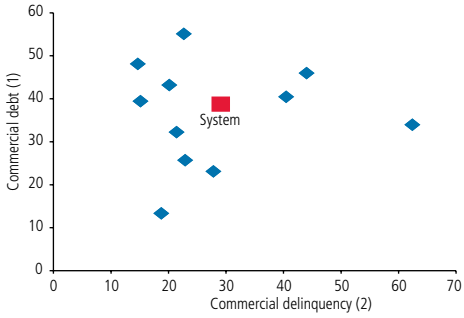
[2]/ The analysis is based on the methodology described in the FSR for the second half of 2013. Both the analysis and the results are regularly reported to the SBIF.

FIGURE IV.6
Provisions coverage ratio of the commercial portfolio (*)
(times)



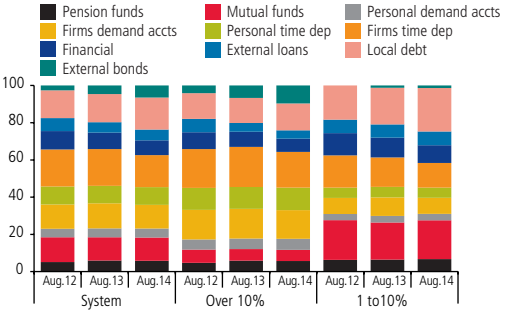
(*) Ratio of specific provisions to default of 90 days and longer. Percentiles weighted by size of the commercial portfolio.
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.7
Concentration of the system 500 largest current and delinquent debtors
(percent of respective portfolio)



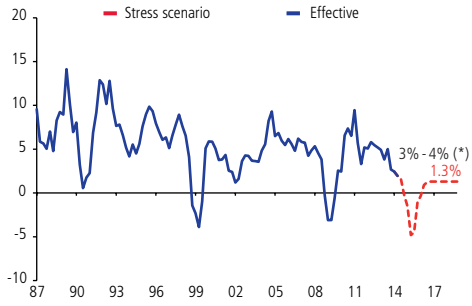
(1) Exposure to the system's 500 largest current debtors over the commercial loans of each bank.
(2) Exposure to the system's 500 largest delinquent debtors over the delinquent commercial loans of each bank.
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.8
Liabilities by size of bank (*)
(percent of liabilities)



(*) Bank size defined as the share of assets; excludes derivatives and other liabilities.
Source: Central Bank of Chile, based on data from SBIF and CSD.

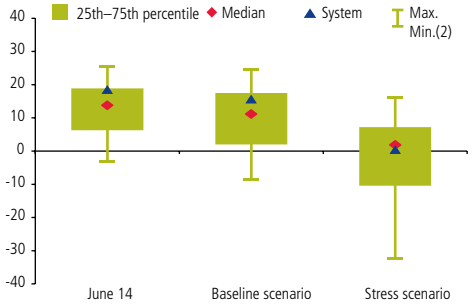
FIGURE IV.9
Real annual growth of GDP
(percent)



(*) The baseline scenario in the September 2014 *Monetary Policy Report* assumes a GDP growth rate of between 3 and 4% in 2015.

Source: Central Bank of Chile.

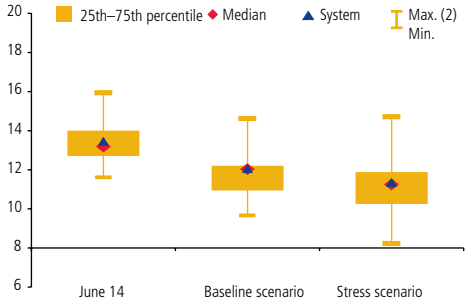
FIGURE IV.10
Impact of different scenarios on ROE (1)
(earnings over core capital)



(1) Data weighted by the core capital of each institution.
(2) Minimums correspond to the 1st percentile.

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

FIGURE IV.11
Impact of different scenarios on the capital adequacy ratio (CAR) (1)(2)
(regulatory capital over risk-weighted assets)



(1) Data weighted by the core capital of each institution.
(2) Calculations do not include treasury or foreign trade banks.
(3) Maximums correspond to the 90th percentile.

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

The stress tests use macro and accounting information for the banking system as of June 2014. Credit risk is calculated by estimating a model that relates provisions—which reflect the quality of the banks' credit portfolios— primarily with economic activity. Market risk is calculated based on three types of exposure: currency, valuation and re-pricing. Both risks are evaluated under the baseline and stress scenarios, using the methodology described in the *Financial Stability Report* for the second half of 2013.

The stress scenario considers a drop in GDP of –3% in annual terms in 2015 and an increase of 1.3% in 2016. This scenario aims to replicate past episodes of financial fragility (figure IV.9).3

The initial conditions for this test (June 2014) are more favorable than for the last round (December 2013). The banking system's return on equity (ROE) is 3.5 percentage points (pp) higher (18.5 versus 15%), and the capital adequacy ratio is 0.2 pp higher (13.3 versus 13.5%).

In the stress scenario, the ROE would fall 0.4 pp of core capital (table IV.2), compared with –3.6 pp in the last test. The group of banks that would have negative earnings under the stress scenario represents 42% of the system's core capital (figure IV.10). In turn, the group of banks with a CAR of over 11% represent 60% of the system's core capital (figure IV.11).4 In the previous stress test, these shares were 62 and 60%, respectively.

TABLE IV.2
Impact of the stress tests on profitability
(percent of core capital)

	Stress scenario
Initial ROE	18.5
Market risk	-1.1
Valuation	-1.0
Re-pricing	-0.5
Currency	0.3
Credit risk	-21.3
Consumer	-9.6
Commercial	-10.0
Mortgage	-1.7
Margin	4.4
Final ROE	0.4

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

Stress tests are an analytical tool that contributes to identifying systemic financial strengths and weaknesses in a given moment of time. Given their partial nature, they do not necessarily uncover all the effects of specific risk scenarios. Consequently, they should not be interpreted as projection exercises. However, given the lower growth outlook and heightened external risks, banks need to ensure that they maintain an adequate level of provisions and capital.

3/ The baseline scenario is consistent with the Monetary Policy Report for September 2014, with GDP growth between 1.75 and 2.25% in 2014 and between 3 and 4% in 2015. The UF interest rate forecast in December 2014 is 3.6% for one- to three-year loans and 4.2% for mortgage loans over 20 years.
4/ Results include reinvested earnings and capitalizations.

V. FINANCIAL REGULATION

This chapter reviews the most important regulatory developments at the local level during the second semester, as well as the most important issues in the debate on financial regulation at the international level.

NATIONAL REGULATION

Law on the Financial Stability Board

Chile's Financial Stability Board (CEF) began operating in October 2011, through a Finance Ministry Decree. The board's main functions, outlined in the FSR for the second half of 2011, are to coordinate and propose measures for safeguarding the integrity and soundness of the financial system and to provide mechanisms for coordinating and exchanging the information necessary for implementing a preventive management of systemic risk and the resolution of critical situations involving the exercise of the functions and powers of the Superintendents.

