FINANCIAL STABILITY REPORT

First 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 of this *Financial Stability Report* was 26 May 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 the 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 risks coming from the United States and the Eurozone described in previous *Financial Stability Reports* have decreased, so the focus has been turned to the Chinese economy as the main source of external risk. In the U.S. the withdrawal of unconventional monetary stimulus has been in line with expectations, while the Eurozone has made progress in the field of fiscal and banking institutions. In contrast, China continues to decelerate and doubts persist about the soundness of its financial system.

The materialization of external risks could have consequences for Chile considering the slowdown in the domestic economy. Importantly, a sharper deceleration in China would have a significant impact because of its effects on external demand and the price of copper. Risks in the U.S. and the Eurozone could trigger episodes of financial turbulence; in particular, a change in the expectations about the timing and speed the U.S. will define for normalization of its monetary policy rate or if new developments in the Eurozone's banking sector fail to meet the markets' expectations.

Domestically, the financial situation of companies has lost some strength in recent quarters. On one hand, corporate borrowing has increased as a percentage of GDP. On the other, firms reporting to the Superintendence of Securities and Insurance (SVS) maintain relatively high levels of debt by historical standards and profits continue to be revised downward. Although these trends are consistent with those of companies in other economies, they are indicative of reduced resilience in the sector to any abrupt adjustments in the dynamics of the economy. Finally, in the last year non-performing loan indicators for commercial banks have deteriorated for firms in sectors more exposed to the overall business cycle.

The housing market shows the same dynamic described in previous *Reports*. Sales of new homes remain high and inventories low. In this context, several indicators show that housing prices continued to rise in 2013. While the upward trend is present across geographical areas, the largest increases continue to concentrate in just a few. On the other hand, in the commercial real estate sector the vacancy rate for office space increased, and is expected to increase further with the entry of new projects to the market. Thus, it is important that the relevant agents take into account in their investment and financing decisions that future prices might evolve away from recent trends.

Risks associated with household debt remain stable. Total household debt rose slightly in the last quarter of 2013. In banking debt, there continues to be a change in composition toward middle- and upper-income households, with stronger growth in credit volume than in number of debtors. Non-performing loan indicators for bank and non-bank lenders show no major movements. This may be due to the compositional changes in consumer portfolios as well as to the lower effect on the labor market of the cyclical position of the economy.

Banks have gradually been reducing commercial credit growth and, to a lesser extent, the consumer lending in response to the slowing economy. There has also been a reduction in the exposure to those sectors most affected by the cycle. **This has been reflected in stable levels of aggregate delinquency, for both segments.**

Banks' profitability increased marginally in recent quarters, while their capital adequacy ratio remain stable. **The stress tests show that the banking system still has sufficient capital to accommodate a severely stressful scenario.** However, this would have somewhat effects in profitability than was obtained in earlier *Reports*.

The less favorable phase of the cycle the economy is experiencing could involve credit risk increases. On one hand, households with greater exposure to the cycle could worsen their payment behavior should the labor market weaken significantly. On the other side, the deterioration seen during the last year in some economic sectors of the commercial loan portfolio could worsen if faced with a more pronounced slowdown. Thus, the level of provisions made in each case is an important element to mitigate the impact of these risks.

Funding costs are low, with long-term real interest rates around their 10-year lows. **Still, a reversal cannot be ruled out, nor can new episodes of volatility.** Accordingly, it is still important to have diversified sources and maturities of external and domestic credit. A large part of the banking industry has moved in that direction, but some smaller banks continue to depend substantially on local wholesale funding sources.

Finally, the Chilean economy is in a phase of slowing output and demand, which affects income growth of households and firms. The growth forecast for this year lies between 2.5 and 3.5%. The combination of somewhat lower GDP growth and possible episodes of volatility in the financial markets requires agents to properly assess their borrowing and lending decisions.

I. EXTERNAL ENVIRONMENT AND FINANCIAL RISKS

Since the last Financial Stability Report, *external financial conditions have improved within a context of lower volatility. However, the risks described in previous* Reports *are still present, and their materialization could have significant effects, especially considering that Chile faces a process of an economic slowdown.*

EVOLUTION OF THE INTERNATIONAL FINANCIAL SITUATION

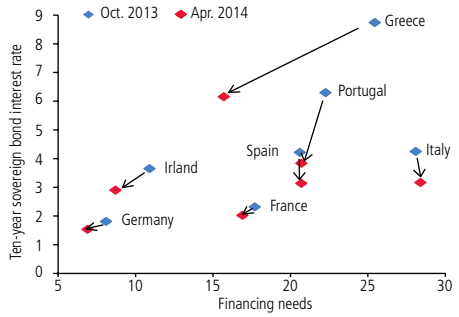
The Eurozone has made progress in the fiscal area and in the institutional structure of the banking industry.

In the fiscal area, both sovereign debt and public sector financing needs have stabilized, although they are still high, especially in the peripheral economies. In addition, the cost of public financing has generally dropped (figure I.1). In fact, Portugal returned to the debt markets for the first time since its rescue in 2011, with a bond issue that was met with strong demand.

The financial system has also improved. The average capitalization of the banking sector increased, which is consistent with the recovery of indicators such as profitability in several of the countries in the Eurozone (figure I.2). A key development in this arena has been the willingness of their authorities to forge agreements on a Single Supervisory Mechanism for the region's banks. This is one of the three fundamental pillars to fulfill the so-called Banking Union (chapter V). It is necessary to keep advancing whit the Single Resolution Mechanism and remain to be addressed a Common Deposit Insurance system, which would provide the basis for limiting contagion between sovereign and banking risk.

These advances have been facilitated by economic growth, albeit at low rates. However, challenges remain for most of the countries in the region, especially in a context of low competitiveness (given the scarce improvement in productivity), high unemployment and real appreciation of the euro. Low inflation figures have given rise to discussions on the need to implement quantitative stimulus programs, and in June the monetary policy rate was cut to a new historical low (figure I.3).

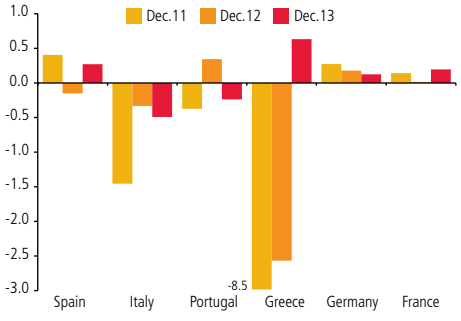
FIGURE I.1
Financing needs and costs in 2014 (*)
(percent, percent of GDP)



(*) Financing needs include maturing debt and the expected fiscal deficit for the year.

Sources: Bloomberg and FMI.

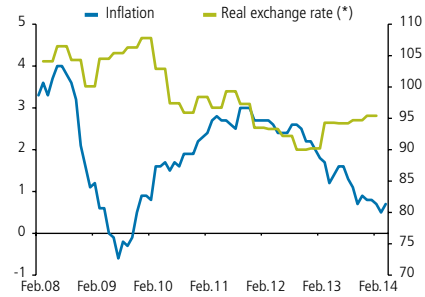
FIGURE I.2
Profitability of the European banking system (*)
(percent of total assets)



(*) For Spain, includes Santander, BBVA, Sabadell, Bankinter, Caixabank, Popular. Italy: Popolare, Monte Dei Pasce, Unicredit, Ubi banca, Intesa San Paolo. Portugal: Espirito Santo, BPI. Greece: Hellenic Post, Piraeus, National Bank of Greece, Alpha, Agricultural. Germany: AAreal Bank, Deutsche, Dab, Commerzbank. France: BNP Paribas, Credit Agricole, Société Générale.

Source: Bloomberg.

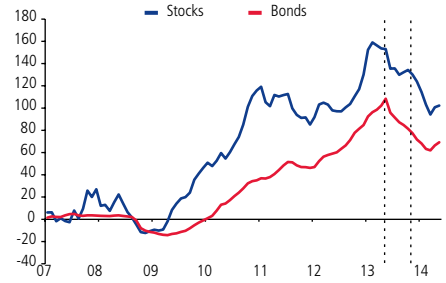
FIGURE I.3
Europe: Inflation and real exchange rate
(annual percent change, fixed-base index: 99.I = 100)



(*) Real exchange rate based on unit labor costs. A positive change indicates an appreciation of the euro.

Sources: Bloomberg and European Central Bank.

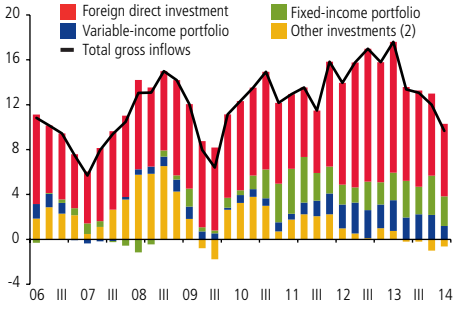
FIGURE I.4
Portfolio flows to emerging economies (*)
(US$ billion)



(*) Flows accumulated since January 2007. Sample of investment fund portfolio flows to emerging Asia, emerging Europe and Latin America. The first vertical line marks the sell-off event in May 2013 and the second the last *Financial Stability Report*. The last datum (May 2014) is a forecast based on flows through the 26th of that month.

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

FIGURE I.5
Gross capital inflows to Chile (1)
(percent of GDP)



(1) Annual accumulated flow of external liabilities, moving quarter.
(2) Includes loans, commercial credits, currency and deposits.

Source: Central Bank of Chile.

In the United States, the withdrawal of the unconventional monetary stimulus has proceeded as expected, in a context of reduced tension in the financial markets.

In December 2013, the U.S. Federal Reserve (the Fed) announced that it would begin to scale back its unconventional monetary stimulus program in January 2014. The withdrawal has proceeded on time and at a rate in line with market expectations. As a result, the international financial markets are calmer than in May 2013, when the Fed first signaled that it was considering cutting back its asset purchase program.

While volatility did increase in January of this year, the withdrawal of the monetary stimulus could not be identified as the main driver. Other contributing factors came from the emerging economies themselves, where sources of vulnerability have built up in the recent past.

In the last few months, the calmer international markets have coincided with an easing of portfolio outflows from emerging economies.

The exodus of portfolio capital in 2013 was especially marked in some of the larger emerging economies, such as Brazil, Russia and China, in both fixed and variable income. This trend was marginally reversed, however, in the first quarter of 2014 (figure I.4).

In Chile, portfolio inflows have slowed since the last *Financial Stability Report*, mainly in variable income.

Domestically, the fixed-income portfolio has been stable at 2.6% of GDP since the last *Report* (27% of total liabilities), in line with the dynamic overseas bond issues by the corporate and banking sectors (chapters III and IV). The variable-income portfolio has contracted relative to the last *Report*, falling from 2.2 to 1.2% of GDP in the first quarter of 2014.

Gross capital inflows to Chile have fallen since the last *Report,* hitting 9.7% of GDP in the first quarter of 2014—its lowest level since late 2009. Foreign direct investment (FDI), in particular, fell from 8.6% of GDP in the third quarter of 2013 to 6.5% of GDP in the first quarter of this year, although it continues to lead the composition of inflows. The drop reflects a less dynamic trend in FDI-related debt instruments and, most recently, a reduction in capital contributions. External liability flows from credits and loans fell to –0.6% of GDP, due to increased amortization of these obligations (figure I.5).

Solvency indicators have not changed significantly, while the availability of external liquidity increased at the margin.

The net international investment position (NIIP) remains around the average of the last two years. Part of the increase in the net debit position of banks and corporations has been offset in some measure by the strengthening of the net credit position of the institutional sector and the central government (figure I.6). This position compares favorably with other emerging economies, as does the economy's external liquidity (box I.1).

The residual short-term external debt remains around 14% of GDP, with a smaller share of the corporate sector (figure I.7).

MAIN EXTERNAL THREATS TO FINANCIAL STABILITY

Most of the trends described in the last *Financial Stability Report* have been consolidated at the global level. Thus, the external risk scenario for the Chilean financial system is similar to what it was six months ago, although the risk factors have been reclassified in terms of their probability of occurrence.

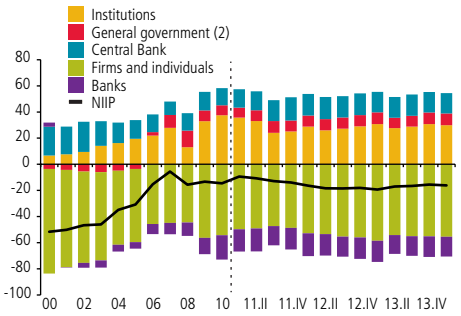
The focal point of risk is the performance of China and developments in its financial market.

The growth outlook for China has declined in the last year. In principle, this is seen as somewhat positive given that the country's authorities are aiming to achieve more sustainable growth in the medium term. However, growth could fall more than expected. This is increasingly probable based on the risks emerging in the financial system, in particular the strong growth of nonbank credit, the quality of the intermediaries of this financing and their high degree of interrelation with the formal banking system.

In the event of that faster slowdown, the emerging world, including Chile, would be affected through both the real and financial channels. The real channel would operate through a reduction in external demand and, mainly, the negative impact on commodities prices, in particular copper[1]/.

The potential impact of the financial channel is less precise, as there are no prior events to provide a comparison. One hypothesis is that a financial crisis in China could trigger greater risk aversion among international investors about other emerging economies, causing an increase in sovereign spreads and capital outflows. In addition, a change in China's reserve accumulation policy, in response to lower liquidity in the financial system or greater openness of the financial account, could lead to higher interest rates on U.S. Treasury bonds[2]/.

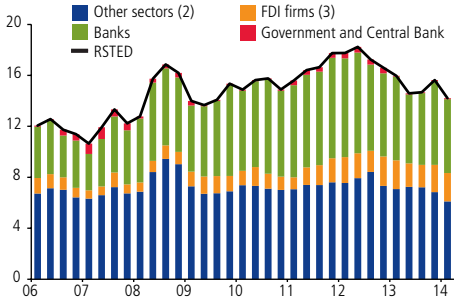
FIGURE I.6
Net international investment position of Chile (1)
(percent of GDP)



(1) GDP at constant real exchange rate (fixed-base index: March 2014=100).
(2) Central government and municipalities.

Source: Central Bank of Chile.

FIGURE I.7
Residual short-term external debt, by institutional sector (1)
(percent of GDP)

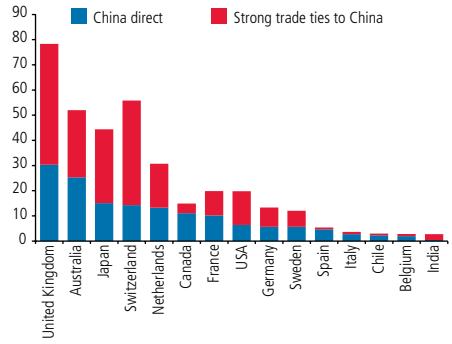


(1) GDP at constant real exchange rate (fixed-base index: March 2014=100).
(2) Other sectors are comprised almost entirely of nonfinancial corporations and, to a lesser extent, nonbank financial firms, households and nonprofit institutions.
(3) FDI loans between related firms.

Source: Central Bank of Chile.

[1]/ For more information, see the *Monetary Policy Report,* March 2014, box I.1.
[2]/ The IMF (2011) estimates an increase in 10-year bond rates of 5 to 12 basis points for each US$100 billion in sales of these assets.

FIGURE I.8
Direct cross-border loans to China and countries with strong trade ties to China (*)
(data for 2013, percent of Tier 1 capital)



(*) Countries with extensive exports to China: Malaysia, Singapore, South Korea and South Africa.

Sources: BIS (ultimate risk basis), IMF (FSI) and Bloomberg.

