FINANCIAL STABILITY REPORT

First half 2016

FINANCIAL STABILITY REPORT

First half 2016

CONTENTS*/

*/ The cutoff date for this *Financial Stability Report* was 18 May 2016.

PREFACE

As established in its Basic Constitutional Act, the Central Bank of Chile must "to look after the stability of the currency and the normal functioning 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 foreign exchange operations.

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

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

The Board

SUMMARY

The main external risks identified in the previous *Financial Stability Report* (FSR) are still present. In December 2015, the U.S. initiated its monetary policy normalization process raising the fed funds rate (FFR) by 25 bp. Although no immediate turbulence episodes followed, volatility events observed early in the year drove the Federal Reserve Board (Fed) to slow down the pace of this process, signaling that it would postpone further hikes if the U.S. domestic conditions support such decision. Nonetheless, the discrepancy between the Fed's communications and the market's expectations regarding the speed of the FFR adjustment in the medium term remains. This entails a risk for financial markets where, as in previous events, unanticipated increases in the FFR could trigger changes in investors' risk appetite, rising volatility and affecting asset prices.

Since the last *Report*, the growth outlook for emerging market economies continue to be revised downwards. In the region, some countries—most notably Brazil—continue to show substantial macroeconomic imbalances that reduce their space for policy making to face more adverse scenarios. In parallel, China´s activity has weaken and certain indicators suggest that financial risks are still significant. New information on the emerging market economies' financial soundness and performance could be followed by volatility events similar to those observed in the first months of the year, or even more severe if combined with a reduced risk appetite due to the aforementioned interest rate normalization.

The above is compounded by new risks that might involve other volatility events. On one hand, there is a possibility that the UK leaves the European Union. On the other hand, European banks have encountered difficulties to resolve their non-performing portfolio problems—legacy of the global financial crisis—in a scenario of weaker world economic outlook and the global banking industry adjusting to new regulatory standards. Recently, such scenario has become more complex due to the challenges that the low interest rates have posed to banks' profitability.

Domestic interest rates are low by historic standards, coherent with monetary policy and the external financial environment. The downward trend of long-term interest rates continues to encourage investment in medium- and long-term mutual funds, which have reached high stock volumes. A significant increase in long-term interest rates poses the risk of these agents becoming an amplifying channel when they suddenly decide to sell off the assets in their portfolios.

Various indicators confirm the conditions described in previous FSR regarding firms losing strength. At the first quarter of 2016, the debt-to-GDP ratio remained around 120%, which is relatively high compared to other emerging economies. Meanwhile, the financial indicators of companies that report to the Superintendence of Securities and Insurance showed no relevant changes since the end of 2015. Thus, from a historical perspective, indebtedness is relatively high while profits are at low levels. However, currency mismatch indicators show that the exchange rate risk remains bounded, although some firms that are highly exposed to international markets—via earnings or assets—have seen currency-related effects in both results and equity.

The real estate sector is going through an adjustment process after being very dynamic. New house sales in Santiago showed a significant reduction in the first quarter of 2016, largely due to the advanced purchase phenomenon observed last year. A substantial part of the 2015 sales were accounted for by promised purchases on unfinished homes scheduled for delivery during the current and coming years. One risk for real estate companies stems from an increase in promises not being honored if the economic outlook worsens. Finally, the vacancy rate in the office-space sector remains at 10%, while rental prices have dropped slightly at the end of 2015.

Aggregate household indebtedness (DTI) continues to rise, in a context of weaker output and employment. The DTI reached 63% at the end of 2015, largely explained by the increase in mortgage debt, which continues to grow around 10% in real annual terms. At the same time, the aggregate financial burden remains at 15% of the sector's disposable income. Although banks' non-performing indicators remain low, recently there has been a slight increase among consumer loans of small amounts. Further deterioration of the labor market may hinder the households' repayment capacity. Any developments on this front will call for close monitoring over the coming quarters.

Bank lending is evolving in line with the business cycle. Commercial loans continue to grow in line with the reduced demand for credit from firms, reflecting lower investment and coherent with the Bank Lending Survey´s results. Consumer credit growth recovered somewhat and mortgage credit growth stabilized. Non-performing loans remain stable, although with a mild deterioration in the commercial loans portfolio.