In November of this year, Law 20,789 was passed to create the CEF as a legal entity, maintaining the board's central structure and objectives. This new legal framework provides a more robust institutional structure, for example by allowing the members to exchange information that is subject to restrictions under their respective legislative frameworks.

The CEF will have important new powers, including the authority to ask the participating supervisory authorities for specific information or studies for monitoring the stability of the financial system and to make recommendations that contribute to financial stability.

The new legislation also contains elements that should contribute to improving the monitoring and supervision of financial conglomerates in Chile, mainly along the dimensions described below.

First, the financial superintendents' authority to request information is extended to the entire corporate group associated with the supervised financial entities. Second, the new law establishes solvency requirements for the controlling shareholders of banks and insurance companies, which until now were only enforceable at the time of foundation or takeover of the respective entity. In the case of noncompliance and failure to rectify the situation within the timeline established by the respective superintendents, the supervisors can take a range of measures, such as designating a representative inspector or provisional administrator in the case of banks.

Single Funds Law

In May, Law 20,712 on the management of third-party funds and individual portfolios entered into force. Commonly called the Single Funds Law (*Ley Única de Fondos,* or *LUF*), the law unifies and standardizes the regulations governing the different types of funds: mutual funds, investment funds, foreign capital investment funds, foreign risk capital funds and real estate funds.

For the mutual funds and their investments, the new legislation increases the flexibility of the portfolio, in terms of both the types of instrument that are eligible for investment and the levels of exposure. The most important changes are as follows:

(i) The new law stipulates the instruments that are not eligible for investment. This broadened the range of investment instruments, given that previously the eligible instruments were specifically listed.

(ii) The law changes the basis for calculating the limit (25%) on the amount the fund can have in instruments issued or backed by an entity relative to the subscribed and paid-in capital of the company in which the fund is investing. The measure is now based on the number of shares effectively subscribed and paid, instead of shares issued, putting the focus on the company's real capital income.

(iii) It expands the investment limit on instruments issued or backed by a single entity from 10 to 20% of the fund's assets. The exception governing investment in the shares of national or foreign funds—not managed by the fund's management or corporate group—increased from 25% to a range of 25 to 100% of assets, where the SVS will set the limit through the issue of a General Regulation based on the diversification of the fund's portfolio and separate equity.

(iv) It raised the limit on exposure to instruments issued or backed by entities pertaining to the same corporate group, from 25 to 30% of the fund's assets.

These changes will probably lead to a redistribution of the investment portfolio, which may have an effect on instruments in which the mutual funds are big participants. In particular, the mutual funds account for almost 40% of bank term deposits. The potential impact of the redistribution is related to the banking system's funding structure, where small- and medium-sized banks have a greater dependence on this type of institutional investor (chapter IV).

Credit entities subject to Law 18,010

In 2013, changes were introduced to Law 18,010 whereby entities that carry out operations subject to a conventional maximum interest rate and that meet the conditions for being classified as institutions that place funds through large-scale money lending operations will be subject to supervision by the SBIF for compliance with the regulatory framework in question. In November the SBIF published the Administrative Directive for Large Money Lending Institutions, which establishes the information that these institutions must periodically report to the Superintendence starting in 2015.

The exact number of entities to be supervised will depend on how many meet the conditions and requirements to be established by Finance Ministry Decree.

In the meantime, the law will be applied to entities that have performed over a thousand money lending operations subject to a conventional maximum interest rate, with a total annual amount of UF100,000 or more. The first list included 877 entities, which significantly increases the number of institutions supervised by the SBIF. However, the institutions can request an exemption by submitting a request for reconsideration, so the number may decrease.

Law on the reorganization and liquidation of business and personal assets

La 20,270 entered into effect on 10 October 2014, replacing the old Bankruptcy Law. The objective is to establish a legal framework for reorganizing viable companies and efficiently winding up those that are not. For natural persons, the law establishes a bankruptcy procedure that gives natural persons the possibility of reaching a bilateral debt refinancing agreement with their creditors.

For legal persons, the law improves the procedure, focused mainly on asset liquidation, allowing the reorganization of viable companies and establishing deadlines for reorganization and liquidation. A period of bankruptcy protection is also created, during which the debtor has certain privileges, including a stay against the commencement of judicial proceedings against the debtor. The objective of bankruptcy protection is to promote the proposal of a reorganization plan and the continuity of operations.

In the case of natural persons, new reorganization and liquidation procedures have been created, which must meet certain requirements in order to be set in motion[1]/. The aim is to include all creditors in a single agreement in the case of reorganization or, alternatively, to implement a single liquidation process. As a result of this process, all debts will be understood as extinguished, novated or renegotiated, as applicable, and the debtor is considered discharged for all legal effects.

The new law also changes the name of the former Superintendence of Bankruptcy to the Superintendence of Insolvency and Reorganization (*Superintendencia de Insolvencia y Reemprendimiento, SIR*); establishes that the insolvency procedures will be resolved by specialized courts, and not randomly assigned to civil courts; and contemplates the creation of a *Bankruptcy Bulletin* that would publish the resolutions and orders dictated in the court proceedings, thereby reducing costs relative to publication in the *Official Gazette.*

In Chile, there are around 140 bankruptcies per year, on average[2]/, The associated procedures are longer and have a lower recovery rate for creditors than in the other OECD countries[3]/. The new legal framework seeks to streamline the bankruptcy process reducing waiting times, promote the use of specialized courts, create effective reorganization procedures and reduce the associated costs.

In the implementation of the law, it is important to ensure that the debt discharge procedure does not generate incentives for default on the part of debtors or affect the recovery rate for creditors. To this end, financial entities need to take these factors into account in their credit risk management processes.

[1]/ The debtor can request reorganization from the Superintendence of Insolvency and Reorganization if there are two or more debts that are past due by more than 90 consecutive days, for a total amount of over UF80. If there is no agreement, the request goes to a process hearing, where a proposal is presented on the liquidation of the debtor's assets. If there is still no agreement, the case goes to a new debtor liquidation hearing.
[2]/ Average annual bankruptcies published in the *Official Gazette* in 2005–2013.
[3]/ In Chile, the recovery rate for creditors is 25.5%, and the length of the bankruptcy process is 4.5 years, versus 68.2% and 1.7 years, on average, in the OECD countries.

Other important documents

Tables V.1 and V.2 present the main regulations issued and opened for public comment, respectively.

INTERNATIONAL REGULATION

Key attributes of effective resolution regimes for financial institutions

An important part of the international regulatory agenda after the 2008 financial crisis has been driven by various commitments adopted by the G20 countries in the framework of the Financial Stability Board (FSB), which aims to improve the robustness of financial markets.