Finally, there could be some degree of contagion to foreign banks and global fund managers that have a significant stock exposure—relative to their core capital and total assets managed—to Chinese banks and/or credit exposure through direct cross-border loans to China and to economies whose exports depend on China (figure I.8).

There could be some short-term volatility events associated with the timing and speed of the normalization of the Fed funds rate, but the risks are concentrated in the medium term.

The uncertainty surrounding the recovery of the U.S. economy and the normalization of its conventional monetary policy has diminished in recent months. Thus, market expectations point to gradual increases in the Fed funds rate starting in mid-2015. However, the possibility of an earlier rise cannot be discarded, which implies a risk of new episodes of volatility. Key factors for the outcome in this area include the official communication from the Fed and the evolution of the U.S. economy. Beyond these considerations, the commencement of the rate hike within the expected horizon carries risks for the emerging economies, which will depend on the response capacity of each economy. The emerging countries, in general, have more solid institutional framework and fundamentals than in previous cases of rate hikes by the Fed, although some have built up vulnerabilities in the most recent period (box I.1).

In the Eurozone, the scenario is fragile despite improvements, and the risks are mainly associated with the financial system.

The new stress tests could uncover weaknesses in the banks' default portfolios, asset valuation and capitalization, which would worsen the financial health diagnosis. At the same time, establishing the Banking Union requires important political agreements, and if these are not reached with the speed and depth expected by the market, it could generate volatility and delay the economic recovery now underway. To some degree, these doubts could undermine investors' appetite for risk and increase risk spreads and external financing costs at the global level.

BOX I.1
NORMALIZATION OF U.S. MONETARY POLICY AND DIFFERENTIATION AMONG EMERGING ECONOMIES

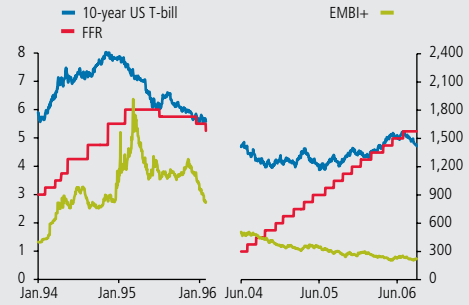
The aftermath of the Great Recession in the United States was marked by low interest rates and massive asset purchases by the U.S. Federal Reserve (the Fed), with strong capital inflows to emerging market economies (EMEs). At the same time, risk spreads contacted beyond what was indicated by macroeconomic fundamentals (Hartelius et al., 2008).

In a context of monetary policy normalization in the United States, macroeconomic fundamentals could become relatively more important, as seen in the most recent period (IMF, 2014a). This box summarizes the economic situation of the EMEs leading up to other rate hike cycles in the federal funds rate (FFR), in order to provide a point of reference for the current situation of this group of economies in general and Chile in particular.

FFR hikes: 1994 and 2004

The FFR hike cycles that commenced in 1994 and 2004 had different results in terms of the increase in long-term rates and the sovereign risk of EMEs[1]/ (figure I.9). This was due, in part, to the relative strength of the macroeconomic environment in which the episodes occurred (Filardo and Hofmann, 2014). In 1994, the reversal of capital flows from the EMEs took place in a context of fixed exchange rate regimes and limited financial openness, which caused a sharp deterioration in financial conditions (IMF, 2013a). In contrast, in 2004 the EMEs were characterized by greater financial openness and high levels of capital inflows (BIS, 2014; IMF, 2013a). Moreover, world growth was more solid in the 2004–06 period, which reinforced the bonanza of capital inflows.

FIGURE I.9
Fed funds rate hikes (*)
(percent, basis point)



(*) The EMBI+ is an expansion of the EMBI that, in addition to Brady bonds denominated in U.S. dollars and other currencies, includes loans, Eurobonds and local market instruments.

Source: Bloomberg.

The Fed's communication about the rate increases was also different in the two episodes[2]/ In 1994, the rate hike surprised the market, whereas in 2004 the process was more transparent and announced in advance[3]/. Recent events show that emerging financial markets are still sensitive to news from the Fed, but to the extent that communication improves, idiosyncratic factors become more important[4]/.

Macroeconomic conditions in the EMEs before a FFR hike

The conditions under which the EMEs faced the FFR hikes were also more favorable in 2004 than in 1994, especially in terms of

[1]/ In 1999, the Fed also implemented a contractionary monetary policy in response to the Asian crisis, which caused economies to react worldwide. This event led to foreign capital outflows from the EMEs, as well as a series of changes in the policy framework of many economies, such as the implementation of a flexible exchange rate regime and the adoption of inflation targeting.

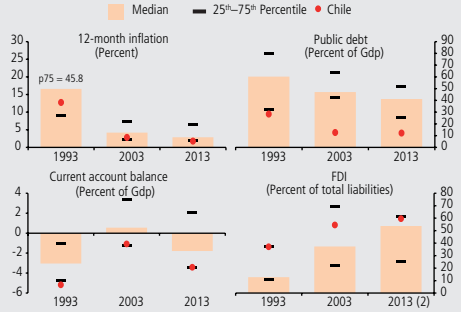
[2]/ See Contreras et al. (2012), González and Levy (2006) and Longstaff et al. (2011) on the role of global versus idiosyncratic factors as determinants of capital flows and sovereign spreads.

[3]/ See Yellen (2013) on the evolution of the Fed's communication strategy over time, with a shift toward "forward guidance" since 2000; and BIS (2014) on the different communication used in the two events.

[4]/ As described in chapter I of this *Report*, the volatility events observed in the most recent period have been associated with idiosyncratic factors and have had a larger impact on economies that are more open financially and that have less policy space (IMF, 2014a; IMF, 2014c).

macroeconomic stability. By 2004, most of the economies had adopted inflation-targeting regimes, and public debt was lower, on average, and more evenly distributed among the economies (figure I.10). Finally, the current account balance was positive for the majority of the countries, while the composition of external financing was dominated by a higher share of foreign direct investment (FDI) before the 2004 cycle than in 1994.

FIGURE I.10
Macroeconomic conditions in EMEs prior to stress events (1)
(percent)



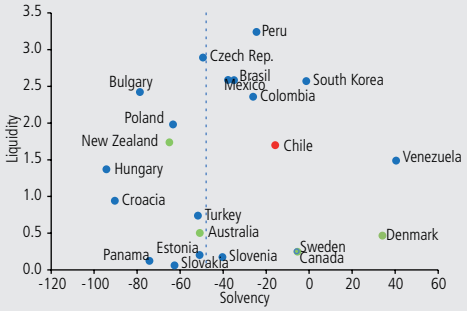
(1) The sample used for inflation statistics, public debt and the current account balance includes the following: Argentina, Brazil, Bulgaria, Chile, China, Colombia, Ecuador, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Panama, Peru, Philippines, Poland, South Korea, Russia, South Africa, Thailand, Turkey, Ukraine and Venezuela. Due to unavailability capital flow data, the sample for the lower right panel does not include Egypt and Malaysia for any year, Ecuador for 1993 and 2003, and China, Colombia, Panama, Russia and Venezuela for 1993.
(2) Cumulative data as of the second quarter of 2013.

Sources: ECLAC, Reinhart and Rogoff (2014) and IMF (2014c).

Current macroeconomic conditions are similar to the period leading up to the 2004 FFR hike, with the exception of the current account balance, which is in deficit on average. Inflation is lower, public debt is slightly lower (but with a wider dispersion), and FDI accounts for a larger share of liabilities. The latter is especially relevant since this component tends to be less volatile[5]/.

Chile compares favorably with other emerging economies on inflation, public debt and the FDI share of external liabilities. Additionally, Chile's external liquidity for financing short-term commitments is currently near the average for EMEs and in the upper end of the group of small open developed economies with a similar macroeconomic regime. It is also in the upper end in both groups of countries in terms of solvency (figure I.11). This reflects the low level of public debt and the strong net credit position of Chilean institutional investors, which practically offsets the net debit position of the corporate and banking sectors. Chile's better relative position is reflected in its risk assessment at the international level, with better credit ratings and lower spreads than other emerging economies.

FIGURE I.11
Solvency and liquidity indicators (1) (2)
(percent of GDP, times)



(1) Solvency: net international investment position as a percent of GDP. Liquidity: ratio of available resources (sum of international reserves and sovereign funds) to financing needs (sum of the deficit portion of the current account that is not financed by FDI liabilities and the short-term external debt).
(2) Data for the second quarter of 2013, or last data available. Dotted lines indicate the median of each indicator for the sample of selected EMEs (blue) and small open developed economies (green).

Sources: Central Bank of Chile, BIS, Bloomberg, IMF and central bank web pages.

[5]/ See *Financial Stability Report*, first half 2013, box I.1.

II. LOCAL FINANCIAL MARKETS

The capital markets have been characterized by the low cost of financing, both short and long term. Sovereign rates continue to show a low degree of co-movement with their external benchmarks.

MONEY MARKET

Financing conditions in the money market have improved, with significant reductions in interest rates and spreads.

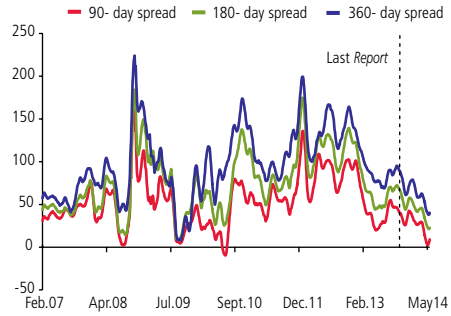
Since the last *Financial Stability Report*, the difference between prime deposit rates and swap contracts (the prime-swap spread) at different maturities fell around 40 basis points (bp) on average. In early May, the 90-day spread was fluctuating around zero, for the first time since the local unconventional stimulus measures (FLAP) were in effect in 2010 (figure II.1). This suggests that financing conditions have eased for the banking system. As a result of the lower spreads and a reduction in the monetary policy rate (MPR) of 75bp since the close of the last *Report,* financing costs in the money market are around 4%, the lowest level since mid-2010 (figure II.2).

The lower spreads could be explained, to a large extent, by the greater investments in time deposits made by institutional investors thus far in the year.

In particular, the pension funds invested around US$4.5 billion in time-deposits in 2014 to date, equivalent to 37% of their stock of time deposits at the start of the year (figure II.3). Even though the pension funds' investments in time deposits continue to be influenced by the massive switching between funds by their affiliates, most of these investments reflect active management decisions.

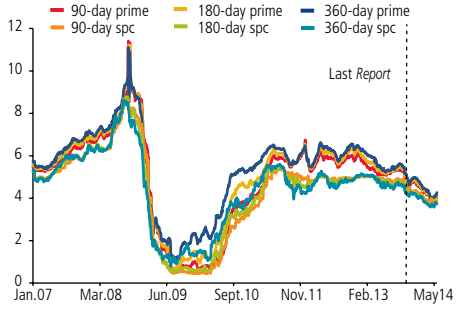
These decisions are part of a strategy of taking less risky positions, which has also led to a reduction in exposure to variable-rate instruments overseas. The increase in time-deposit investments is also consistent with a strategy of obtaining capital gains in a period characterized by reductions in local short-term rates.

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



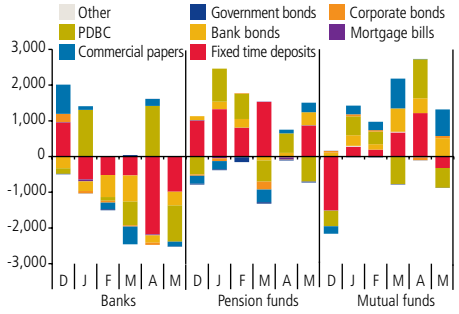
(*) Average interbank prime-swap spread.
Source: Central Bank of Chile.

FIGURE II.2
Prime rates and average interbank swap rates (spc)
(percent)



Sources: Central Bank of Chile and Bloomberg.

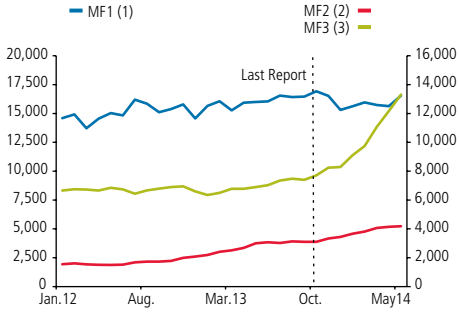
FIGURE II.3
Fixed-income portfolio management and financial intermediation of institutional investors (*)
(change in stock, US$ million)



(*) Data available through 23 May 2014.

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

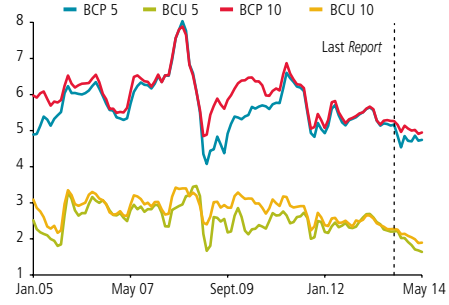
FIGURE II.4
Mutual fund fixed-income assets
(US$ million)



(1) Investment in debt with a maturity of 90 days or less.
(2) Investment in debt with a maturity of 365 days or less.
(3) Investment in medium- and long-term debt.

Source: SVS.

FIGURE II.5
Interest rate on long-term sovereign bonds (*)
(percent)



(*) Average monthly rates.

Source: Central Bank of Chile.

The mutual funds have also increased substantially their investments in time-deposits. Thus far in the year, they have invested around US$2 billion in these instruments—equivalent to 8% of their time-deposits stock at the start of the year. These investments largely correspond to new flows under management, which have primarily been allocated to funds that are concentrated in debt instruments, in particular medium- and long-term Type 3 funds (MF3) (figure II.4).

The better financing conditions could also reflect the notable issuance of fixed-income instruments by some banks, which has given the banking system an additional source of liquidity.

All in all, there is always the possibility that sudden changes in the portfolio composition of the institutional investors, in response to relative asset returns and/or changes in the perception of local or external risk, could generate significant reversals in the spreads, as has occurred in the past.

FIXED-INCOME MARKET

Long-term sovereign interest rates continued to decrease since the last *Report*.

Since the close of the last *Report*, the rates on peso-denominated instruments have declined 10bp, on average, while UF-denominated rates have dropped around 45bp. This reduction is in addition to the decrease recorded in the second half of 2013. As a result, the rates on nominal and inflation-indexed instruments at some maturities are at their lowest level of the last decade (figure II.5).

Local factors—associated with a fall in the supply of sovereign bonds, greater demand by the institutional investors and a lower economic growth outlook—could be behind the lower rates since the last *Report*. In particular, mutual funds concentrated in medium- and long-term debt (FM3) have recorded a significant increase in assets under management since the last *Report*. As mentioned, this increase mainly derives from new contributions and, to a lesser extent, the reallocation of resources in variable-income funds.

The steady decline in local rates since last year is especially noteworthy considering that the external benchmarks have increased since the second half of 2013, with a slight reduction in the most recent period. Estimates of the domestic ten-year rate in pesos, based on uncovered interest rate parity models, suggest that it should have behaved more in line with external benchmark rates in recent quarters (figure II.6).

As discussed in the last *Financial Stability Report,* while there is a lot of uncertainty regarding the determinant factors behind these differences, idiosyncratic elements could be part of the explanation. These include frictions in the local debt market, the relatively small size of the sovereign fixed-income market and its limited integration, with a low share of non-resident investors. Local rates could adjust in the future, however, as the global depositary note (GDN) program and the implementation of the new Single Funds Act could achieve a higher degree of integration between local and international debt markets in the long run.

In the national corporate market, lower spreads have contributed to improving financing conditions.