As the previous *Report* pointed out, capitalization levels of domestic banks have fallen in recent years. As of the end of 2015, the capital adequacy ratio (CAR) was 12.6%. Although the announced capitalizations and accounting changes would drive this indicator slightly above 13%, its evolution has shown a decline during the past five years. This contrasts with the international trend, where banks at various jurisdictions have seen their capitalization levels increased. Thus, compared to OECD countries, Chile stands at the lower part of this indicator's distribution.

Although the current levels of capitalization are sufficient to absorb a severe stress scenario, financial buffers have tightened. While all banks have CAR above the 8% regulatory minimum in the stress scenario, the fraction of banks showing a CAR above 10% has declined in the past few years, representing in the current exercise less than half of the system's assets.

I. EXTERNAL ENVIRONMENT AND FINANCIAL RISKS

The main risks deriving from the external scenario described in the last Financial Stability Report (FSR) are still present. In particular, the normalization of U.S. monetary policy could trigger spread decompression, with an impact on the cost of external financing, and the growth outlook for emerging economies continues to be revised downward. New risks are also surfacing, including a more complex scenario for the profitability of the European banking system.

EVOLUTION OF THE INTERNATIONAL FINANCIAL SITUATION

The developed economies maintain their expansionary monetary policies, in the context of a declining world growth outlook.

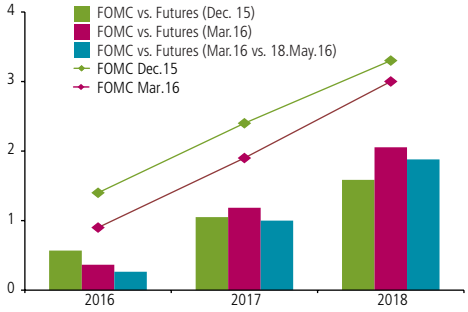
Last December, the U.S. Federal Reserve (Fed) launched its monetary policy normalization process, with an increase in the target range for the federal funds rate (FFR). Although the FFR hike did not cause any immediate market turbulence, the volatility early this year led the Fed to slow down the normalization process. Thus, the Fed decided not to adjust the target range at its meetings in January, March and April of this year. On the cutoff date for this FSR, the Fed published the minutes from the April meeting, which point to a possible hike in the coming months. However, there is still a wide gap between FOMC communications regarding the FFR and market expectations inferred from financial prices for the end of this year and the next two years (figure I.1).

Other developed economies have adopted increasingly expansionary monetary policies—with a notable intensification of accommodative policies in Japan and Europe—in a context of a shrinking outlook for world growth. This coincides with a steady reduction in long-term sovereign bonds rates in advanced economies in the most recent period, in some cases dipping into negative territory (figure I.2).

For emerging economies, the growth outlook continues to be revised downward.

Market forecasts on growth in the emerging economies continue to be revised downward (figure I.3). In particular, projections for China both this year and in the medium term are below 7%. At the same time, the Chinese Central

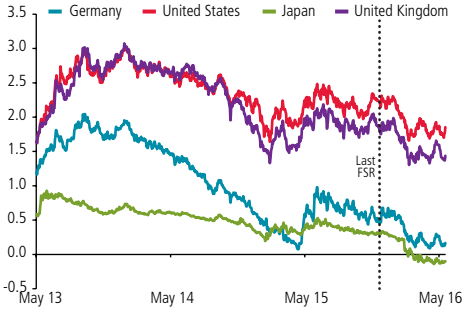
FIGURE I.1
Expectations for the U.S. reference rate at year-end (*)
(percent)



(*) FOMC Dec.15 and Mar.16 series are the median vote by FOMC members on the expected level of the FFR at the meetings. Bars graph the difference between the Fed's communications and expectations implicit in FFR futures contracts.

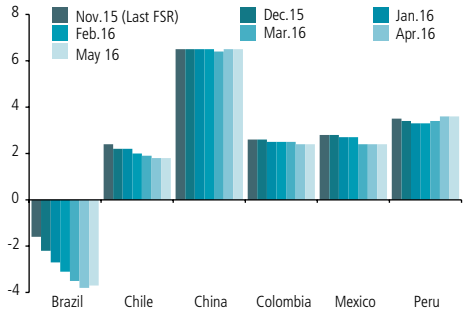
Source: Central Bank of Chile, based on data from Bloomberg and the Fed.