TABLE V.1
Main regulations issued in the second half of 2014

Date	Organization	Regulation	Material and objectives
29-05-2014	SBIF	ADMINISTRATIVE DIRECTIVE 3.569 BANKS MODIFICATION OF RAN CHAPTER 1-14	Complements the regulations in the Chapter with instructions related to the Foreign Account Tax Compliance Act (FACTA). To comply with FATCA, banks must register with the U.S. Internal Revenue Service (IRS) and annually report information on U.S. accounts, as required for U.S. tax purposes.
10-06-2014	SBIF	ADMINISTRATIVE DIRECTIVE 156 COOPERATIVES COMPLEMENT TO CIRCULAR No. 123	Complements instructions related to the Foreign Account Tax Compliance Act (FACTA). To comply with FATCA, banks must register with the U.S. Internal Revenue Service (IRS) and annually report information on U.S. accounts, as required for U.S. tax purposes.
07-10-2014	SBIF	ADMINISTRATIVE DIRECTIVE 3.570 MODIFICATION OF RAN CHAPTERS 20-7, 11-6 and 11-7	Moves toward a model in which the banks will be able to adopt the decision to externalize certain services without the prior authorization of the SBIF, in compliance with various requirements included in the regulations related to operating risk management.
13-11-2014	SBIF	ADMINISTRATIVE DIRECTIVE 1 ICCM REGULATIONS FOR MONEY LENDERS SUPERVISED UNDER LAW 18,010	Issues regulations to entities (ICCMs) that carry out operations subject to a conventional maximum interest rate and that meet the conditions for being classified as institutions that place funds through large-scale money lending operations. In particular, solicits the periodic disclosure of detailed information on operations, excluding data that identifies the debtors.
09-12-2014	Central Bank of Chile	NEW CHAPTER III.J.3 OF THE CBC COMPENDIUM OF FINANCIAL REGULATIONS	Adjusts or updates the regulatory requirements that could be inhibiting the development of some means of payment. Also aims to increase the consistency between some of the definitions and requirements in this Chapter with those considered in Chapter III.J.1.

TABLE V.2
Main regulations published for public commentary in the second half of 2014

Date	Organization	Regulation	Material and objectives
15-07-2014	MINECON	PUBLIC CONSULTATION CLOSED MODIFICATION TO THE REGULATIONS ON INFORMATION PROVIDED TO CONSUMERS OF BANK AND NONBANK CREDIT CARDS	Improves the existing regulations, in order to ensure the protection of consumer rights, in particular repealing the possibility of including new automatic renewal clauses and modifying the information requirements in the case of consumers who do not accept this renewal.
15-07-2014	MINECON	PUBLIC CONSULTATION CLOSED REGULATIONS ON THE MEANS AND CONDITIONS THROUGH WHICH A CONSUMER CAN ACCEPT THE INITIATION, MODIFICATION OR TERMINATION OF CONTRACTS FOR FINANCIAL PRODUCTS AND SERVICES	Complements the existing legal regulations establishing electronic or remote means that are suitable for consumers to signal their acceptance of the supplier's proposal for the initiation, modification or termination of contracts.
25-07-2014	SVS	PUBLIC CONSULTATION CLOSED REPORT ON SUPERVISION OF MARKET CONDUCT	Presents the new model for supervision of Market Conduct in the insurance industry. The current risk-based approach to supervising the solvency of the system is expanded through the addition of a scheme that promotes fair treatment between insurance companies, insurance intermediaries, claims adjusters and their clients.
22-08-2014	SVS	PUBLIC CONSULTATION CLOSED REPEAL OF ADMINISTRATIVE DIRECTIVE 1441 OF 1999	Regulatory proposal that updates the minimum instructions governing external audits and the reporting of internal control systems of insurance and reinsurance companies, in line with the risk-based supervision model applied in the insurance industry.

One of the lessons of the crisis was that the resolution frameworks in different jurisdictions were not always adequate for resolving a financial institution or conglomerate without destabilizing the system and without committing public funds in the resolution process[4]/. In addition, these regulatory frameworks were not appropriate for resolving institutions with operations in several jurisdictions or coordinating authorities in different countries in the process (IMF, 2014b).

In 2011, the FSB published a document on key attributes for the effective resolution of financial institutions, which should be implemented by the G20 countries (FSB, 2011). The objective is to prevent the problem posed by entities that are considered "too big to fail," whose insolvency could affect the stability of the financial system and force the authorities to use public funds to bail them out. While these key attributes address the resolution of financial institutions in general, the first version provided guidelines mainly for banks. In October of this year, guidelines were added for insurers and systemically important financial market infrastructures (FSB, 2014a).

In November of this year, the FSB published its "Report to the G20 on Progress in Reform of Resolution Regimes and Resolution Planning for G-SIFIs" (FSB, 2014b), which outlines the progress made in implementing the key attributes for bank resolution in the different G20 jurisdictions. The report notes that despite the progress made, much work remains in legal, financial and operational areas, which reflects the inherent complexity of the resolution of financial institutions.

The key attributes are primarily designed for developed economies, and they contain a number of elements directed solely at the resolution of global systemically important financial institutions (G-SIFIs). However, there is a degree of consensus that the attributes of these resolution schemes may not be adequate for resolving a global systemically important bank (G-SIB) without causing disruptions in the financial system. To address this issue, the FSB released for pubic consultation among its members a report that adds requirements for G-SIBs. The main measure is an increase in the share of instruments that can absorb losses during resolution (total loss-absorbing capacity, or TLAC), together with an increase in the debt ratio requirement (table V.3).

The key attributes contain elements considered best practices in resolution, which can be applied in any jurisdiction, in particular with regard to local (not global) systemically important financial institutions. Thus, even in the case of a small economy without any G-SIFIs, the key attributes can be adapted to the specific reality of the financial system.

Given the recent announcements of a future amendment to the Chilean General Banking Law, which would address resolution, it is important for the debate to take into account the key attributes, as well as the complexities that have arisen in other jurisdictions in terms of implementation.

TABLE V.3
Requirements for global systemically important banks
(percent)

Document	G-SIB requirement		Minimum	Maximum
TLAC	Regulatory capital	CET1	4.5	4.5
		AT1	1.5	1.5
		T2	2	2
	Other TLAC instruments		8	12
Total TLAC			16	20
	Conservation buffer		2.5	2.5
	Countercyclical buffer		0	2.5
	Burden of G-SIB		1	3.5
Total system buffers and burden			4	9
TOTAL			19.5	28.5
Of which CET1			8	13

Source: Financial Stability Board.

[4]/ Resolution: action taken by the authorities (with or without private participation) aimed at maintaining financial stability or solving severe problems in financial institutions that have endangered their viability.

Implementation of the Basel Committee standards

In preparation for the Summit of G20 Leaders held on 15–16 November in Brisbane, Australia, on 12 November the BCBS published a progress report on the implementation of its bank solvency and liquidity standards, as part of the organization's regular monitoring of the implementation of BCBS recommendations at the international level. Box V.1 reviews the advances in the implementation of the BCBS standards and what it means for the local industry.