The financing conditions for firms began to improve steadily in mid-2013, and the trend has continued thus far in 2014 (figure II.7). Since the last *Report*, the corporate bond spread has decreased by around 30bp, on average. Combined with the lower long-term sovereign rates, this implies better private debt conditions, with average costs falling on the order of 86bp. As a result, the climate has been favorable for the issuance of bonds on the local market (figure II.8).

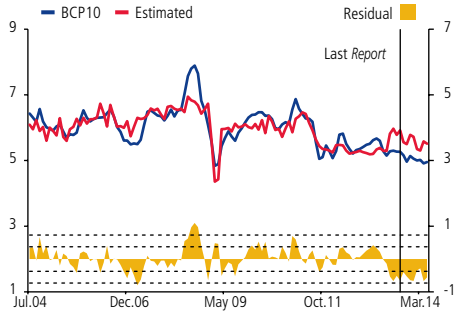
While this reduction in financing costs is a positive development, if local rates remain low over the coming months, there could be losses deriving from the rescue of private bonds and the prepayment of mortgage instruments. The latter, in particular, would affect the value of assets held by banks and life insurance companies. Low interest rates could also motivate investors to seek out relatively riskier assets.

STOCK AND FOREIGN EXCHANGE MARKETS

The better performance of developed countries vis-à-vis emerging economies in the recent period has had an impact on stock and currency prices.

The local stock exchange, measured through the *IPSA* index, fell in January but has since recovered, posting a cumulative increase of 7% measured in pesos as of the closing date of this *Report* (table II.1). In terms of volatility, the *IPSA* has followed a similar trend to other emerging stock markets since the start of the year. Thus far in the second quarter of 2014, volatility has been somewhat lower than in the second half of 2013 (figure II.9).

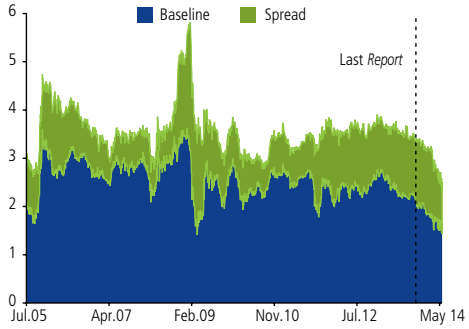
FIGURE II.6
Estimated long-term sovereign rate (*)
(percent)



(*) Estimates based on the uncovered parity model. Slashed lines indicate 5% and 10% confidence intervals.

Source: Central Bank of Chile.

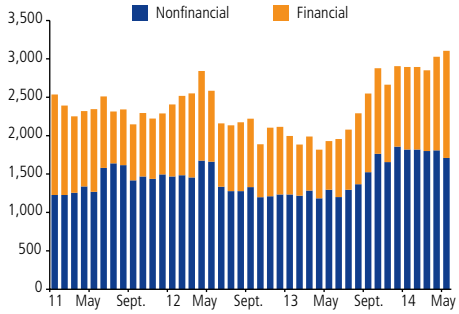
FIGURE II.7
Financing costs for firms (*)
(percent)



(*) Private issues of UF-denominated bonds with a AA rating and a maturity of around five years.

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

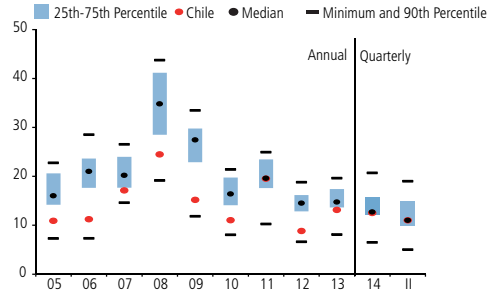
FIGURE II.8
Domestic bond issues (*)
(Ch$ billion accumulated in 12 months)



(*) At May 2014 prices.

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

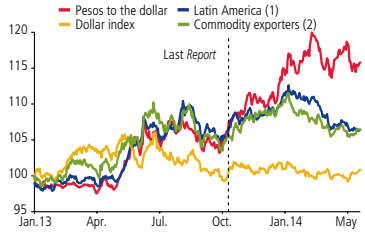
FIGURE II.9
Stock index volatility in emerging economies (*)
(annualized percent, local currency)



(*) Average monthly volatility, calculated as the standard deviation of the daily variation in the stock index in 20-day moving period. The sample includes Chile, Russia, Brazil, Mexico, Peru, Colombia, South Africa, South Korea, China, India, Malaysia, Philippines, Hungary, Poland, Czech Rep. and Turkey.

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

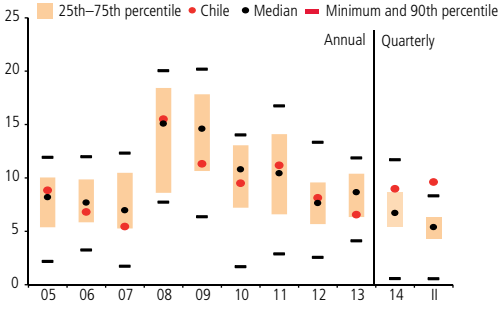
FIGURE II.10
Benchmark parities
(index: January 2013 = 100)



(1) Includes Colombia, Peru, Mexico and Brazil.
(2) Includes Norway, Canada, New Zealand and Australia.

Source: Bloomberg.

FIGURE II.11
Exchange rate volatility (*)
(annualized percent, in local currency)



(*) The 20-day moving average of the daily change in the exchange rate. The sample includes the same countries as figure II.9, plus the Eurozone, United Kingdom, Japan, Canada, Norway, Australia, New Zealand, Indonesia and Vietnam.

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

TABLE II.1
Comparison of stock market returns (1)
(percent)

Countries	2010	2011	2012	2013	2014	Since the last *Report*
IPSA	10.5	-20.3	-4.8	-8.0	7.0	1.2
Latam (2)	-7.4	-20.5	-3.9	-11.7	4.1	-0.7
Commodity exporters (3)	32.1	30.7	44.1	22.7	6.0	4.1
Developed economies (4)	39.8	28.4	43.5	24.3	3.4	5.8
Emerging (5)	21.8	2.2	22.3	2.7	5.9	1.6

(1) Percentage change in the index in local currency, from the beginning of the year to the statistical closing date of this *Financial Stability Report*.
(2) Argentina, Brazil, Chile, Colombia and Peru.
(3) Australia, Canada, Norway and New Zealand.
(4) Norway, Canada, New Zealand, Australia, Germany, France, United Kingdom and United States
(5) Indonesia, Hungary, Croatia, Malaysia, Philippines, Colombia, Argentina, Czech Rep., Turkey, India, South Africa, Poland, Chile, Mexico and Brazil.

Source: Bloomberg.

In the foreign exchange market, the Chilean peso has depreciated significantly since mid-2013, reaching just over $570 to the dollar in March of this year. This depreciation has been greater than the average of the countries in the region and other commodity exporters (figure II.10). The exchange rate was over $550 to the dollar at the close of this *Report*.

The peso has not only depreciated more sharply, but also been more volatile, with volatility ranking in the 90th percentile of a broad sample of countries at the close of this *Report* (figure II.11).

As mentioned previously, the possibility of continued volatility in the exchange rate and the stock market in the short term cannot be discarded.

III. CREDIT USERS

FIRMS

Business debt increased slightly relative to GDP, mainly due to the higher debt associated with foreign direct investment (FDI).

In the first quarter of 2014, business debt increased in GDP terms, reaching 97%, the highest level since 2005 (figure III.1). FDI was central to this dynamic, as mentioned in past *Reports*, increasing from 5% of GDP in 2011 to 12% in 2014. While this component continues to record double-digit annual growth rates, it has slowed in the last two quarters (table III.1), consistent with the drop in FDI flows (chapter I). By sector, the increase has been concentrated in transportation and telecommunications; mining; and electricity, gas and water (figure III.2).

TABLE III.1
Financing sources
(real annual change)

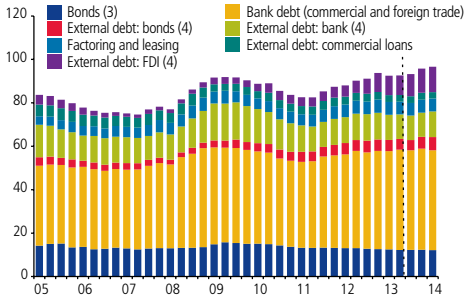
Indicator	Avg.	2008	2009	2010	2011	2012	2013				2014	Share	Growth contribution (1)
	05-07	IV	IV	IV	IV	IV	I	II	III	IV	I		
Local debt	12.6	6.8	2.5	3.8	10.6	8.1	8.1	6.1	5.6	5.3	3.4	66.4	2.4
Bank and other loans	13.9	9.2	-1.3	4.3	13.5	10.4	10.1	8.0	7.1	6.2	4.2	53.8	2.3
Commercial loans	12.6	6.2	8.8	1.9	9.6	12.0	10.9	8.2	7.5	7.0	4.5	41.1	1.9
Foreign trade	16.8	32.5	-39.5	11.5	38.5	3.4	8.2	10.5	7.2	5.5	3.4	6.5	0.2
Factoring and leasing (2)	19.7	2.1	-10.2	15.0	16.4	7.9	7.6	4.2	4.2	2.3	3.2	6.1	0.2
Locally listed instruments (3)	8.1	-1.4	17.0	2.3	1.3	-0.3	0.5	-1.5	-0.2	1.4	0.1	12.6	0.0
External debt (4)	-0.9	13.4	16.7	4.6	8.3	20.5	16.9	13.1	8.3	7.5	15.9	33.6	4.9
Loans	6.1	19.0	18.8	-10.6	-4.4	6.8	2.4	-2.6	-4.2	-5.9	4.5	12.2	0.6
Commercial credits	3.4	-1.4	-19.6	16.2	12.7	-7.5	-10.4	-10.5	-11.3	-6.2	-3.1	3.1	-0.1
Bonds	-11.1	-1.6	51.7	26.1	24.5	13.4	4.7	5.1	-8.4	7.1	20.9	6.3	1.2
FDI-related loans	-25.2	36.0	38.1	47.0	28.8	82.8	82.0	69.6	53.7	32.0	34.4	12.1	3.3
Total	**8.6**	**8.5**	**6.4**	**4.1**	**9.9**	**11.8**	**10.7**	**8.1**	**6.4**	**6.0**	**7.3**	**100.0**	**7.3**

(1) Percentage points.
(2) Factoring includes bank and nonbank institutions.
(3) Corporate bonds (excluding *Codelco*), securitized bonds with nonbank underlying assets and commercial papers, at market value.
(4) Includes FDI-related loans. Converted to pesos using the average exchange rate in the moving year.

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

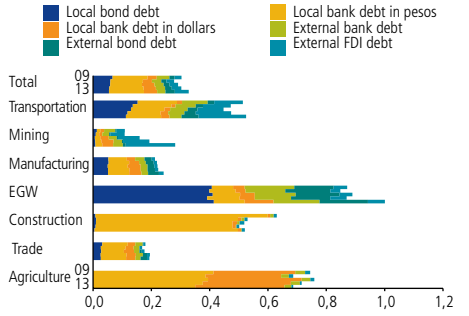
On aggregate, the firms that *report* to the Superintendence of Securities and Insurance (SVS) maintain financial debt of 70% of equity, which is high relative to the previous period of 2012 (figure III.3). The debt-to-equity ratio has increased, in particular, among firms tied to construction and transportation, reaching the highest level of the last ten years (table III.2). From an international perspective, corporate debt is higher than in other Latin American countries and higher than a group of countries with a similar per capita GDP, but lower than in the developed economies (box III.1).

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



(1) The dotted line indicates the closing date of the last *Report*.
(2) GDP in the moving year ending in each quarter.
(3) Corporate bonds (excluding *Codelco*), securitized bonds with nonbank underlying assets and commercial papers, at market value.
(4) Converted to pesos using the average exchange rate in the moving year.
Source: Central Bank of Chile, based on Achef, SBIF and SVS data.

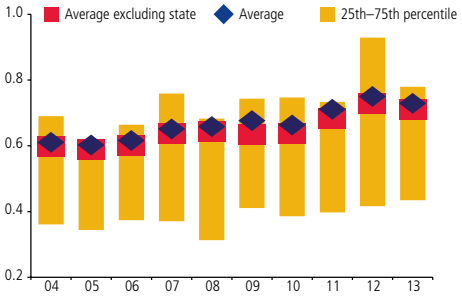
FIGURE III.2
Indebtedness by economic sector, 2009–2013(*)
(total debt over annual sales)



(*) Each bar represents data for December of each year, starting in 2009 and ending in 2013. The financial services and community services sectors are excluded.

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

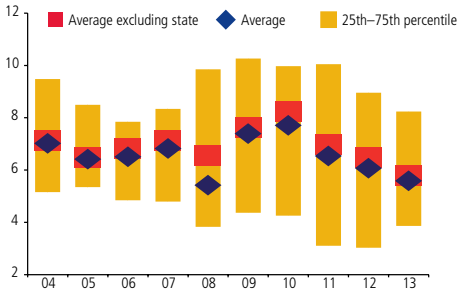
FIGURE III.3
Corporate sector debt (1)(2)
(times)



(1) Debt-equity ratio.
(2) Data for December of each year.

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

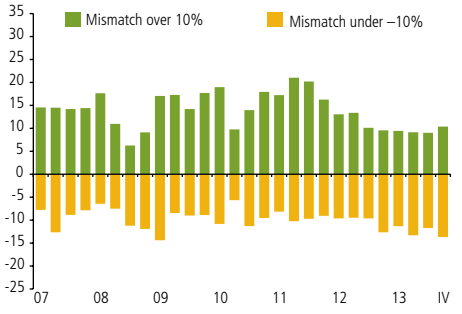
FIGURE III.4
Corporate sector profitability (1)(2)
(percent)



(1) Earnings before interest and taxes accumulated in twelve months, over total assets.
(2) Data for December of each year.

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

FIGURE III.5
Currency mismatch of corporate sector firms (*)
(percent of total assets)



(*) Based on a sample of firms that report their financial statements 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 SVS data.

TABLE III.2
Corporate sector debt (1)(2)
(times)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Construction	0.33	0.38	0.42	0.55	0.67	0.60	0.58	0.72	0.78	0.83
Consumer	0.65	0.58	0.63	0.79	0.84	0.70	0.79	0.77	0.95	0.76
Transport and Communications	0.53	0.77	0.78	0.68	0.72	0.93	0.89	1.01	0.96	1.07
Food	0.40	0.40	0.38	0.42	0.49	0.39	0.38	0.50	0.55	0.61
Services and other	0.89	0.81	0.82	0.81	0.71	1.31	1.28	1.29	1.13	1.16
EGW	0.61	0.58	0.55	0.64	0.64	0.58	0.59	0.60	0.58	0.53
Forestry	0.27	0.26	0.30	0.26	0.29	0.37	0.39	0.43	0.51	0.52
Total	0.60	0.59	0.60	0.64	0.64	0.64	0.64	0.68	0.73	0.71

(1) Debt-equity ratio.
(2) Data for December of each year.

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

Aggregate corporate returns have dropped below the levels recorded in the mid-2000s.

The return on assets of firms that *report* to the SVS was 5.6% in December 2013 (5.8% excluding state companies), which is lower than the average for 2004–2008 (figure III.4). However, a comparison with other groups of countries reveals that the lower earnings in Chile is not an isolated phenomenon (box III.1).

By sector, the return on assets of the consumer sector dropped to less than half, while the food sector recovered relative to 2012, when returns were abnormally low. In construction, earnings declined to levels similar to 2010–11 (table III.3).