FIGURE I.2
Interest rates on ten-year sovereign bonds
(percent)



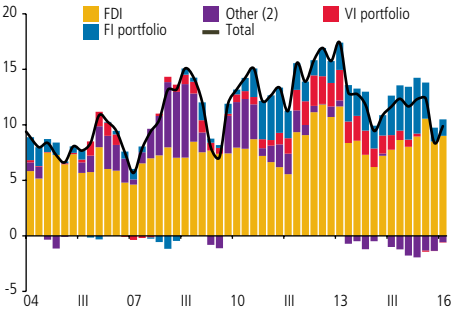
Source: Bloomberg.

FIGURE I.3
Growth expectations for 2016
(percent)



Source: Consensus Forecasts.

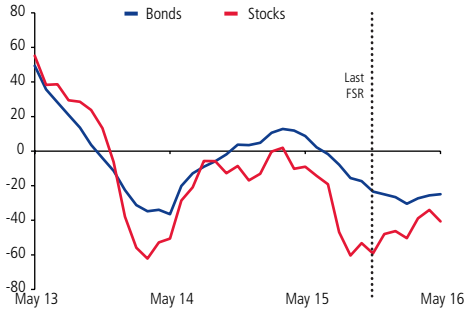
FIGURE I.4
Gross capital inflows to Chile (1)
(percent of GDP)



(1) Accumulated annual flow, excluding derivatives.
(2) Includes trade credits, loans, currency and deposits, and other liabilities.

Source: Central Bank of Chile.

FIGURE I.5
Portfolio flows to emerging economies (*)
(US$ billion, 12-month moving sum)



(*) Investment fund flows to emerging Europe, emerging Asia and Latin America. Latest data include flows through 18 May.

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

Bank continues to move forward with policies to open up the country's capital markets. Carrying out a financial liberalization process while maintaining a floating exchange rate within a currency band and strong capital controls raises important challenges, as shown by the recent capital outflows (BIS *Quarterly Review*, March 2016). Finally, some indicators of vulnerability of the Chinese financial system have worsened. In particular, the banking sector has recorded a deterioration in the loan portfolio, which has resulted in a doubling of the system's delinquency rates.

With regard to other emerging economies, Brazil continues to display a vulnerable macro-financial situation, in the midst of ongoing political turmoil. Other countries in the region continue to face low growth prospects, with macroeconomic imbalances that reduce the policy space for addressing the external financial conditions. Thus, the risk described in the last FSR remains—namely, that Chilean firms with investments in Brazil and other economies in the region could see a contraction in their assets and income.

CHILE'S EXTERNAL SITUATION

Capital inflows have increased slightly since year-end 2015, but they have not yet returned to the levels of the last FSR.

In Chile, gross capital inflows grew from 8.4% to 9.9% of GDP between the fourth quarter of 2015 and the first quarter of 2016 (figure I.4). The last two quarters have been characterized by substantially lower portfolio flows than recorded in the 2014–2015 period, a trend shared with other emerging economies (figure I.5).

While external debt is increasing, the net international investment position (NIIP) in Chile has diminished slightly in recent quarters.

In the first quarter 2016, total external debt expanded to 68% of GDP, where the residual short-term component remained around 18% of GDP (figure I.6). This figure is relatively high compared with the last five years, and it is mainly due to a larger share of the foreign direct investment (FDI) component. The FDI increase, in turn, is mostly explained by a specific operation that was matched by a foreign loan with a related entity. Consequently, external liquidity—approximated by the ratio of international reserves to residual short-term external debt—is slightly lower than in the last FSR. In addition to international reserves, the economy holds sovereign funds, which have been relatively stable. Finally, the NIIP recorded a slight decrease. This was primarily due to FDI and portfolio liabilities, which increased in value as a result of the appreciation of the Chilean peso against the dollar and the positive performance of the local stock market (figure I.7).

MAIN EXTERNAL THREATS TO FINANCIAL STABILITY

The biggest source of uncertainty continues to be the speed with which the Fed will proceed with normalizing monetary policy.