Other important documents

Table V.4 presents the main documents published on regulatory issues at the international level, with an emphasis on issues related to resolution and infrastructure/transparency.

TABLE V.4
List of documents reviewed

Document	Title	Organization	Solvency / Liquidity	Infrastructure / Transparency	SIFIs	Resolution	Risk mgmt / Governance	Supervision
1/	Report on Supervisory Colleges for Financial Conglomerates	BIS						*
2/	Principles for Effective Supervisory Colleges	BIS						*
3/	Review of the Principles for the Sound Management of Operational Risk	BIS					*	
4/	The G-SIB Assessment Methodology — Score Calculation	BIS			*			*
5/	Basel Capital Framework National Discretions	BIS	*					
6/	Reducing Excessive Variability in Banks' Regulatory Capital Ratios	BIS	*					
7/	Recovery of Financial Market Infrastructures — Final Report	BIS		*		*		
8/	Cyber Resilience in Financial Market Infrastructures	BIS		*			*	
9/	Developments in Collateral Management Services	BIS					*	
10/	Non-banks In Retail Payments	BIS						*
11/	Basel III: The Net Stable Funding Ratio	BIS	*				*	
12/	Regulatory Framework for Haircuts on Non-centrally Cleared Securities Financing Transactions	FSB	*	*				*
13/	Guidance on Resolution of Non-bank Financial Institutions	FSB				*		
14/	Feasibility Study on Approaches to Aggregate OTC Derivatives Data	FSB		*				
15/	Jurisdictions' Ability to Defer to Each Other's OTC Derivatives Market Regulatory Regimes	FSB		*				
16/	Structural Banking Reforms: Cross-border Consistencies and Global Financial Stability Implications	FSB			*	*		
17/	Monitoring the Effects of Agreed Regulatory Reforms on EMDEs	FSB	*		*	*		
18/	Key Attributes of Effective Resolution Regimes for Financial Institutions	FSB				*		
19/	Recovery and Resolution Planning for Systemically Important Insurers — Guidance on Identification of Critical Functions and Critical Shared Services	FSB			*	*		
20/	Adequacy of Loss-Absorbing Capacity of Global Systemically Important Banks in Resolution	FSB			*	*		
21/	Report to the G20 on Progress in Reform of Resolution Regimes and Resolution Planning for Global Systemically Important Financial Institutions (G-SIFIs)	FSB			*	*		
22/	The Bank of England's Approach to Resolution	BoE				*		
23/	Supervising International Banks: The Prudential Regulation Authority's Approach to Branch Supervision	PRA						*
24/	Subordinated Guarantees and the Quality of Capital	PRA	*	*				
25/	Depositor Protection — Consultation Paper	PRA		*				
26/	Guidelines on the Remuneration Benchmarking Exercise	EBA		*			*	
27/	Technical Standards on Supervisory Reporting for Institutions	EBA	*					*

Source: Websites of each institution.

BOX V.I STATUS OF IMPLEMENTATION OF THE BASEL III STANDARDS

In response to the 2008 financial crisis, The Basel Committee on Banking Supervision (BCBS) revised its solvency standards, in the framework of reforms spearheaded by the leaders of the G20. As a result, in June 2011 the BCBS published the final report outlining these standards (BCBS, 2010 and 2011).

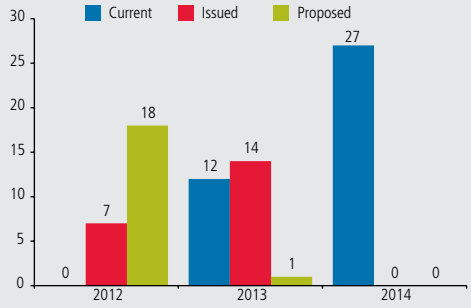
The BCBS also strengthened its "Principles for Sound Liquidity Risk Management and Supervision" (2000 and 2008), developing quantitative standards in this area for the first time: the liquidity coverage ratio (LCR) (BCBS, 2013) and the net stable funding ratio (NSFR) (BCBS, 2014a).

The implementation of these standards by the 27 member countries of the BCBS is regularly monitored by the Committee[1]/. According to the exercises, these countries have made significant progress in incorporating the new standards into their regulatory regimes, in terms of both solvency and liquidity.

As of October 2014, all the BCBS member countries had implemented the Basel III solvency regulations. A year ago, only 12 had done so (BCBS, 2014b) (figure V.1).

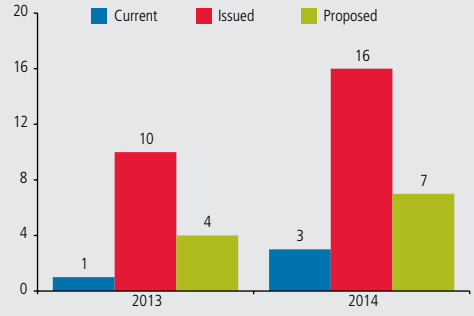
Progress has also been made in the adoption of liquidity standards since the last *Financial Stability Report,* in particular the LCR. In October 2014, a total of 26 jurisdictions had moved forward on the incorporation of the (BCBS, 2014b)— (figure V.2).

FIGURE V.1
Status of the implementation of Basel III solvency standards
(Number of BCBS member jurisdictions in October of each year)



Source: BCBS (2014b).

FIGURE V.2
Status of the implementation of the LCR
(Number of BCBS member jurisdictions in October of each year)

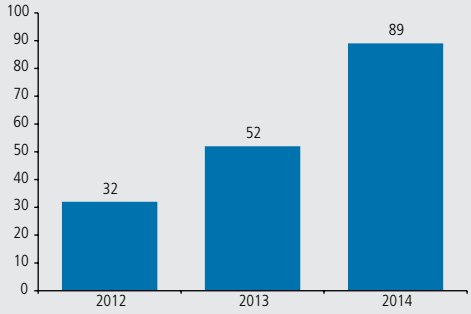


Source: BCBS (2014b).

[1]/ There are currently 27 jurisdictions in the BCBS: Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Netherlands, Hong Kong SAR, India, Indonesia, Italy, Japan, South Korea, Luxembourg, Mexico, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

The Financial Stability Institute (FSI) of the Bank for International Settlements (BIS) carried out a global survey to assess the degree of progress in the implementation of prudential standards in countries that are not part of the BCBS. Based on the 2014 survey (BCBS, 2014b), 89 non-member countries are in some stage of the Basel III implementation process (figure V.3).

FIGURE V.3
Status of the implementation of Basel III (*)
(Number of non-BCBS jurisdictions in June of each year)

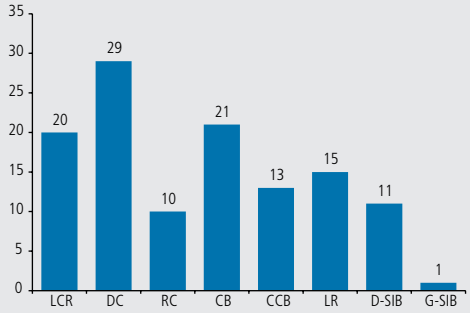


Source: BCBS (2014b).