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

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Construction	8.9	9.1	11.4	7.7	5.2	3.7	4.4	4.0	5.1	4.4
Consumer	5.7	7.1	7.9	6.8	5.9	5.1	5.4	4.2	7.1	2.8
Transportation and Telecommunications	13.2	3.9	6.5	7.7	7.2	7.2	9.2	2.7	5.0	3.0
Food	6.5	8.1	9.7	10.1	6.3	10.2	11.8	9.6	3.3	6.2
Services and other	6.5	7.0	6.0	6.6	6.1	5.7	6.9	8.3	8.6	7.5
EGW	6.1	6.5	6.5	6.4	7.9	11.7	9.4	8.5	8.8	8.9
Forestry	7.1	5.0	5.0	7.8	4.5	4.3	7.0	6.9	4.2	5.2
Total	7.1	6.5	6.8	7.1	6.6	7.6	8.2	7.0	6.5	5.8

(1) Earnings before interest and taxes accumulated in twelve months over total assets.
(2) Data for December of each year.

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

The currency mismatch was stable in the sample of SVS-reporting firms.

Over the last few years, the external debt of nonfinancial firms has increased more than local debt, exceeding 30% of GDP (figure III.1). The corporate sector's residual short-term external debt (RSTED) was 8% of GDP at year-end 2013, which is consistent with the historical pattern for the sector (figure I.7). Two percentage points of the RSTED correspond to FDI-related debt coming due; most of the remainder involves foreign trade credits tied to imports. This overall increase in external debt has not translated into an increase in the share of SVS-reporting firms with a currency mismatch of over 10%. In fact, the mismatch has been practically constant, with only a slight increase in the last quarter of 2013 (figure III.5).

Considering the full sample of nonfinancial firms, the percentage of debt denominated in foreign currency—both local and external—is almost 50% of total debt, excluding the services sector[1]/ (figure III.6). Mining and construction have the highest rates, which is consistent with the type of market in which they participate. Agriculture also has a high share, but it originates from local banks. In terms of evolution, the share of foreign currency debt in total debt has increased marginally in these sectors in the past year, driven by mining and transportation. The net derivatives position appears to be consistent with hedging strategies for international trade exposure in the different sectors. Given the sharp volatility of the exchange rate in the past few months, it is advisable for firms to cover this risk through their assets or derivative positions.

Payment indicators have deteriorated in recent quarters.

The nonperforming loan ratio of the commercial portfolio has been stable since the last *Report*, as has the unpaid installments ratio. The latter is calculated with administrative data that support a disaggregation by sector. When the services sectors are excluded from the calculation, the aggregate unpaid installments ratio increases (figure III.7). The payment indicator worsens across the board among the remaining sectors (figure III.8).

In sum, the indebtedness of firms (as a share of GDP) has increased at the margin and is now at its highest level since 2005. Among firms that report to the SVS, leveraging is stable but high relative to previous years, especially among companies related to construction and transportation. The profitability of the corporate sector has continued to decline over the last year. With the exception of the services sectors, there has been a widespread deterioration in payment behavior on bank debt.

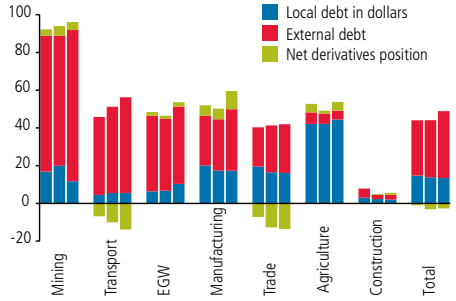
REAL ESTATE SECTOR

As in previous quarters, new home sales remain strong, while inventories are low.

New home sales in Santiago continue to be dynamic. The percentage of sales with immediate delivery is still relatively low, although higher than at year-end 2013 (figure III.9). The largest companies in the sector are carrying a lower inventory of homes available for sale than at the close of the last *Report*. Thus, a moderate contraction in housing demand would not significantly increase the number of months to sell existing inventory.

[1]/ includes financial services, community services and unclassified activities, which together represented 43% of total bank debt in 2013.

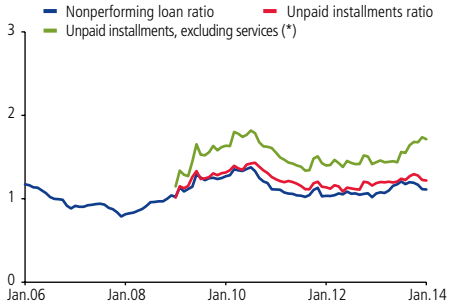
FIGURE III.6
Sectoral debt and use of currency derivatives, 2011–2013 (*)
(percent of total debt)



(*) Each bar represents data for December of each year, starting in 2011 and ending in 2013.

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

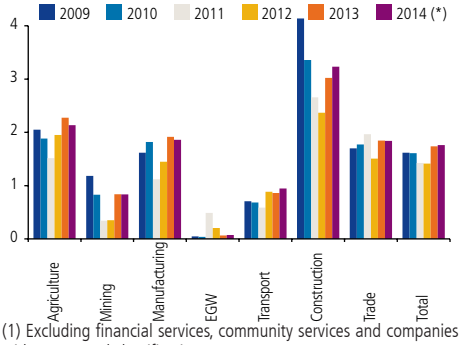
FIGURE III.7
Default ratios on commercial loans
(percent of loans)



(*) Excluding financial services, community services and companies with no sectoral classification.

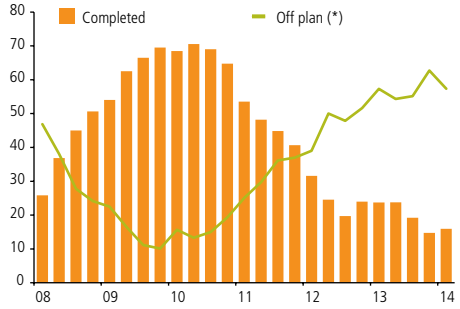
Source: Central Bank of Chile, based on SBIF data.

FIGURE III.8
Unpaid installments ratio (1)(2)
(percent of loans)



(1) Excluding financial services, community services and companies with no sectoral classification.
(2) Data are for December of each year, except 2014 (March).
Source: Central Bank of Chile, based on SBIF data.

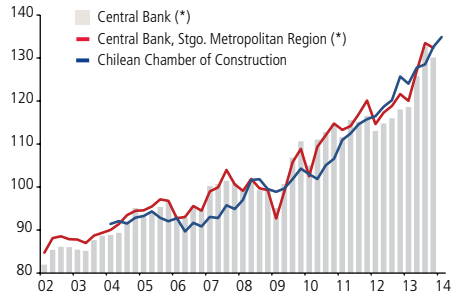
FIGURE III.9
New home sales by stage of construction
(percent of total units)



(*) Includes sales of homes in various stages of construction (in construction, foundations laid, excavations only) and not yet started.

Source: Central Bank of Chile, based on data from the Chilean Chamber of Construction.

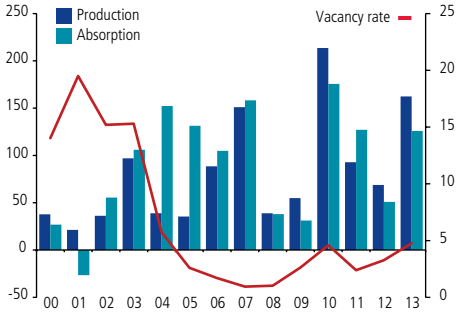
FIGURE III.10
Real housing prices
(fixed-base index: March 2004=100)



(*) Preliminary results.

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

FIGURE III.11
Market for class A and A+ offices
(thousands of square meters, percent)



Source: Global Property Solutions.

The available data show that aggregate home prices continued to grow in 2013.

In the fourth quarter of 2013, home prices grew at annual rates of 10%, with an upward dynamic that was recorded at the national level as well as in the Santiago Metropolitan Region (figure III.10). Market indices, which have less coverage but are more current, suggest that this growth rate continued through the first quarter of 2014.

While the increase in home prices in recent years is consistent with the evolution of income, interest rates and construction costs, there is a strong degree of heterogeneity in the growth of prices. In particular, there are important differences by type of home (house prices have grown more than apartments) and by geographic location (with the fastest growth in the northern regions of the country and in the eastern municipalities of the Santiago Metropolitan Region) (box III.2).

The vacancy rate has increased in the office market, as expected.

The office market recorded a strong increase in new available space in 2013[2]/ (figure III.11). Consequently, vacancy rates rose to 4.8% for class A office space and 5.9% for class B as of December 2013 (GPS, 2013; CBRE Chile, 2013). For 2014, vacancy estimates point to a new increase, as nearly 400,000 square meters are projected to come on the market, which is over the average of the last decade. To date, rental prices have not been affected, but the new projects scheduled to be finished in 2014–16 could feel an impact, especially in less prime locations.

Financial indicators have deteriorated for firms in the sector.

The group of large construction and real estate companies that report to the SVS recorded profitability of around 5% in December 2013, which is the lowest rate of the last four years (table III.4). Effective cash flow generation has decreased in the last two years, while indebtedness has increased, especially in short-term debt. With regard to lending standards, the Bank Lending Survey reports tighter conditions on credit to construction and real estate companies (figure III.12).

TABLE III.4
Financial indicators of construction and real estate companies (1)
(percent, times)

	06	07	08	09	10	11	12	13
Return on assets (2)	9.7	6.8	4.9	3.6	5.8	5.3	5.5	4.7
Indebtedness (3)	0.69	0.88	1.12	1.09	1.04	1.13	1.19	1.27
Debt in pesos / Total debt (2)	48.0	67.5	67.4	56.0	55.2	52.2	66.0	71.4
Operating flow (2)	5.5	-4.0	-5.5	3.9	4.6	0.3	-8.7	-3.0

(1) Includes the seven largest companies in the sector that report to the SVS.
(2) Percent.
(3) Financial debt/Equity. Times.

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

[2]/ This figure was lower than projected due to delays in the handover of several projects.

In sum, the risks for the real estate sector described in past *Financial Stability Reports* remain an issue. With low inventories, home prices continued to rise in 2013. Both buyers and sellers need to bear in mind that this dynamic and the current level of home prices may not be sustainable in the future. Moreover, payment indicators have deteriorated in recent quarters, and the profitability of companies in the sector has declined. Therefore, a scenario in which the demand for housing suddenly weakens could have significant consequences for the sector. This is exacerbated by the situation in the office market, where the vacancy rate has increased and is expected to continue rising as a large amount of new office space comes on the market.

HOUSEHOLDS

Aggregate debt has increased marginally in the last two quarters.

Household debt increased in late 2013 to 57% of disposable income (versus 55% at year-end 2012). The financial burden increased to 14.6% of disposable income, although the growth rate slowed. The composition of consumer versus mortgage debt and its contribution to the financial burden did not change significantly (figure III.13).

The growth of household debt continues to be driven by bank debt.

Total household debt grew 8.0% in the fourth quarter of 2013, with a strong share in the banking system. Bank mortgages grew 9.1% in real annual terms, while the real annual growth rate of bank consumer debt was 8.2% (table III.5).

TABLE III.5
Household debt
(real annual change, percent)

Indicator	2009	2010	2011	2012				2013				Growth contribution (1)	Share
	IV	IV	IV	I	II	III	IV	I	II	III	IV		
Mortgage	8.5	7.2	7.0	7.0	7.5	7.7	7.6	8.3	8.4	8.6	8.9	5.1	57.8
Bank	9.7	9.2	8.0	8.1	8.3	8.3	8.3	8.9	9.0	9.0	9.1	4.7	51.8
Nonbank (2)	1.1	-5.8	-0.7	-0.9	1.4	3.0	2.0	4.0	4.1	5.6	7.4	0.4	6.0
Consumer	5.0	6.9	7.0	4.8	5.0	5.1	6.8	6.9	7.7	6.8	6.8	2.9	42.2
Bank	3.3	8.8	13.3	11.0	10.7	10.4	8.9	9.3	9.6	7.7	8.2	2.1	26.1
Nonbank	0.2	4.7	-7.6	-9.4	-10.2	-10.2	-2.3	-2.9	-1.1	0.0	0.1	0.0	10.3
Retailers	-8.4	6.1	-15.1	-17.7	-19.0	-19.1	-5.6	-7.3	-5.8	-3.2	-0.5	0.0	4.9
CCAF (3)	9.7	3.8	5.2	3.6	2.5	0.6	3.5	3.9	7.3	8.3	4.1	0.2	3.6
Cooperatives	16.7	2.1	-5.1	-5.5	-4.4	-1.8	-3.3	-3.6	-3.9	-6.5	-5.6	-0.1	1.7
Other (4)	36.8	3.6	18.3	13.6	17.3	17.0	17.8	17.3	16.6	15.7	13.6	0.8	5.8
Total	**7.0**	**7.0**	**7.0**	**6.1**	**6.4**	**6.6**	**7.2**	**7.7**	**8.1**	**7.9**	**8.0**	**8.0**	**100.0**

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

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

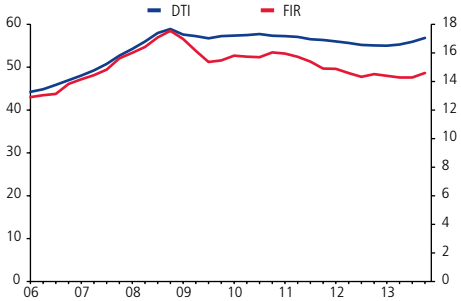
In the case of nonbank lenders, the annual growth rate of mortgage loans had increased at year-end 2013, but the nonbank share of this type of loan remains limited. Nonbank consumer loans did not grow in annual terms in the last two quarters, retaining a share of 28% of this type of loan.

FIGURE III.12
Change in the supply of credit (1)(2)
(percent of total responses)

(1) From June 2010, includes banks that have loans in the respective segment.
(2) The difference between the number of the banks that thought approval standards were tighter or looser relative to last quarter, as a percent of total responses.

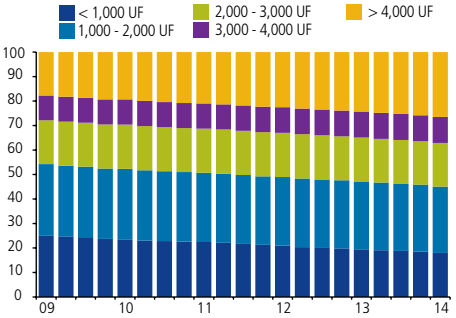
Source: Central Bank of Chile.

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



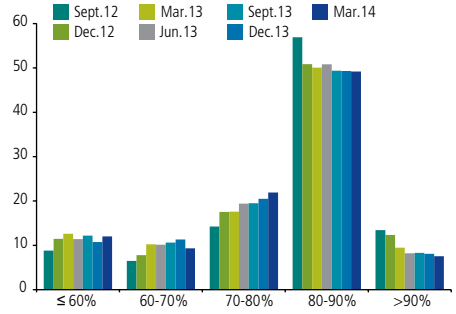
Source: Central Bank of Chile, based on data from the SBIF, SuSeSo and SVS.

FIGURE III.14
Mortgage loans by size
(percent)



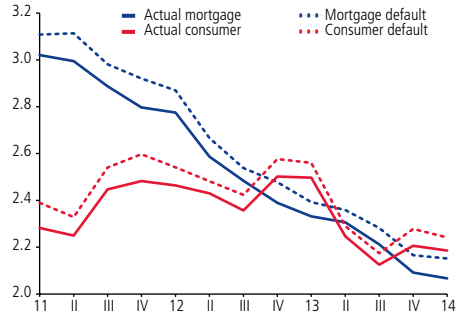
Source: Central Bank of Chile, based on SBIF data.

FIGURE III.15
Loan-to-value ratio
(percent of loan)



Source: Central Bank of Chile.