(*) A jurisdiction that has implemented some section of Basel III is considered in the process of adoption.

Within this group, 17 countries have proposed or implemented the majority of the Basel III innovations in terms of solvency standards[2]/. Of the non-member countries that have published a regulatory proposal for eight sections of Basel III, 20 have made progress on the LCR (FSI, 2014)— (figure V.4).

FIGURE V.4
Status of the implementation of Basel III by section (*)
(Number of non-BCBS jurisdictions with at least a regulatory proposal in March 2014)



Source: Central Bank of Chile, based on data from FSI (2014).

(*) LCR: Liquidity coverage ratio; DC: Definition of capital; RC: Risk coverage— counterparty risk and dependence on external ratings; CB: Conservation buffer; CCB: Countercyclical buffer; LR: Leverage ratio; D-SIB: Domestic systemic bank; G-SIB: Global systemic bank.

In the case of Chile, the recent public consultation for amending the Central Bank of Chile's regulation of bank liquidity risk management constitutes an important advance in terms of achieving greater convergence with international standards in this area.

This regulation was prepared in direct coordination with the SBIF, which, in turn, will issue a specific regulation for its implementation.

Moving in the same direction with regard to solvency is more complex, however, because the General Banking Law (GBL) contains an explicit prescriptive regime that is closely associated with the recommendations of the first Basel Agreement (Basel I).

These experiences need to be taken into account in the development of proposals aimed at amending and improving the GBL. Specifically, it is important to develop a sufficiently flexible legal framework that can incorporate through the regulatory channel the international lessons and developments in financial policy that are emerging over time.

[2]/ All 17 countries in this group have published a regulatory proposal addressing at least three of the following five solvency areas of Basel III: (a) definition of capital, (b) risk coverage, (c) conservation buffer, (d) countercyclical buffer, and (e) leverage ratio.

VI. PAYMENT SYSTEMS

This chapter presents the main statistics on the payment system and describes developments in financial infrastructure at the local and international levels.[1]/.

LARGE-VALUE PAYMENT SYSTEMS

In Chile, the large-value payment system (LVPS) is comprised of the real-time gross settlements (RTGS) system and the large-value payment clearing house (Combanc). The RTGS system is in practice an international standard and is managed by the Central Bank. It settles gross transactions immediately in the accounts of each bank, whereas Combanc nets the transactions for each bank at the end of the day and then clears them through the RTGS system.

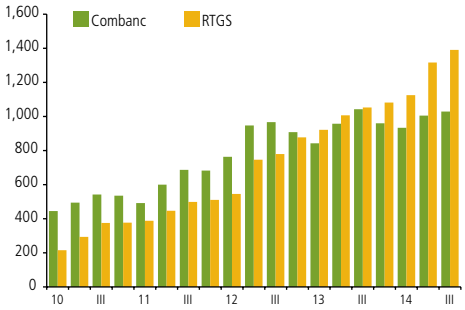
The settlement of transactions from the OTC securities market continued to increase in the RTGS

Since 2010, the amount of OTC securities transactions settled in the RTGS system has increased steadily (figure VI.1) and has exceeded the transactions processed by Combanc since the first quarter of 2013 with the difference growing larger. This trend could be related to a scenario of lower interest rates, which reduces the opportunity cost of liquidity and, therefore, the cost of sending payments directly through the RTGS system[2]/. At the same time, there is also an increasing number of transactions from the CCLV Contraparte Central SA (figure VI.2), which by law must be netted in the RTGS system as of 2010.

In the third quarter of 2014, the average daily amount settled in the large-value payment system was Ch$14.7 trillion, with an annual growth rate of 9% (table VI.1). The RTGS system accounted for 74% of total settlements in the LPVS, versus 70% of the third quarter of 2013. This increase is mainly due to the growth of interbank operations, which include payments from the OTC market described above (figure VI.3).

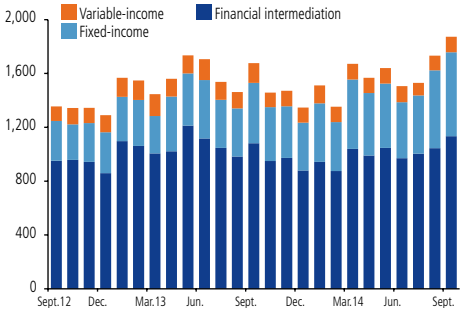
Finally, the use of Central Bank liquidity facilities—namely, the intraday liquidity facility and the standing liquidity facility—has declined despite the increased

FIGURE VI.1
Systems for clearing transactions from the OTC securities market (*)
(Ch$ billion)



(*) Quarterly averages.
Source: Central Bank of Chile.

FIGURE VI.2
Amounts processed in the CCLV by type of instrument (*)
(Ch$ billion)



(*) Daily averages.
Source: Central Bank of Chile, based on data from SVS.

[1]/ More statistics are available in the statistical appendix and on the Central Bank's website, under Payment Systems.
[2]/ Because the RTGS system operates through gross settlements, it requires more liquidity than Combanc, which operates through net settlements.

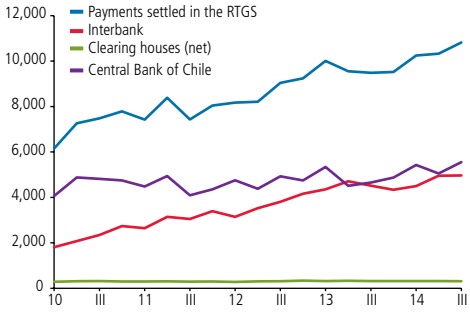
TABLE VI.1
Amounts cleared and processed in the large-value payment systems (*)
(Ch$ billion)

	Third quarter	
	2013	2014
Payments settled in the RTGS	**9,485**	**10,821**
Interbank	4,515	4,963
Own	1,623	1,687
Client account	1,418	1,428
Securities market, CCLV	428	462
Securities market, non-CCLV	1,046	1,386
Clearing houses		
(net)	317	309
checks	59	59
ATMs	16	17
Combanc	241	233
Central Bank of Chile	4,653	5,549
Payments processed in Combanc	**4,012**	**3,895**
Own	915	961
Client account	2,056	1,909
Securities market, non-CCLV	1,040	1,025

(*) Daily averages for each quarter.

Sources: Central Bank of Chile, Combanc and SVS.

FIGURE VI.3
Amounts cleared and processed through the large-value payment systems (*)
(Ch$ billion)



(*) Daily averages for each quarter. Through August 2010, data are from the CCL (the old securities clearing house).

Sources: Central Bank of Chile, Combanc and SVS.

use of the RTGS system in both absolute and relative terms. This probably reflects a greater availability of liquidity in the system (figure VI.4).