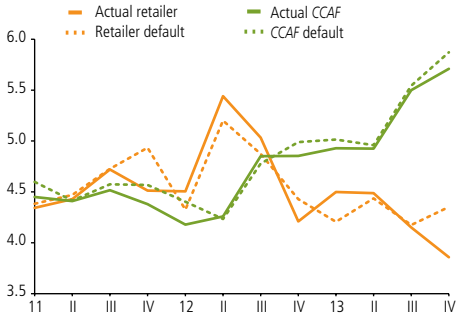
FIGURE III.16
90-day default rate of banks (1)(2)
(percent of loans)



(1) Mortgages excluding *BancoEstado*.
(2) A three-month lag is used for the comparative basis. Quarterly data.

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

FIGURE III.17
90-day default rate of nonbank lenders
(percent of loans)



(*) A three-month lag is used for the comparative basis. *CCAF:* Family compensation funds.

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

Bank debt has grown as a result of an increase in average household debt and not in the number of debtors.

In bank mortgages, the average debt has grown faster than the number of debtors (table III.6), and there has been a compositional shift toward larger loans, consistent with the higher home prices (figure III.14). In consumer debt, after several quarters, average debt grew faster than the number of debtors. This slower growth of debtors is consistent with the contraction of specialized consumer divisions in the banking sector recorded since mind-2013 (chapter IV).

TABLE III.6
Household bank debt
(real annual change, percent)

	2011				2012				2013				2014
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I (*)
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	9.5
No. of 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
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	6.3
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	7.2
No. of 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	1.0
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	6.1

(*) Data for February.

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

Lending standards have tightened somewhat for mortgages and been stable for consumer loans.

According to the Bank Lending Survey for March 2014, lending conditions are slightly tighter for mortgages and have not changed for consumer loans. Banks report that mortgages continue to be highly concentrated in the segment with a loan-to-value (LTV) ratio of 80 and 90%. If anything, there has been a slight drop in the percentage of loans granted with over 90% financing and an increase in mortgages with an LTV of 70 to 80% (figure III.15).

Aggregate payment indicators have not deteriorated despite the increase in household debt

In bank mortgage loans, the 90-day default rate continued to decline, in terms of both the real value and the lagged basis. In bank consumer loans, there was a marginal increase in the last quarter of 2013, which was partially reversed in early 2014, but the rate is still lower than the last two years (figure III.16). Among nonbank lenders, the 90-day default rate has declined for retailers, whereas it has worsened for the family compensation funds (*Cajas de Compensación de Asignación Familiar*). The latter group was affected by regulatory changes, including the standardization of default reporting requirements (figure III.17).

In sum, household debt continues to grow at around the rates recorded in previous periods. The share of bank credit has grown, mainly through an increase in average debt. Consequently, aggregate indebtedness has increased slightly, but payment indicators have not deteriorated. This is consistent with the greater relative supply of credit to upper- and middle-income households described in past *Reports*.

BOX III.1 THE PERFORMANCE OF THE NONFINANCIAL CORPORATE SECTOR: AN INTERNATIONAL COMPARISON

This box compares the performance of the Chilean corporate sector against different samples of countries for the period 2000–12, in terms of profitability, indebtedness, financing costs and interest coverage ratios. This exercise supports the analysis of both the evolution and the level of these financial variables relative to other economies that can serve as a benchmark. As in any international comparison, even countries that seem similar may have important differences in terms of their institutional, legal and financial development, which complicates the analysis. These factors are not considered in this box, which could limit the scope of the conclusions.

The comparison uses three samples of countries: (i) developing countries with a comparable GDP per capita, based on the IMF classification (2013); (ii) Latin America; and (iii) developed countries[1]/. The data are from Datastream, an international financial database. The information in this database differs from the data used in chapter III, which are reported by the SVS. The main differences are as follows: (i) Datastream mainly includes exchange-listed firms, which are a subset of the firms registered in the SVS database; (ii) Datastream does not correct for the parent-affiliate effect, which induces double accounting, for which the Central Bank made an internal correction based on ownership information contained in the financial statements; and (iii) there are differences in the values of financial variables in the two databases[2]/.

Results

In the period under analysis, the Chilean corporate sector was less profitable than both the comparable GDP and Latin American groups (figure III.18). All the groups recorded declining profitability starting in 2010, although the trend was less marked in the developed countries.

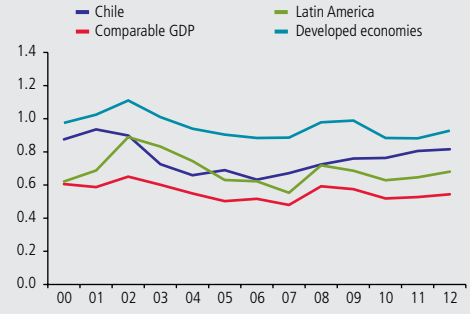
FIGURE III.18
Return on assets (1)(2)
(percent)

(1) EBIT/Total assets. Group weighted average.
(2) Datastream data downloaded in the first half of 2014.

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

With regard to the level of indebtedness, Chile is above the comparable GDP and Latin American groups and below the developed countries (figure III.19).

FIGURE III.19
Indebtedness (1)(2)
(times)



(1) Financial debt/Equity. Group weighted average.
(2) Datastream data downloaded in the first half of 2014.

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

[1]/ The countries with a comparable GDP are Argentina, Brazil, Mexico, Malaysia, Poland, Russia, Turkey and South Africa, which had a per capita GDP of between US$7,900 and US$13,390 in 2011. The Latin American sample includes Argentina, Brazil, Colombia, Mexico and Peru. The developed countries are Canada, Germany, Spain, France, the United Kingdom, Italy, Japan and the United States.

[2]/ For more details, see Ramírez and Vásquez (2014).

FIGURE III.20
Cost of financing (1)(2)
(percent)

(1) Financial expense/Financial debt. Group weighted average.
(2) Datastream data downloaded in the first half of 2014.

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

Financing costs in Chile are consistently lower than in the comparable GDP and Latin American countries and equal to the developed country group. However, financing costs have fallen for the comparable GDP and Latin American groups in recent years, although they are still higher than in the developed countries (figure III.20).

FIGURE III.21
Interest coverage ratio (1)(2)
(times)

(1) EBIT/Financial expense. Group weighted average.
(2) Datastream data downloaded in the first half of 2014.

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

Finally, interest coverage ratios have fallen across the board in all the groups in recent years, as a result of a decrease in profitability and the stabilization of financial expense over assets (figure III.21). Chile's ratio is similar to that of the comparable GDP group.

In sum, the trend for the profitability, indebtedness and interest coverage ratios of Chilean firms is not substantially different from the comparison groups. Although the indebtedness level is higher than in the comparable GDP and Latin American groups, financing costs are lower throughout the period of comparison. However, the materialization of the risk scenarios described in this *Report* could lead to significant changes in external financing costs. When combined with the higher indebtedness and lower interest coverage ratio, this could generate difficulties in terms of meeting obligations. Firms thus need to correctly assimilate these factors in their debt behavior.

Finally, it is important to bear in mind, again, that while the Datastream database provides an alternative for carrying out international comparisons, important caveats include the structural differences between seemingly comparable countries and the parent-affiliate effect, which is not corrected in this database.

BOX III.2 HOUSING PRICES IN CHILE

The correct analysis and measurement of housing prices is essential for an adequate assessment of the real estate sector and financial stability. This box describes the methodology and main results of the implementation of a housing price index (HPI) for Chile, which will be published by the Central Bank[1]/. The HPI includes breakdowns by type of property—houses and apartments— and geographic region.

Methodology and data sources

The HPI is constructed using anonymous administrative records from the Chilean Internal Revenue Service, corresponding to actual new and used home transactions in the period 2002–13[2]/. This information is complemented with the nonagricultural real estate registry, which contains relevant information including land surface area and quality, zoning and size of construction.

The method used is stratification or mixed adjustment, which was chosen based on the data available in Chile and a review of international best practices[3]/. This methodology is consistent with chained national account measures, with reference year 2008. The method measures price changes in different groups of homes according to certain characteristics.

Fourteen groups are considered, based on different combinations of the following characteristics:

- 7 geographic regions: the north, the center (excluding the Santiago Metropolitan Region), the south and four subdivisions of the Santiago Metropolitan Region (SMR) (east, west, center and south)[4]/; and

- 2 types of housing: houses and apartments.

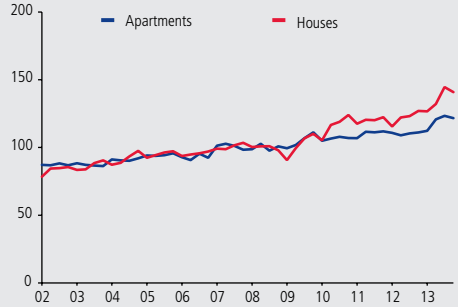
The aggregate price index combines the simple average of the price index for each group—in UFs (*Unidad de Fomento*, an inflation-indexed unit of account) per square meter—weighted by the square meters traded in the previous year[5]/.

The aggregate HPI and its decomposition by type of property and geographic region will have a quarterly frequency and will be published half-yearly by the Central Bank.

Results

As analyzed in chapter III, the aggregate housing price index continued to grow in 2013 (figure III.10). The breakdown by type of property reveals a difference in the growth of houses and apartments (figure III.22). Both indices grew at similar rates through late 2009, at an average of around 3% in real annual terms. Beginning in the first quarter of 2010, however, the house price index increased more than apartments, posting an average real annual growth rate of 8% in 2010–13. The earthquake in February 2010 may have contributed to this development due to the relative increase in the demand for houses versus apartments.

FIGURE III.22
Home prices by type of dwelling (*)
(fixed-base index: 2008 = 100)



(*) Preliminary results.

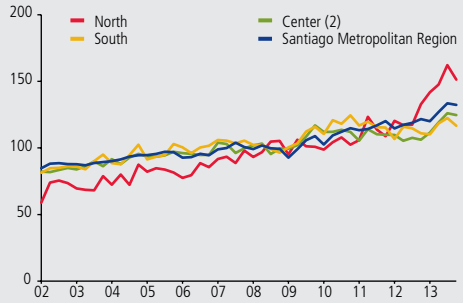
Source: Central Bank of Chile, based on data from the Internal Revenue Service (SII).

[1]/ For more details on the calculation methodology, see Central Bank of Chile (2014b).
[2]/ The advantages of this data source are that it is based on actual transactions, rather than theoretical valuations (Eurostat, 2013), and that it has national coverage.
[3]/ Other methodologies used for this purpose are repeat sales and hedonic prices. In the case of the former, there is not a sufficiently long time series; in the latter, the database does not include detailed information on home characteristics (Vio, 2012).
[4]/ The north includes the regions of Arica y Parinacota, Tarapacá, Antofagasta and Atacama. The central region includes Coquimbo, Valparaíso, Libertador Bernardo O'Higgins and Maule. The south covers Biobío, la Araucanía, los Ríos, los Lagos, Aysén and Magallanes.

[5]/ This index does not reflect changes in quality and composition that could arise within each group.

The results by geographic region also demonstrate dispersion. Since the third quarter of 2012, the north has grown faster than the rest of the country (figure III.23), which is due, in part, to dynamic mining investments in that region. Similarly, the eastern district of the Santiago Metropolitan Region has posted higher growth rates than the rest of the Region since early 2013 (figure III.24). As indicated in previous *Reports,* the eastern SMR is characterized by particularly low inventories and a limited supply of land, which could explain the price increases.

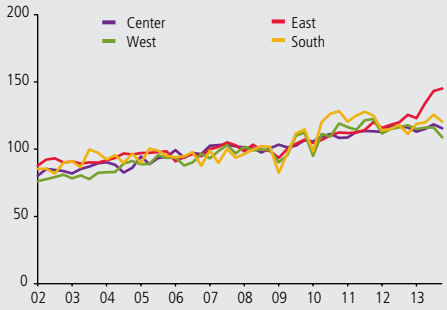
FIGURE III.23
Home prices by geographic region (1)
(fixed-base index: 2008 = 100)



(1) Preliminary results.
(2) Excluding the Santiago Metropolitan Region.

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

FIGURE III.24
Santiago Metropolitan Region: home prices by area (*)
(fixed-base index: 2008 = 100)



(*) Preliminary results.

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

IV. BANKING SYSTEM

The expansion of commercial and consumer credit has slowed in line with the phase of the economic cycle. Some risk indicators for the commercial portfolio have deteriorated, while the consumer risk indicators have stabilized. The potential impact of a stress scenario is higher than in previous *Financial Stability Reports.*

The growth of commercial and consumer credit has eased, consistent with the less dynamic economy, while the growth rate of housing loans remains around 10% in real annual terms.

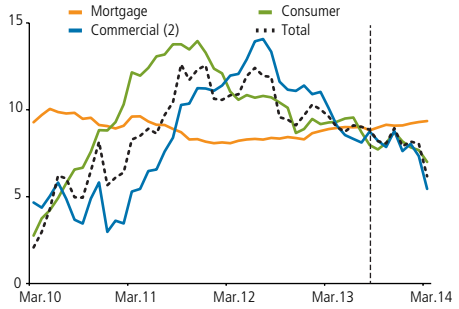
The slowdown in credit expansion has been steepest in the commercial portfolio, in line with the less dynamic output and the decrease in investment (figure IV.1). This trend was most visible toward the end of the first quarter, when the real annual growth rate dropped to 5.5% after averaging around 8% in the second half 2013. By sector, the decline was most evident in construction and mining (figure IV.2). Services, such as financial services and insurance, continue to explain a large share of aggregate growth. Consumer credit recorded a more moderate slowdown, from a real annual growth rate of 8% to 7% in the same period.

Default on commercial loans is stable, but it has increased in the productive sectors and in firms with lower debt.

Payment indicators for firms carrying a lower debt level have deteriorated in the last two years, in particular in the 500–18,000 UF segment, which is generally associated with SMEs (figure IV.3). Furthermore, in 2013 there was a generalized increase in default across productive sectors, excluding services, which in some cases reached the highest levels of the last five years (chapter III). This has not generated a significant increase in aggregate commercial default due to the stability of payment behavior in the services sector, especially financial services, which accounts for a large share of the banking industry's commercial portfolio. At the same time, the banking system's stock of provisions has risen, supporting stable coverage levels.

The lower growth of credit and the higher default rates in some sectors has coincided with a tightening of approval standards for commercial loans. According to the Bank Lending Survey, between December 2013 and March 2014, supply conditions tightened for both large firms and SMEs. In contrast, the net survey responses indicate that lending conditions for consumer credit did not change in the same period.

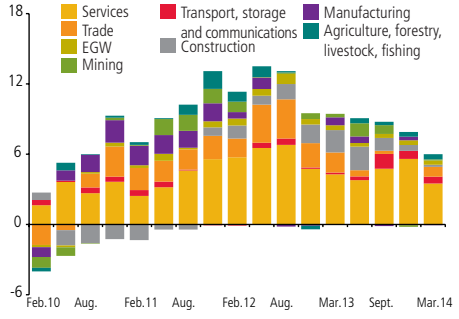
FIGURE IV.1
Growth rate of loans (1)
(percent, real annual change)



(1) The vertical dotted line indicates the statistical closing date of the last *Report.*
(2) Excluding foreign trade loans.

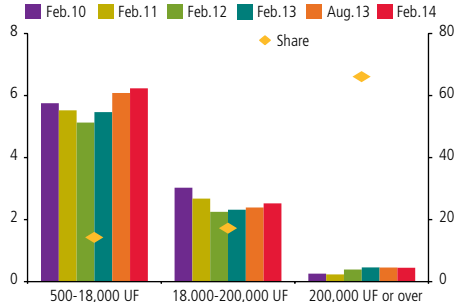
Source: Central Bank of Chile, based on SBIF data.

FIGURE IV.2
Growth rate of commercial loans, by economic sector
(porcentaje, variación real anual)



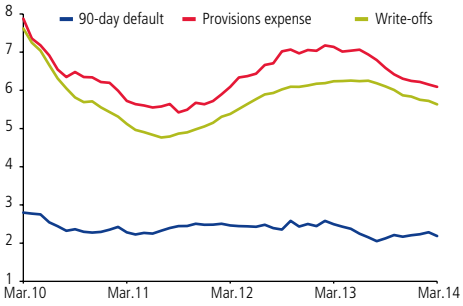
Source: Central Bank of Chile, based on SBIF data.

FIGURE IV.3
Default and share of commercial loans, by loan size
(percent of respective portfolio)



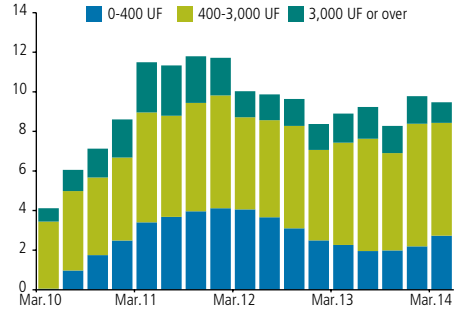
Source: Central Bank of Chile, based on SBIF data.

FIGURE IV.4
Risk indicators of the consumer portfolio
(percent of loans)



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

FIGURE IV.5
Growth rate of consumer loans, by loan size (*)
(real annual change, percent)



(*) Includes consumer debt of savings and loan cooperatives supervised by the SBIF.

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

Consumer default has stabilized, and the growth of this segment has been driven by larger loans.

The default rate of the consumer portfolio stabilized in the first months of 2014, which was accompanied by lower write-offs and provisions expense since mid-2013 (figure IV.4). This may be associated with the shift in the composition of bank growth toward upper- and middle-income segments, at the expense of lower-income brackets, which has also been reflected in a reduction in the specialized divisions of large banks. Thus, the growth of consumer credit has been driven by the 400–3,000 UF loan segment (figure IV.5).

The banking system's profitability has recovered, due in part to transitory factors, while solvency levels remain around 13%.

The profitability of the banking sector has increased in recent months, mainly due to higher inflation, which was reflected in the contribution of adjustment margins. Banks with a larger market share have also recorded lower support costs. In this group, these effects offset the lower income from commissions and interest margins (figure IV.6). The lower interest margins could be associated with the aforementioned reorientation toward higher amounts, which are granted at lower rates than smaller loans.

In February, the capital adequacy ratio (CAR) was around 13% for the system. Tier 2 capital increased, due to the issue of subordinated bonds for nearly US$650 million in the last quarter of 2013 (figure IV.7). The CAR is lower than the average of a broad group of countries (box IV.1)

External financing sources continued to diversify, and average maturity increased.

The banking system continues to enjoy favorable external financing conditions, with an external debt of around 10% of total liabilities. After a dynamic second half of 2013, the issue of commercial papers in the United States eased in the first quarter 2014. In contrast, external bonds have grown more than other foreign credits (figure IV.8). Thus far in the year, the amount of these issues has exceeded registered issues as of the same date in 2013. In addition, the average maturity of external debt has increased. The mismatch between foreign currency asset and liability operations is stable at around 5% of effective equity.

The system retains a strong dependence on local wholesale financing, although to a lesser extent for medium-sized banks.

In the local market, the cost of financing has been lowered through short- and long-term issues (chapter II). As reported in past *Financial Stability Reports,* the dependence on wholesale financing differs by type of bank, with smaller banks having a higher exposure. In the first quarter of 2014, this source of financing increased for this group of banks (appendix figures).

RISK FACTORS

A sharper economic slowdown could imply an increase in credit risk, especially in the commercial portfolio.

In recent months, the profitability of firms has decreased, consistent with the phase of the economic cycle, and payment compliance on bank debt has worsened in some sectors. This has been most visible in sectors that are more exposed to the cycle, especially construction, and in firms carrying lower debt levels. A sharper slowdown of the economy could increase the deterioration of the commercial portfolio in these and other sectors. The level of provisions constituted in each case is a key element for mitigating the impact of these risks.

In principle, the higher growth rate of bank loans at larger amounts and to higher-income segments reduces credit risk, but if the trend continues, it could reverse this effect.

This strategy could be increasing the financial burden and indebtedness of these households to levels where the risk surpasses their lower exposure to the cycle. Moreover, lower-income households still represent a significant share of the portfolio. Thus, a sharp slowdown of the economy that affects their payment behavior could have a strong impact on banks with a higher exposure to this segment.

The banking sector could face periods of volatility and higher financing costs in the domestic and external markets.

The materialization of the external risk scenarios (chapter I) could make it difficult to roll over debt overseas while increasing banks' financing costs. This risk is mitigated by the limited level of external financing on aggregate and the banks' diversification in the use of debt instruments, such as the issue of bonds and commercial papers.

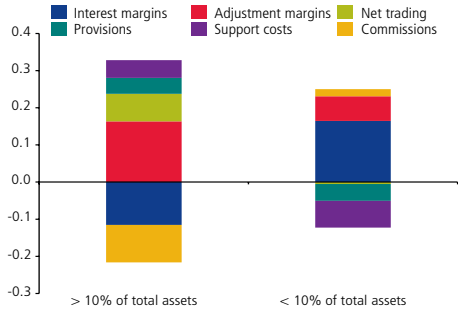
Domestically, the cost of financing could increase, given its current low level. Sudden changes in the institutional investors' portfolios could generate reversals in spreads and have a strong impact on smaller banks with a high exposure to wholesale financing. Although the spread in the domestic market remains low, a deterioration in the external scenario could cause larger market participants to demand more financial resources on the local market, which would reduce the availability of funds for other participants.

STRESS TESTS[1]/

Stress tests show that the banking system is in an appropriate financial position to absorb the materialization of a severe stress scenario. However, it would have a somewhat larger impact on profitability than estimated in previous *Reports*.

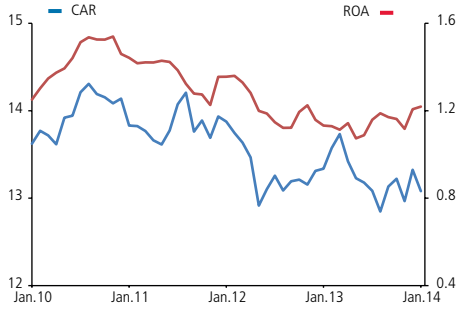
[1]/ The analysis is based on the methodology described in Jara et al (2007) and Alfaro and Sagner (2011). Both, the analysis and the results, are regularly reported to the SBIF.

FIGURE IV.6
Change in main components of the ROA (*)
(from September 2013 to March 2014, percent)



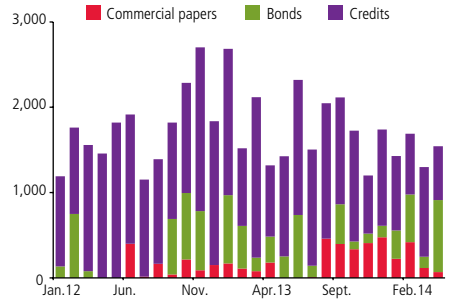
(*) Based on consolidated financial statements.
Source: Central Bank of Chile, based on SBIF data.

FIGURE IV.7
Capital adequacy ratio and return on assets (*)
(percent)



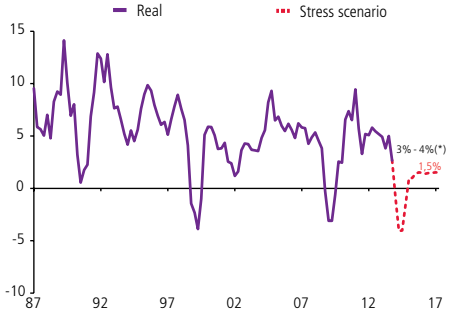
(*) Based on consolidated financial statements.
Source: Central Bank of Chile, based on SBIF data.

FIGURE IV.8
Bank debt issued overseas
(US$ million)



Source: Central Bank of Chile.

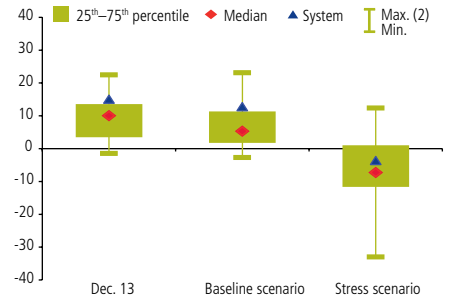
FIGURE IV.9
Annual GDP growth
(quarterly data, percent)



(*) Baseline scenario in the March 2014 *Monetary Policy Report*, with a growth rate of 3–4% for 2014.

Source: Central Bank of Chile.

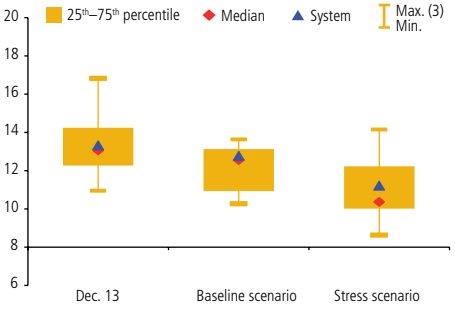
FIGURE IV.10
Impact of different scenarios on return on capital (1)
(earnings over Tier 1 capital)



(1) Data are weighted by the core capital of each institution.
(2) The minimum is the first percentile.

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

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



(1) Data are weighted by the core capital of each institution.
(2) Calculations do not include treasury or foreign trade banks.
(3) The maximum is the 90th percentile.

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

The stress tests use macro and accounting information for the banking system as of December 2013. 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 repricing. Both risks are evaluated under the baseline and stress scenarios, using the methodology described in the last *Report*.

The stress scenario considers a drop in GDP in the short term and slower growth in the medium term. Accordingly, output falls 2.7% on average in 2014 and then converges to a 1.5% increase in 2016. This scenario aims to replicate past episodes of financial fragility (figure IV.9)[2]/

Relative to the last *Financial Stability Report,* based on data for June 2013, the current period is more favorable in terms of profitability and very similar on capitalization. The banking system's return on equity (ROE) is 1.4 percentage points higher (15.0% versus 13.6%) and the CAR is very similar (13.2% versus 13.3%).

In the stress scenario, the ROE would fall –3.6 percentage points of core capital (table IV.1), compared with 2.1 percentage points in the stress tests described in the last *Report*. At the individual level, banks that represent 62% of the system's Tier 1 capital would post negative earnings (figure IV.10). A group of banks accounting for 60% of the system's Tier 1 capital would have a CAR of over 11% (figure IV.11)[3]/. In the last *Report,* these figures were 47% and 62% respectively.

Stress tests are an analytical tool that contribute 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, banks need to ensure that they maintain an adequate level of provisions and capital.

TABLE IV.1
Impact of stress tests on profitability
(percent of Tier 1 capital)

	Stress scenario
Initial ROE	15
Market risk	-2.3
Valuation	-1.0
Repricing	-1.3
Currency	0.0
Credit risk	-20.2
Consumer	-8.6
Commercial	-9.9
Mortgage	-1.8
Margin	3.9
Final ROE	-3.6

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

[2]/ The baseline scenario is consistent with the *Monetary Policy Report* for March 2014, with GDP growth of 3 to 4% in 2014. The UF interest rate forecast in June 2014 is 4.7% for both one- to three-year loans and mortgage loans over 20 years.
[3]/ These results include reinvested earnings.

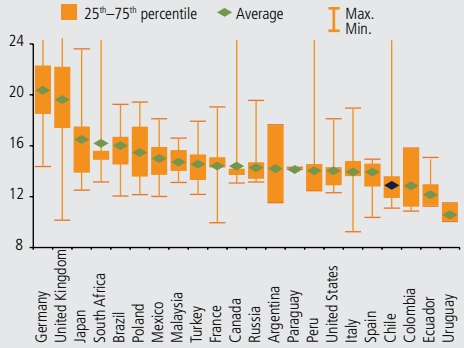
BOX IV.1 INTERNATIONAL COMPARISON OF THE SOLVENCY OF THE CHILEAN BANKING SYSTEM

In the banking business, capital acts as a buffer for unexpected losses, while provisions do the same for expected losses (Borio et al., 2001). Determining the solvency of the banking system thus requires, at the very least, an assessment of its capital position and level of provisions. This box evaluates the relative international position of the local banking system on these variables. It also identifies some important measurement and regulation issues to complete the analysis.

Capital

As described in past *Reports*[1]/, international comparisons of banking system capital are based on the capital adequacy ratio (CAR) and the leverage ratio. In terms of the CAR, Chile is below the average of a broad sample of countries (figure IV.12)[2]/

FIGURE IV.12
Capital adequacy ratio (*)
(latest available data, percent)



(*) Latest available data for 2012 or 2013.

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

However, the CAR is defined as the ratio of regulatory capital to risk-weighted assets (RWA). To determine total RWA, the definition of the weights is critical. In Chile, these weights are assigned by risk category, which in some cases are higher than the proposed weights of the standard models incorporated in Basel II and upheld in Basel III (table IV.2). This could bias the CAR downward relative to countries that use this standard.

TABLE IV.2
Risk weights in the standard Basel II model and in Chile (General Banking Law)
(percent)

	Basel II	LGB
Cash	0	0
Exposure to sovereign or central bank debt	0-100	10 o 100 (2)
Trade credits (1)	0-100	100
Commercial mortgages	100	100
Multilateral development banks	0	100
Banks (1)	20-100	100
Consumer	75	100
Home mortgages	35 o >	60
90-day default portfolio (net of provisions) (1)	100	100
90-day default portfolio (net of provisions), mortgage loans	50-100	100

(1) A weight of over 150% could be applied to: sovereign, state-owned or bank debt or corporate securities rated lower than B–; commercial credit rated lower than BB–; and mortgage loans in default with provisions of less than 20% of the debt.
(2) Sovereign or Central Bank of Chile debt: 10%; remainder: 100%.

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

An additional complication in the international comparison of the CAR is the treatment of operational and market risk, in particular whether charges for these risks are included in the RWA. The Chilean regulation does not incorporate them, although the regulatory guidelines on market risk require allocating additional capital to cover market risk exposure (MRE)[3]/. Estimates by the SBIF, which aim to correct for these differences in the local and international regulations, suggest that the Chilean banking system, on average, would comply with the Basel III standards, even though this scheme is not specifically incorporated in our legislation.

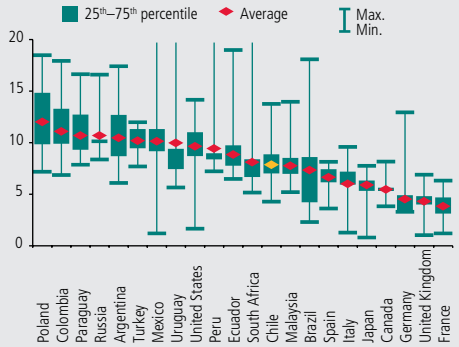
Given the difficulty of comparing the CAR among countries, there are other simpler indicators that are more robust to regulatory differences, such as the leverage ratio (defined here as equity over assets). Based on this measure, Chile's relative solvency position improves to around the sample mean (figure IV.13). Basel III incorporates a minimum requirement of 3% for the leverage ratio

[1]/ Box V.1, *Financial Stability Report*, Second Half 2012.
[2]/ This analysis uses the same sample of countries as box III.1, except that more Latin American countries are included. For each country, the 15 largest banks are included, taking the latest available data for 2012 or 2013, according to the Bankscope database. Cooperative banks are included when local legislation treats these as banks. This methodology has its flaws: for some countries, the banks in the sample may not be representative of the system as a whole; and the methodology considers the banks established in each county, which implies that assets from "other countries" are included. The methodology is similar to that used by Arregui (2014).