FINANCIAL INFRASTRUCTURE[3]/

Principles for financial market infrastructures (FMIs) and their implementation at the local and international levels

The financial crisis of 2008–2009 presented an opportunity to test the real contribution of the FMIs under stress conditions[4]/. In most cases, the FMIs contributed significantly to efficiently and safely managing growing volumes of transactions, closure of positions, collateral and loss allocation[5]/.

The relative success of the FMIs led the 20 main economies of the world (G20) to commit to extending their use, in accordance with the highest standards and international consensus.

The convergence and specific definition of FMI standards was developed by CPMI-IOSCO (2012)[6]/, which published the final version of the new Principles for Financial Market Infrastructures (PFMI) in April 2012. The new international standards cover a wide range of issues, incorporating greater capital requirements, resolution systems, risk and liquidity management criteria, portability of positions and segregation of collateral. They also promote tiered participation arrangements with indirect participants, to avoid market concentration in a few participants who become too big to fail. Finally, market transparency is enhanced through the disclosure of market data to entities called trade repositories.

The process of implementing these principles is being carried out in several countries around the world. CPMI-IOSCO is monitoring the implementation in 28 jurisdictions[6]/, including Chile as a member of IOSCO.

Two examples that incorporate the G20 mandates and the new principles for financial market infrastructures, as well as other international standards, are the Dodd-Frank Act in the United States and the European Market Infrastructure Regulation (EMIR) in Europe (box VI.1).

[3]/ The financial market infrastructures comprise the payment systems, central counterparties, securities clearing systems, central securities depositories and trade repositories.
[4]/ CPSS (2001); CPSS-IOSCO (2001, 2004).
[5]/ An interesting example is the resolution of Lehman Brothers, which was relatively orderly, in contrast with the OTC transactions carried out by the institutions.
[6]/ CPMI (ex CPSS), Committee on Payment and Market Infrastructures of the Bank for International Settlements (BIS).
[7]/ Argentina, Australia, Belgium, Brazil, Canada, Chile, China, European Union, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Mexico, Netherlands, South Korea, Russia, Saudi Arabia , Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

Implementation of the PFMIs in Chile

The implementation of the PFMIs in Chile is important. While the payment systems and financial infrastructure have been modernized substantially in the last 20 years[8]/, in step with the development of the financial markets, there are still a number of pending challenges.

The Ministry of Finance and the Central Bank are evaluating international assessment and cooperation mechanisms, mainly through the World Bank, with a view to a broad adoption of the PFMIs in the medium term.

RETAIL PAYMENT SYSTEMS

The credit card market is undergoing a significant reorganization in 2014.

As reported in the FSR for the second half of 2013, ownership of the credit card business of two nonbank entities, which together account for 33% of the total, is being taken over by banks. In one of the cases, the transfer has already been completed; in the other, it has been negotiated, but has yet to take place.

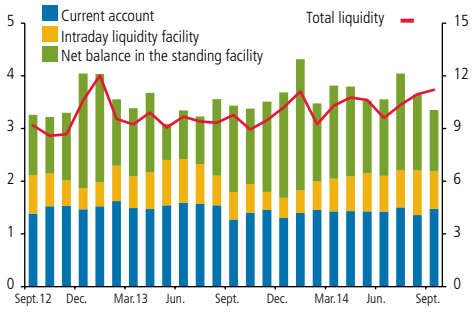
As a result, the market shares of credit card issuers are changing markedly. The share of bank credit cards, in terms of amount, will increase from 55 to 67%, while the number of cards will increase from 30 to 55%. One of the negotiated transfers of the nonbank corporation's credit card business will increase the bank's market share from 2.2 to 12.7%, thereby becoming the third largest bank issuer. Finally, in the nonbank credit card market, once the transfers have been completed, one issuer will control 62% of the market.

New regulations on the issue and operation of prepaid debit cards

After analyzing the comments received during the period of public consultation, the Central Bank published the final version of the new regulations for issuers and operators of stored value (prepaid) cards issued by banks.

As described in the last FSR, the objective of the proposed changes is to remove regulatory requirements that could be inhibiting the development of this means of payment, without introducing additional risks to the retail payment system. Thus, the new regulations eliminated the requirement of prior authorization by the Central Bank for banks to issue this type of card; raised the limit on anonymous disposable cards; and authorized the use of personalized prepaid cards overseas.

FIGURE VI.4
Liquidity in the RTGS system (*)
(Ch$ trillion)



(*) Monthly daily average.
Source: Central Bank of Chile.

[8]/ The real-time gross settlements (RTGS) system for large-value payments was created in 2004. The Securities Custody Law was modernized in 1999, 2002 and 2002. The large-value payment clearing house (*Combanc*) entered into operation in 2005; the Securities Clearing and Settlement Law was published in 2009; and the country's first central counterparty for the stock market (CCLV *Acciones*) was created in 2010. The regulatory guidelines for a central counterparty for derivatives markets (CCLV *Derivados*) was approved in 2012.

The definitive version of the new regulations incorporates new modifications and clarifications, in line with some of the comments received during the public consultation. These include allowing the remote purchase of prepaid cards, allowing the purchase of prepaid cards for natural persons by legal persons, which will allow companies or the government to use the cards to distribute payment or benefits, and authorizing the operators to assume payment responsibility.

With regard to this initiative, it is important to bear in mind that the Central Bank's authority to regulate the means of payment cannot currently be applied to prepaid cards issued by nonbank entities. This means of payment is currently restricted exclusively to banks, in accordance with the provisions of the GBL and the interpretation thereof by the SBIF.

Congress is currently discussing legislative proposals to allow the issue of prepaid cards by nonbank entities. In the event that such a proposal is passed, the Central Bank would be in a position to define the applicable regulations.

BOX VI.I COMPLIANCE WITH THE PRINCIPLES FOR MARKET INFRASTRUCTURES AND CROSS-BORDER DERIVATIVES TRANSACTIONS

The G20 countries have recently committed to strengthening the derivatives market with a series of measures: moving sufficiently standardized OTC derivatives to the exchange; processing settlement through central counterparties (CCP); reporting information on the transactions to trade repositories (TR); and increasing the capital requirements on contracts that are not cleared and settled though a CCP.

Some of these commitments have been incorporated as specific recommendations in the Principles for Financial Market Infrastructures (PFMI), defined by the BIS Committee on Payments and Market Infrastructures (CPMI).

In addition, the Basel III solvency standards for the banking industry—developed by the BIS Basel Committee on Banking Supervision (BCBS)—establish lower capital requirements for banks' derivatives exposure to qualifying CCPs (QCCP) than for exposure to non-qualifying CCPs. One of the three requirements for being a QCCP is compliance with the corresponding PFMI[1],[2]/. This is a significant development considering that the main jurisdictions have committed to following the Basel recommendations more comprehensively in their legislative, regulatory and supervisory regimes.

In the case of the derivatives market, this new regulatory environment has an international scope, with requirements for entities located in jurisdictions that do not necessarily apply equivalent regulatory frameworks.

The rest of this box explains how CCPs located in jurisdictions outside the United States and the European Union (EU) can clear and settle contracts with U.S. and EU counterparties.

United States

The Dodd-Frank Act establishes channels through which foreign CCPs can provide clearing and settlement services to U.S. entities. The first is to register as a CCP in the United States and thus be subject to supervision and regulation as a Derivatives Clearing Organization (DCO)[3]/. The second is for the regulatory agency in the United States—either the Commodity Futures Trading Commission (CFTC) or the Securities and Exchange Commission (SEC), depending on the type of derivative—to grant an "exception" acknowledging that the CCP complies with equivalent requirements to the U.S. regulations in its jurisdiction of origin[4]/.

Some of the PFMIs are contained in the U.S. regulations, and systemically important CCPs (or SIDCOs) are subject to all of the PFMIs. It is to be expected that the requirements for granting exceptions will use the PFMIs as a baseline framework for the authorization.

European Union

The EU has a procedure for recognizing the legal and supervisory framework of non-member countries as equivalent. Thus, when a transaction is carried out in a non-member country where one of the counterparties is from the EU, the counterparties are assumed to have complied with the requirements of the European Market Infrastructure Regulation (EMIR)—except for the reporting requirements—when they apply the regulations of the non-member country, in order to avoid the duplication of regulations or problems arising from policies with conflicting requirements.

[1]/ The qualifying conditions are that the CCP has a license to operate as such with respect to the products offered; that the CCP is supervised and regulated in a jurisdiction where the regulator/supervisor has publicly established that the CCP complies with local rules and regulations that are consistent with the PFMI; and finally, that the CCP must disclose the necessary data for calculating capital requirements for default fund exposures.

[2]/ Basel III.

[3]/ The name of derivatives CCPs in the United States.

[4]/ To date, few foreign CCPs have registered as a DCO, and no CCP has been granted an exception. Consequently, there is a degree of uncertainty with regard to the application of these regulations.

As part of the equivalency assessment, one of the parameters considered is compliance with the PFMIs. This is especially important for the principles related to CCPs because, as mentioned above, only entities that comply with the PFMIs can be considered QCCPs, which then implies lower capital requirements for banks that clear and settle their derivatives through these infrastructures.

Finally, the recognition of foreign CCPs and TRs by the European Commission will require information sharing and cooperation agreements with the authorities in the non-member countries.

Impact in Chile

The regulations described above have a cross-border impact with important implications for Chile. The United States and Europe are the main markets in which Chilean entities perform derivatives transactions. In this scenario, the alternatives for carrying out transactions with entities based in the United States or Europe are as follows:

(1) Recognize foreign CCPs in Chile through an appropriate legal regime, thereby allowing local counterparties to work with foreign infrastructures; and

(2) Achieve the recognition of local CCPs in foreign jurisdictions, by applying the corresponding requirements specified in each jurisdiction, with particular focus on the regulations applicable in the United States and Europe as mentioned above. In the case of Europe, request recognition of the jurisdiction as equivalent by the European Union[5]/.

Compliance with the PFMIs by Chile and, by extension, the CCPs authorized to operate in the local market would bring the country closer to both the U.S. and European standards.

In this context, it is necessary to identify the gaps that Chile needs to overcome for convergence with the PFMIs, which could imply legislative and regulatory changes. It is therefore essential to gain a broad commitment from the relevant authorities and the private sector.

[5]/ Theoretically, it would be possible to channel transactions through another jurisdiction, but the world trend is toward convergence with the aforementioned requirements, and this does not represent advantages relative to the first alternative.

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GLOSSARY

Acid liquidity: The acid-test ratio, or the ratio between current assets net of inventory and current liabilities.

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.

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.

Banks, large: represent over 10% of banking system assets.

Banks, small- and medium-sized: represent up to 10% of banking system assets.

Basel III: A set of new capital and liquidity requirements for the banking industry, developed by the BIS with the aim of substantially strengthening the Basel II capital framework. The objectives include the following: raise the quality, consistency and transparency of the capital base; strengthen risk hedging; introduce leverage limits; promote a countercyclical capital framework; and introduce a global liquidity standard. These requirements will be implemented gradually through 2019.

CAR: Capital adequacy ratio. A measure of a bank's financial soundness, measured as the ratio of capital to credit-risk-weighted assets.

Central counterparty: An intermediary that acts as the buyer for all sellers and as the seller for all buyers in a given market.

Certificate of deposit: A certificate issued by a bank, in recognition of having received a deposit for a specified period and at a specified interest rate. Essentially, it is a type of negotiable fixed-term deposit (documented by the certificate).

Conventional maximum interest rate: The upper limit on lending interest rates, which is 50% over the current interest rate. It is set by the SBIF, and exceeding this limit is sanctioned by Law 18,010.

Core capital: Paid-in capital plus bank reserves and period earnings, net of provisions for the distribution of dividends.

Countercyclical provisions: Bank provisions constituted when the macroeconomic scenario is favorable and released when the environment deteriorates, thereby promoting a more stable evolution of provisions across the cycle.

Credit risk: The possibility that a bank borrower or counterparty will fail to meet its contractual obligation, whether in interest or capital.

Cross-currency swap: Derivatives contract between two parties, who agree to periodically exchange principal and interest payments between two different currencies, on a benchmark amount and for a specified period.

Currency mismatch: The difference between foreign currency liabilities and foreign currency assets, less the net position in derivatives (the difference between buy and sell positions in derivatives contracts). An alternative measure is calculated as the difference between external debt and the net derivatives position, scaled by exports minus imports.

Currency risk: Exposure to losses caused by adverse changes in the value of the foreign currencies in which the instruments, contracts and other transactions recorded on the balance sheet are denominated.

Default of 90 days or more: The total amount of a loan that is past due by 90 days or longer, even if only some of the monthly payments are past due.

Delinquent loans: Loans that are past due by more than 30 days from the maturity date. The full amount of the loan is considered delinquent.

Deposit insurance: Bank funds—common to a given financial system—that back retail deposits (usually from private individuals).

DTI: Debt-to-income ratio. Measures the debt held by households with different financial and nonfinancial entities as a percentage of their disposable income.

Effective equity: The sum of Tier 1 and Tier 2 capital. The latter mainly includes subordinated bonds and additional provisions.

EMBI Global spread: The most commonly used measure of emerging market risk. The difference between the return on emerging economies' sovereign debt in dollars issued in international markets and U.S. Treasury bonds.

Financial debt: Debt that pays interest, measured as bank debt, plus public liabilities (bonds and commercial papers).

Financial indebtedness: Ratio of financial indebtedness, measured as financial debt/(Equity plus minority interest).

FIR: Financial burden-to-income ratio. Measures the payments that households must make to fulfill their consumer and mortgage loan commitments, as a percentage of their disposable income.