[3]/ Chapter IIIB2 of the *Compendium of Financial Regulations*, Central Bank of Chile.

as a substantive improvement over Basel II, which is very similar to the leverage requirement that has been in the General Banking Law since the 1980s[4/].

FIGURE IV.13
Banking system leverage ratio (*)
(percent)

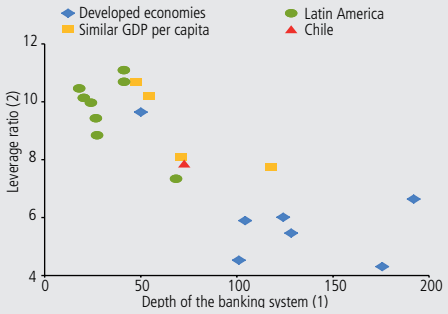


(*) Latest available data for 2012 or 2013.

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

Another factor to take into account is that more developed financial systems tend to have lower levels of capital. When the countries are grouped by level of financial development (measured as domestic bank credit over GDP), Chile's leverage ratios are consistent with the depth of the banking sector (figure IV.14).

FIGURE IV.14
Leverage ratio and depth of the banking system
(percent)



(1) Domestic bank credit to the private sector as a percent of GDP, 2012.
(2) Equity as a percent of assets, 2013.

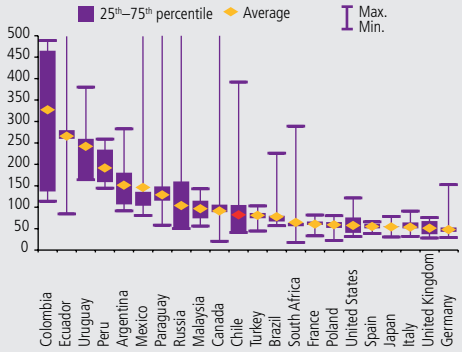
Sources: IMF, World Bank, OECD estimates and Bankscope.

[4/] The Basel III leverage ratio is not strictly comparable to the measure used here, in that the numerator includes additional Tier 1 capital and the denominator includes adjustments that are not available in the banks' financial data.

Provisions

Provisions allow banks to recognize anticipated losses due to risk in the loan portfolio. To the extent that the constituted provisions are sufficient, the probability of unexpected impacts on bank profits and thus on capital is reduced. The coverage ratio is widely used for this purpose. Chile's coverage ratios are in the mean for the countries in the sample (figure IV.15).

FIGURE IV.15
Provisions coverage ratio (*)
(percent)



(*) Calculated as the stock of provisions divided by the 90-day default portfolio. Latest available data in 2012 or 2013.

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

Conclusions

The solvency of the Chilean banking system, measured through its capital levels and provisions for credit risk, are comparable to countries with similar levels of development, based on the metrics used in this box.

Although solvency levels appear to be appropriate, it is important to continue making progress on a reform of the banking legislation to incorporate solvency requirements in line with international consensus and current developments in this area. This would not only bring the country closer to international best practices, but also facilitate the international comparison of the local banking system. These legal modifications could be especially important in the case of capital levels, which under the current legislation are still subject to specific definitions associated with Basel I. In the case of provisions, in recent years, the SBIF has been appropriately using the powers conferred on the Superintendence under the General Banking Law to continuously improve its provisions regulations.

V. FINANCIAL REGULATION

This chapter reviews the most important regulatory developments at the local level and the most important issues in the debate on financial regulation at the international level[1]/.

NATIONAL REGULATION

New liquidity rules

From 9 May to 6 September 2014, a proposal for fine-tuning the Central Bank of Chile's rules on bank liquidity risk management will be open for public consultation. The new regulation pursues the following objectives:

• To strengthen liquidity risk management policies in the banking system, giving more responsibility to the board of directors and management and establishing minimum criteria for developing stress tests and contingency plans.

• To increase the quantity and quality of the information available to the supervisor and the market, through the inclusion of new monitoring variables such as the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) from Basel III; an indicator for monitoring short-term liquidity under a scenario characterized by an idiosyncratic reduction of wholesale financing; and monitoring variables for different-quality liquid assets and concentration of financing sources. In terms of public information, new quantitative and qualitative requirements are added.

• To fine-tune the current regulatory requirements by adding requirements for aggregate maturity mismatches to complement individual requirements and providing guidelines for the treatment of bank affiliates overseas. Adjustments are also being incorporated to standardize the criteria on the use of internal models (adjusted basis), so that similar flows will be treated similarly across all banks.

For now, the new Basel quantitative requirements will not be incorporated into the current regulatory limits. Once the new regulations enter into effect, the SBIF and the Bank will be able to estimate the LCR and NSFR more precisely. In addition to providing better quality information at a higher frequency—for

[1/] The statistical appendix provides information on transaction volumes in the payment systems.

example, on high-quality liquid assets (HQLA) and financing sources—the information captured in the observation period (around one year) will support the necessary adjustments and calibrations so that the new regulations can provide the foundation for adopting the LCR as a regulatory requirement and improving the current limits.

More details on the regulations open to public consultation are available on the Central Bank's website[2]/. Box V.1 assesses the state of implementation of the Basel III liquidity rules at the international level.

Foreign securities transactions in pesos

The Securities Market Law (*Ley de Mercado de Valores, LMV*) establishes that foreign securities must be denominated in foreign currency or, alternatively, in national currency but with payments made in foreign currency. To be traded and paid in pesos an authorization of Central Bank is required and it can establishes terms and conditions on the operations[3]/.

Over the past few years, the supply of foreign securities has increased on the local market, mainly in the form of exchange-traded fund (ETF) shares and stocks. In addition, various private sector agents have requested the Central Bank to grant the authorization covered under the Securities Market Law. The Bank, in turn, considered that this would not only facilitate the development of a broader spectrum of investment alternatives, as in the case of the authorization in 2006 for nonresidents to issue peso-denominated bonds ("huaso bonds"), but also allow the associated transactions to be cleared and settled through a central counterparty, which has more robust infrastructure and systems for managing operational risk and guarantees.

Thus, following a period of public consultation, in May 2014 the Bank authorized that transactions associated with foreign exchange-traded funds (ETF), stocks and securities certificates can be denominated and paid in pesos.

This authorization is subject to the following conditions: (i) the instruments must be eligible for being publicly traded on the securities markets of the issuer country or other markets; (ii) the issuer must be established in a country that is a member of the Financial Action Task Force (FATF) or an equivalent organization, aimed at combatting money laundering and terrorist financing, and that is not listed as an uncooperative country or a tax haven; (iii) the instruments must be registered in the Foreign Securities Registry maintained by the SVS; and (iv) the instruments must be traded on the securities exchange.

It is further established that these instruments must be held in custody by a securities custody and deposit firm, constituted in accordance with Law 18,876. The firm(s) must report monthly to the Central Bank on changes, at the aggregate level, of the custody of these instruments. The exchanges on which

[2]/ http://www.bcentral.cl/normativa/consulta-publica/Antecedentesconsultaliquidez_09052014.pdf.
[3]/ The Bank's power to grant this authorization was incorporated together with the Capital Market Reform III, enacted in 2010.

they are traded must report the total volume of transactions on a monthly basis. Finally, the authorization also addresses aspects of compliance with the foreign exchange regulations. Thus, while the associated transactions in pesos between residents are not foreign exchange operations, there could be foreign exchange operations associated with the transactions, such as the purchase or sale of foreign securities overseas or the purchase or sale of these securities in the local market by nonresidents, which must comply with the current regulations.

Changes to the regulations on the issue and operation of prepaid debit cards

The Central Bank published for public consultation changes to the regulations on the issue and operation of prepaid debit cards (stored value), contained in Chapter III.J.3 of the *Compendium of Financial Regulations.* The objective is to remove regulatory requirements that could be inhibiting the development of this means of payment, without introducing additional risks to the retail payments system. Congress is currently discussing legal changes to provide for the possible future issue of prepaid cards by nonbank entities, which therefore are not considered in the changes to Chapter III.J.3.

The main changes are as follows: (i) the elimination of the requirement of prior authorization by the Central Bank in order for banks to issue prepaid cards, as well as for different companies to provide the service of operating such cards; (ii) the integration of the regulations affecting prepaid card operators, so that a single entity can operate debit, credit and prepaid cards, given compliance with specific requirements; (iii) the raising of the limit on anonymous disposable cards; and (iv) the authorization to use identified prepaid cards overseas. More details are available on the Central Bank's website[4]/.

Tables V.1 and V.2 present the main regulations published and opened for public consultation, respectively.

INTERNATIONAL REGULATION

In order to assess the pending challenges for Latin America with regard to the global reform of the over-the-counter (OTC) derivatives market, the Bank organized a joint seminar with the IMF in January.

As discussed in previous *Reports,* following the international financial crisis of 2008, the G20 adopted a series of commitments to strengthen the infrastructure for OTC derivatives. The first economies to enact such legislation were the United States, through the Dodd-Frank Act, and the European Union, through the European Market Infrastructure Regulation (EMIR)[5]/. The G20 commitments are reflected in a review and updating of the Principles

[4] See the *Financial Stability Report* for the first and second halves of 2012 and the second half of 2013.

[5] The FSB indicates that there are twelve CCPs for commodity derivatives, six for credit derivatives, seven for equity derivatives, nine for currency contracts and sixteen for interest rate derivatives. See OTC *Derivatives Market Reforms: Seventh Progress Report on Implementation*. FSB, 8 April 2014.

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

Date	Organization	Regulation	Material and objective
03-Dec-2013	SVS	GENERAL REGULATION (NCG) 355	To raise the operating standards of external audit firms, with a focus on the technical expertise and independence of partners and participants.
04-Dec-2013	SVS	EXEMPT RESOLUTION 423	To incorporate the clearing and settlement of derivatives in the operating regulations of CCLV, *Contraparte Central S.A.*
19-Dec-2013	SVS	NCG 357	To facilitate the underwriting of foreign securities in the SVS registry by administrators.
06-Mar-2014	SVS	NCG 361 and NCG 362	To raise the operating standards and modernize the use of rating agencies and to establish conditions for carrying out complementary activities.
20-Mar-2014	Central Bank	AMENDMENTS TO CHAPTER VI OF THE *COMPENDIUM OF FOREIGN EXCHANGE REGULATIONS*	To incorporate commissions charges for reimbursement requests processed by the Central Bank for local authorized institutions and to limit the instruments that are covered under the Reciprocal Payment and Credit Agreement-Aladi.
30-Apr-2014	SVS	NCG 363	To establish the timelines and information to be presented by all parties that must enroll in the Registry of Portfolio Managers.
05-May-2014	Central Bank	RESOLUTION 1820-03-140430	To authorize transaction and payment in pesos of mutual fund or foreign investment fund shares corresponding to ETFs, shares in foreign corporations and foreign securities certificates, in order to promote investment alternatives in the local market, and to allow clearing and settlement through a central counterparty.

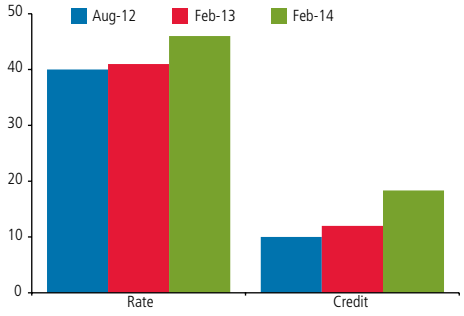
TABLE V.2
Main regulations published for public consultation in the first half of 2014

Date	Organization	Regulation	Material and objectives
18-Dec-2013	SBIF	EXTENSION OF PUBLIC CONSULTATION CLOSED AMENDMENT TO CHAPTER B -1 OF THE COMPENDIUM OF ACCOUNTING REGULATIONS	To align the local regulatory guidelines with international standards and to introduce new prudential elements that promote the development of healthy risk management practices.
28-Jan-2014	SVS	PUBLIC CONSULTATION CLOSED REPEAL OF CIRCULAR 1898 OF 2008 ON APV AND APVC	To revise and modernize the current requirements established for voluntary pension savings plans (APV) and collective voluntary pension savings plans (APVC) in order to promote competition and efficiency in the industry.
13-Feb-2014	SBIF	PUBLIC CONSULTATION CLOSED APPENDIX 2 OF CHAPTER B-1 OF THE COMPENDIUM OF ACCOUNTING REGULATIONS	To capture credit risk in bank provisions and to promote the gradual adoption of best practices in risk management, thereby ensuring the preservation of the robustness of the local banking system over time.
07-Mar-2014	SBIF	PUBLIC CONSULTATION CLOSED MODIFICA CAPÍTULO 20-7 DE LA RAN	To move toward a model in which the banks will adopt the decision to externalize some specified services without requiring prior authorization by the SBIF, in compliance with various requirements in the regulations governing operational risk management.
16-Apr-2014	SVS	PUBLIC CONSULTATION CLOSED SUPERSEDES CIRCULAR 2027 AND DEROGATES CIRCULARS 1538, 1754, 1841, 1947 and 2032, AS WELL AS OFFICIAL CIRCULARS 19, 417, AND 704.	To establish the minimum contents to be included in the Internal Regulations, Contracts and General Regulations of the mutual and investment funds, as well as other informational requirements, in accordance with the provisions of Law 20,712.
09-May-2014	Central Bank	AMENDMENT TO CHAPTER III.B.2 OF THE *COMPENDIUM OF FINANCIAL REGULATIONS* OF THE CENTRAL BANK	To incorporate international consensus and current developments on the regulation of liquidity risk, especially the lessons of the last international financial crisis, taking into account the Basel III recommendations, and to incorporate the lessons from the application of the regulation in Chile since the last modification, in October 2003.
22-May-2014	Central Bank	AMENDMENT TO CHAPTER III.J.3 OF THE *COMPENDIUM OF FINANCIAL REGULATIONS* OF THE CENTRAL BANK	To remove regulatory requirements that could be inhibiting the development of prepaid means of payment (stored value cards).

for Financial Market Infrastructures (PFMI) defined by CPSS-IOSCO. The final version of the PFMI was published in April 2012, and it replaces the three sets of prior independent standards for systemically important payment systems, central counterparties (CCPs) and securities clearing systems. The new set standardizes and strengthens the previous principles and incorporates some new guidelines.

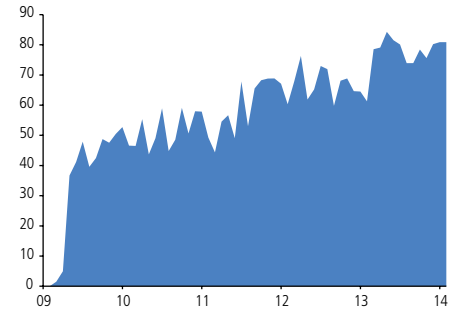
Today, a large number of jurisdictions are in the process of incorporating these new principles. According to the Financial Stability Board (FSB), in the member countries there are several operational CCPs for derivatives based on underlying assets[6/]. The FSB has also reported that a significant fraction of OTC rate and credit derivatives are being channeled through CCPs, and this mechanism increased substantially in 2013 (figure V.1). Since 2013, the United States has been working to apply the mandate to centralize certain classes of standardized OTC derivatives. In its annual report issued in May 2014, the Financial Stability Oversight Council (FSOC) indicates that in the United States, credit derivatives processed in CCPs have increased from 0% in 2009 to 81% in February 2014 (figure V.2).

FIGURE V.1.
Fraction of derivatives processed through CCPs in FSB member countries, by underlying asset class
(percent)



Source: Central Bank of Chile, based on FSB data.