Indexation margin: Difference between the indexation adjustments earned and paid by banks, measured relative to total bank assets.

Interest coverage ratio: A measure of repayment capacity, defined as the ratio of EBITDA to financial expense.

Interest margin: Difference between the interest earned and paid by banks, measured relative to total bank assets.

Interest rate risk: Exposure to losses caused by adverse changes in interest rates, which affect the value of the instruments, contracts and other transactions recorded on the balance sheet.

Jurisdiction: The territory or sphere of activity over which an entity exercises the power or authority to govern and to establish enforceable laws or apply them in court.

Leverage: Measured as the banks' debt over equity; used as a complementary tool to capital adequacy requirements.

Liquidity coverage ratio (LCR): A measure designed to ensure that a bank has sufficient high-quality liquid assets to survive a 30-day liquidity stress scenario. Defined as the ratio of high-quality liquid assets to total net cash outflows for the 30-day stress scenario.

Liquidity risk: The risk that a counterparty (or participant in the payments system) will not be able to meet its obligations when they come due, although it may be able to do so in the future. Liquidity risk does not necessarily imply that the counterparty is insolvent.

Market risk exposure (MRE): Exposure to interest rate risk on the trading book and to currency risk on the balance sheet.

Market risk: The potential loss in value of the net positions held by a financial entity, as the result of adverse changes in market prices.

Net interest margin: Difference between interests and indexation adjustments earned and paid by banks, measured relative to total bank assets.

Net stable funding ratio (NSFR): A measure designed to complement the LCR by ensuring an asset and liability profile that is sustainable in the long term (one year). Defined as the ratio of the amount of available stable funding to the amount of required stable funding, equal to the weighted sum of liabilities and assets, respectively.

Nonperforming loans: Bank loans, or a fraction thereof that are past due by up to 90 days from the maturity date. On loans with fixed monthly payments, only the amount of the past-due payment is considered, although the full amount of the loan could transfer to the nonperforming portfolio if acceleration clauses are enforced.

NPL ratio: Nonperforming loans ratio. A measure of credit risk, measured as the ratio between nonperforming loans and total loans.

Office absorption: The change in the occupied square meters of office space between one period and the next.

Office production: The usable surface area of office space in new buildings that passed the final municipal inspection in the period.

Operating income: A bank's earnings, including the interest margin, indexation margin, commissions, foreign exchange operations, financial operations, recovery of write-offs and other operating income.

Prime-swap spread: The difference between the prime deposit rate and the average interbank swap rate. Used as a benchmark for analyzing liquidity conditions in the banking sector.

Provisions coverage ratio: Measure of a bank's provisions relative to nonperforming loans.

Re-pricing: A component of interest rate risk, corresponding to the exposure to losses caused by rolling over of assets and liabilities with different maturities under different financial conditions.

Residual short-term external debt: External debt coming due within 12 months of a given date (that is, short-term external debt plus the current portion of long-term external debt).

Revolving credit: Under this loan facility, which is generally associated with lines of credit and credit cards, a borrower can repay less than the total amount borrowed in the "minimum payment" period. The balance generates a new debt (revolving loan), to which the effective interest rate for the period is applied and added to the loan balance.

Risk-weighted assets: Bank assets weighted on the basis of five risk categories, set forth in Article 67 of the General Banking Law. The ratio of capital to risk-weighted assets serves as a measure of capital adequacy (known as the Basel ratio), which is internationally accepted as a measure of bank solvency.

ROA: Return on assets. Measured as the ratio of earnings after taxes, amortizations and extraordinary items to total assets.

ROE: Return on equity. Measured as the ratio of earnings after taxes, amortizations and extraordinary items to shareholders' equity plus minority interest. It is the shareholders' return.

Senior bonds: Ordinary long-term bonds issued by banks.

Single investment account: One of the products offered by the Chilean life insurance companies, which corresponds to an insurance plan that combines protection and saving. Categorized as private non-retirement savings.

Sovereign spread: The difference between the interest rate on a U.S. Treasury bond and the interest rate on debt instruments issued in local or foreign currency by the government of a given country.

Subordinate bonds: Long-term bonds issued by banks, with an average maturity of not less than five years and with no prepayment clauses. Because subordinate bonds are repaid after the claims of other creditors are settled in the case of bank liquidation, a share of these bonds is computed as effective equity.

Syndicated loans: Financing provided by a group of banks or financial institutions, under a single loan contract, with the goal of diversifying the risks associated with a very large loan.

Tier 1 capital: Core capital plus declared reserves or retained earnings. May also include non-redeemable non-cumulative preferred stock.

Tier 2 capital: Also called supplementary capital. Bank equity exceeding Tier 1 capital. Includes subordinated bonds, up to 50% of Tier 1 capital and general provisions up to 1.25% of risk-weighted assets.

Unpaid installments ratio (UIR). A measure of credit risk calculated as the ratio of loan installments that are past due by over 90 days to the total debt. For business loans, the delinquent installments are past due by up to three years; for personal loans, up to one year.

ABBREVIATIONS

ACHEF: *Asociación Chilena de Empresas de Factoring* (Association of Chilean Factoring Firms).

AFP: *Administradoras de Fondos de Pensiones* (Pension fund administrators).

BCS: *Bolsa de Comercio de Santiago* (Santiago Stock Exchange).

BCU: Central Bank bonds denominated in UFs.

BIS: Bank for International Settlements.

BLS: Bank Lending Survey.

CDS: Credit default swap.

CMR: Conventional maximum rate.

CSD: Central Securities Depository.

ECB: European Central Bank.

EMBI: Emerging Market Bond Index.

FDI: Foreign direct investment.

FFR: Federal Funds rate (U.S. Federal Reserve policy rate).

FSI: Financial soundness indicators.

FSR: Financial Stability Report.

FTD: Fixed-term deposit.

GBL: General Banking Law.

GDP: Gross domestic product.

Imacec: Monthly Economic Activity Index.

IMF: International Monetary Fund.

IPoM: Monetary Policy Report.

IPSA: *Índice de Precios Selectivo de Acciones* (Selective Stock Price Index).

MSCI: Morgan Stanley Capital International.

NIIP: Net international investment position.

PF: Pension funds.

PRF: Pension Reserve Fund.

RSTED: Residual short-term external debt.

SBIF: *Superintendencia de Bancos e Instituciones Financieras* (Superintendence of Banks and Financial Institutions).

SII: *Servicio de Impuestos Internos* (Chilean Internal Revenue Service).

SP: *Superintendencia de Pensiones* (Superintendence of Pensions).

SuSeSo: *Superintendencia de Seguridad Social* (Superintendence of Social Security).

SVS: *Superintendencia de Valores y Seguros* (Superintendence of Securities and Insurance).

UF: *Unidad de Fomento*, an inflation-indexed unit of account.

UIR: Unpaid installment ratio.

USA: United States of America.

VIX: Volatility Index.

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