FIGURE V.2.
Fraction of credit derivatives processed through CCPs in the United States
(percent)



Source: Depository Trust and Clearing Corporation (DTCC), through the Financial Stability Oversight Council (FSOC).

Main lessons from the seminar "OTC Derivatives Global Reform" organized jointly by the Central Bank of Chile and the IMF

The actions to be taken to comply with the aforementioned G20 agreements, with regard to cross-border OTC derivative transactions, can be grouped under four general guidelines:

(i) Recognition of local CCPs by foreign jurisdictions, in particular the United States and the European Union, which implies first demonstrating that, in terms of derivatives, the local legislation and supervision are equivalent to those jurisdictions.

(ii) Alternatively or as a complement, there would need to be local recognition of foreign CCPs that process transactions involving a local counterparty.

(iii) Compliance with the PFMI, at least in relation to derivatives infrastructure. Here, most jurisdictions would have to implement legal and regulatory changes in order to adapt to the principles.

(iv) Explicit coordination agreements between authorities, at both the local and international levels.

From the perspective of local authorities, the implications of the international initiatives can be divided into two groups. First, there are those actions or reforms that are not strictly necessary in the short term, but that are related to compliance with international recommendations, such as the implementation of the PFMI and compliance with the G20 criteria. While not adapting to this

[6/] http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/108622.pdf.

structure would not affect the functioning of local markets, conforming to these standards could influence, for example, the international collateral and capital requirements for local banks in their cross-border transactions. It could also affect Chile's potential financial integration with the world in the medium and long term. Second, there are those actions that are necessary for Chilean agents who participate in cross-border transactions to continue operating normally with their foreign counterparties. Even if Chile does not accede to the PFMI or the G20 standards, the foreign counterparties of local agents are subject to their respective regulatory frameworks, that is, they are obligated to report the transaction to a trade repository (TR) and/or process it through a CCP. With regard to transaction reports to a foreign TR, it is important to study the necessity and advisability of international agreements on reciprocal access to information, taking into account the local rules on access to financial information. With regard to transactions processed through a foreign CCP, it is necessary to determine the criteria under which the foreign CCPs are recognized, the conditions under which local agents are allowed to participate in these services and the nature of the obligations contracted by the local entities with these counterparties.

Advances on the European Banking Union

As a reaction to the international financial crisis, the authorities in the European Union (EU) committed to developing a Banking Union. The declared objectives include ensuring that taxpayers do not face losses from future crises and breaking the link between bank's and sovereign's finances. In June 2009, the European Council recommended establishing a single set of rules applicable to all financial institutions in the common market[7/]. Conceptually, the Banking Union is based on four basic elements: a uniform deposit insurance scheme, common prudential requirements, a single bank supervisor and a single bank resolution mechanism.

Since the initial recommendation in 2009, the European authorities have progressively moved forward with the implementation of the Banking Union. In July 2010, the Commission proposed substantive changes to the deposit insurance scheme, in order to simplify, adapt and standardize these protection mechanisms[8/]; in July 2013, the Capital Requirements Directive (CRD IV) entered into force, which will implement Basel III[9/]; and in October 2013, a Single Supervisory Mechanism was adopted, which should be fully operational in November 2014. Finally, substantial progress was made on the resolution of banks with solvency problems in early 2014: in March, the European Parliament and the European Council reached a political agreement to support the European Commission's proposal for a Single Resolution Mechanism, while in April, the Parliament adopted the bank resolution and deposit insurance directives. These events are important milestones in the reform process associated with the Banking Union, as they represent the consolidation of the fundamental policy guidelines for the new scheme.

[7/] http://ec.europa.eu/internal_market/bank/guarantee/index_en.htm.
[8/] For more details on this Directive, see http://europa.eu/rapid/press-release_MEMO-13-690_en.htm.
[9/] http://europa.eu/rapid/press-release_MEMO-14-244_en.htm.

With the deposit guarantee schemes (DGS) proposed by the Commission in 2010 and recently adopted by the Parliament, the authorities have advanced toward a more uniform deposit insurance scheme across the EU and agreed to maintain the state deposit guarantee with coverage of 100,000 euros. The agreement further contemplates streamlining the process of accessing the funds, through a calendar for gradually reducing the reimbursement time from the current 20 business days to only seven.

The new prudential requirements for the European banking system, established through the CRD IV, will implement Basel III in Europe and incorporate elements that go beyond the solvency and liquidity scheme. These include requirements for strengthening the banks' corporate governance, especially in terms of risk monitoring by the board of directors; reporting requirements to improve the transparency of the banking industry; and requirements for banks to reduce the use of risk rating agencies.

In the framework of the new Single Supervisory Mechanism (SSM) for the Eurozone, the European Central Bank (ECB) will be responsible for the direct supervision of banks deemed "significant," namely, if the value of the bank's assets exceeds 30 billion euros or represents at least 20% of the GDP of their country of origin. Banks that have received fiscal support or European bailout funds will also be directly supervised by the ECB. This covers about 130 banks, which represent 85% of total European bank assets. On 16 April, the ECB published the regulations establishing the general framework for cooperation with national bank supervisory authorities, who will support the ECB in its new supervisory role and also perform the direct supervision and monitoring of the remaining banks.

The Bank Recovery and Resolution Directive (BRRD), which is still under discussion, will constitute a single set of rules for the recovery and resolution of banks in the EU and provide tools for prevention, intervention and resolution. Consequently, the BRRD will require banks to design recovery plans—so-called living wills—outlining the necessary measures for overcoming stress events; while the authorities must develop resolution plans for banks with critical problems, at both the group and individual levels. These measures aim to preserve the most crucial functions and services for the proper functioning of the financial system as a whole. The main resolution tools considered are the winding down of specific business areas, the incorporation of bridge banks, asset separation and a "bail-in" mechanism to ensure that the first agents to face losses would be the shareholders and creditors of the bank in question, thereby upholding deposit protection and reducing the possibility of falling back on fiscal funds.

The Single Resolution Mechanism (SRM) will be the tool for implementing the BRRD. The SRM will centralize decision-making on the resolution of a given bank, with participation by the ECB and national authorities. The European Commission and Council will assume the role of overseeing the process. The SRM anticipates the creation of a single resolution fund with contributions from banks, which would reach 55 billion euros in eight years.

Table V.3 lists the main documents published on regulatory issues at the international level, with a focus on risk management and corporate governance.

TABLE V.3
List of documents reviewed

Document	Title	Organization	Solvency / Liquidity	Infrastructure / Transparency	SIFIs	Risk mngmt / Governance	Supervision
1/	FSB member jurisdictions' action plans to reduce reliance on CRA ratings	FSB				*	
2/	Thematic Review of the FSB Principles for Reducing Reliance on CRA Ratings (final report)	FSB				*	
3/	Seventh Progress Report on OTC derivatives reform implementation	FSB		*			
4/	Consultative Document: Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions	FSB			*		
5/	Guidance on Supervisory Interaction with Financial Institutions on Risk Culture (A Framework for Assessing Risk Culture)	FSB				*	
6/	Supervisory Intensity and Effectiveness (Progress Report on Enhanced Supervision)	FSB	*			*	*
7/	Basel III leverage ratio framework and disclosure requirements	BIS	*	*			
8/	Liquidity coverage ratio disclosure standards	BIS	*	*			
11/	Capital requirements for bank exposures to central counterparties: final standard	BIS	*				
12/	Supervisory framework for measuring and controlling large exposures: final standard	BIS				*	*
13/	Guidance for Supervisors on Market-Based Indicators of Liquidity	BIS	*				*
14/	Revised good practice principles for supervisory colleges: consultative document	BIS					*
15/	A sound capital planning process: fundamental elements	BIS	*			*	
16/	External audits of banks: final document	BIS		*		*	*

Source: Websites of each institution.

BOX V.I STATUS OF THE IMPLEMENTATION OF BASEL III LIQUIDITY REQUIREMENTS

In response to the international financial crisis of 2008, the Basel Committee on Banking Supervision (BCBS) revised its paper on "Principles for Sound Liquidity Risk Management and Supervision" (BCBS, 2000 and 2008) and, for the first time, proposed quantitative standards for these principles (BCBS, 2010).

First, the liquidity coverage ratio (LCR) is designed to ensure that a given bank has sufficient high-quality liquid assets (HQLA) to survive a 30-day liquidity stress scenario. Second, the net stable funding ratio (NSFR) complements the LCR by ensuring an asset and liability maturity profile that is sustainable over a period of one year. These indicators will enter into effect in 2015 and 2018, respectively, with a phase-in period according to a schedule proposed by the BCBS, during which banks are expected to achieve 100% compliance.

The first formal definition of these indicators was introduced in 2010 (BCBS, 2010) and compliance by banks in G20 countries is now being monitored.

Revisions

The Basel III liquidity indicators have not been exempt from criticism. In particular, a debate has arisen around the definition of HQLA and the impact it could have on the demand for sovereign securities and central bank liquidity, as well as the implementation of monetary policy. There are also questions on the calibration of the standardized weights for the different flows and their compatibility with the two indicators; the impact on bank financing costs and credit; and the interaction between the liquidity rules and other regulations, such as solvency.

Part of this discussion has been addressed in successive revisions by the BCBS. The LCR standards were revised in January 2013 (BCBS, 2013), adding a new class of HQLA (level 2B[1]/) and changing the discount rates on the different flows considered. While the implementation date was held at 1 January 2015, the regulatory minimum was reduced to 60%, increasing 10 percentage points a year until achieving 100% on 1 January 2019.

This revision also considered the inclusion of three alternative mechanisms for jurisdictions that have an insufficient supply of HQLA[2]/:

(i) Liquidity facilities that are contractually committed by the central bank, at a cost that does not generate disincentives for the direct holding of HQLA.

(ii) The accounting of HQLA in foreign currency to cover liquidity risk in local currency, with currency haircuts.

(iii) The use of a higher share of level 2A assets, with a higher discount rate for the fraction over the 40% limit.

The inclusion of alternative mechanisms came as a response to concerns from countries like Australia, Hong Kong and Singapore, whose quantitative impact studies identified a limited supply of sovereign securities to comply with the requirements of level 1 HQLA or nonbank corporate debt that qualifies as level 2.

The NSFR standards were revised and put into public consultation in January 2014 (BCBS, 2014a). This revision recognizes a larger share of stable short-term retail financing in the numerator, differentiates liquidity needs by loan portfolio

[1]/ Basel III classifies HQLA in two levels. Level 1 assets can be included in the stock with no limits and, in principle, are not subject to haircuts. Level 2 (A and B) require haircuts and have a cap of 40% of the HQLA stock. Level 2B assets are relatively lower quality, so they require larger haircuts and have a cap of 15%.

[2]/ Insufficiency is measured relative to 100% compliance. The text of the regulations also establishes principles for the supervision and monitoring of the use of these alternative mechanisms.

quality in the denominator and improves the consistency with the revised LCR weights. The BCBS set the implementation date for 1 January 2018, although it has not yet announced the required introductory level or the phase-in period.

International experience

The European Union must issue the final regulations on LCR compliance by mid-2014 (BCBS, 2014b). To date, the Capital Requirements Directive (CRD IV) incorporates an obligatory 60% compliance with the LCR starting on 1 January 2015, with annual increases until achieving 100% in 2018, one year earlier than suggested by Basel III. The regulations will be applied to all banks and nonbank financial institutions deemed to be systemically important.

In October 2013, the U.S. Federal Reserve published for public consultation an LCR proposal for large banking conglomerates, with differentiated requirements depending on size. The final regulations should be published in 2014, and the indicator will enter into effect at 80% in January 2015, with a phase-in period of just two years[3]/.

The emerging economies are also making progresses:

• In China, in February 2014, the Banking Regulatory Commission published regulatory guidelines on liquidity risk management in the commercial banking system, including the LCR with the same phase-in period set by the BCBS. These regulations entered into force in March of this year (BCBS, 2014b).

• South Africa introduced regulations that incorporate the monitoring of the LCR in early 2013, with a view to achieving final adoption within the schedule set by the BCBS (BCBS, 2014b).

• In Latin America, Colombia issued regulations on liquidity risk management in 2011, to adapt the local liquidity risk indicator to LCR standards. These regulations, which entered into effect in 2012[4]/, apply not only to banks, but also more generally to credit establishments, large cooperatives and stock brokers.

• In Peru, the "Regulations for Liquidity Risk Management" were issued in 2012, introducing a liquidity requirement that is similar to the LCR[5]/. The regulations implement an initial limit of 80% starting in January 2014 and increasing to 100% in January 2016, but only for banks that have a strong share of retail financing or that could represent systemic risk[6]/

• Brazil has had a regulatory framework for liquidity risk management in line with BIS principles since 2012[7]/. Draft regulations introducing the LCR are expected to be published in the second quarter of 2014 (BCBS, 2014b).

Advances in Chile

In early May of this year, the Central Bank of Chile put to public consultation a set of regulatory guidelines that aim to align the local regulations with international qualitative and quantitative standards (chapter V). The implementation of these regulations would mark the start of the observation period for the Basel III liquidity indicators in the Chilean banking system, during which the Bank will undertake the evaluation and solution of undesired consequences and make the necessary adjustments prior to incorporating regulatory limits. Preliminary estimates by the IMF, the Central Bank and the SBIF indicate that the banking sector is well positioned to comply with these indicators at the system level, although there are differences among individual institutions (IMF, 2013b; Central Bank of Chile, 2010).

The LCR proposed in the draft regulations put to public consultation is a strict version of Basel III, adjusted to the realities of the local market, which ensures its credibility and comparability at the international level. During the observation period, an assessment will be made of existing gaps between the supply and demand of HQLA, which could translate into difficulties in achieving 100% compliance. Based on this assessment, the Bank will revise the proposed criteria, evaluate the necessity and advisability of establishing alternative liquidity mechanisms and define an appropriate period for the progressive introduction of the requirement, with levels and schedules that might be different from those established by the BCBS. This fine-tuning process will maintain the general framework defined by the international standards and aim to produce the least possible impact on the stability of the financial system.

[3]/ For more details, see http://www.federalreserve.gov/newsevents/press/bcreg/20131024a.htm.

[4]/ The local liquidity risk indicator is defined as liquid assets adjusted for market and currency risk over net liquidity requirements. See chapter VI of the *Circular Básica Contable y Financiera* issued by the Financial Superintendence of Colombia.

[5]/ LCR= [HQLA + min {income, 75% disbursements}]/disbursements. It is measured independently in local and foreign currency. See Resolution S.B.S. 9075 – 2012.

[6]/ That is, banks with an asset share of over 1% of total financial system assets.

[7]/ Resolution 4090 of 24 May 2012, Central Bank of Brazil.

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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.

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.

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.

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.

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 transferred 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.

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. Like equivalent measures in other markets (such as the LIBOR-OIS spread), it is used as a benchmark for analyzing funding liquidity conditions in the banking sector.

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

Repricing: 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.

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: 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: 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).

ECB: European Central Bank.

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

BCU: Central Bank bonds denominated in UFs.

BIS: Bank for International Settlements.

CSD: Central Securities Depository.

FTD: Fixed-term deposit.

RSTED: Residual short-term external debt.

BLS: Bank Lending Survey.

EMBI: Emerging Market Bond Index.

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

FSI: Financial soundness indicators.

PF: Pension funds.

PRF: Pension Reserve Fund. GDN: Global Depositary Notes.

FDI: Foreign direct investment.

FSR: Financial Stability Report.

IPoM: Monetary Policy Report.

GBL: General Banking Law.

MSCI: Morgan Stanley Capital International.

NIIP: Net international investment position.

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: an inflation-indexed unit of account.

VIX: Volatility Index.

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