The discrepancy between the Fed's communications and market expectations for the medium-term path of the FFR reflects the degree of uncertainty surrounding the rate of monetary policy normalization in the United States. As with past events, an unexpected hike in the reference rate could trigger sudden changes in U.S. volatility indices and, at the global level, sharp increases in international long-term interest rates and investment portfolio adjustments.

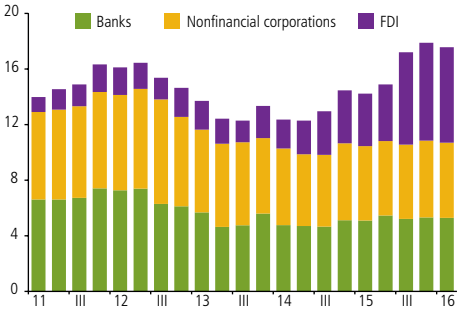
There could also be a return of the financial stress exhibited in early 2016, which generated changes in the different global volatility indicators (figure I.8). While these events are usually short-lived—to the extent that the market assimilates new information—the lower risk appetite of investors could result in an abrupt portfolio reallocation away from emerging economies.

The low interest rates in developed economies raise risks for investors and the international banking system.

Low interest rates heighten the demand for high-risk assets, given the search for returns, putting upward pressure on financial assets. A price correction could cause losses on assets held by investors. At the same time, with both short and long rates down, banks could feel an impact on their income (Borio et al., 2015). Combined with the low growth outlook for the Eurozone and a low-quality loan portfolio—inherited from the last financial crisis—these trends will put pressure on profitability in the European banking system.

Some new geopolitical risks have also arisen, most notably the referendum scheduled for late June in the United Kingdom, on a possible exit from the European Union. If Britons vote to leave, it is expected to trigger a depreciation of the pound sterling as well as other economic implications that could bring the monetary authority to reevaluate its course of action (BoE, 2016). Moreover, some market agents have noted that an exit would have an impact on other economies in the Eurozone with close commercial and financial ties to the United Kingdom.

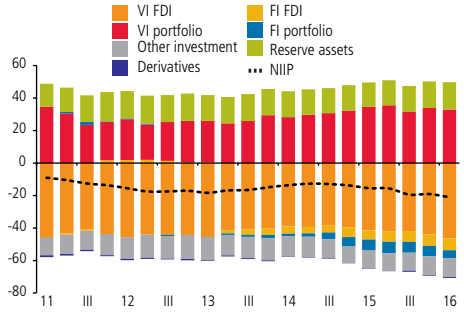
FIGURE I.6
Residual short-term external debt (*)
(percent of GDP)



(*) Excluding the Central Bank, the Central Government and nonbank financial corporations, since their debt is less than 1%.

Source: Central Bank of Chile.

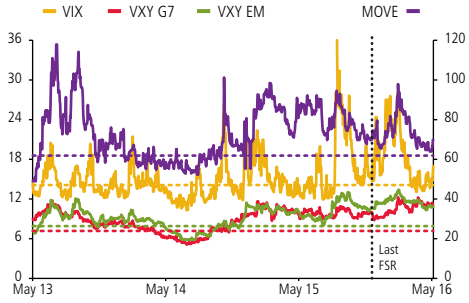
FIGURE I.7
Net international investment position (NIIP)
(percent of GDP) (*)



(*) GDP at constant real exchange rate (fixed-base index: Mar.16=100).

Source: Central Bank of Chile.

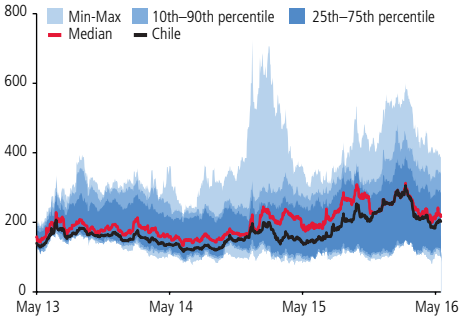
FIGURE I.8
Financial market volatility (*)
(percent; index)



(*) The slashed horizontal lines mark the average of the respective series in 2014.

Source: Bloomberg.

FIGURE I.9
EMBI, selected economies (*)
(basis points)



(*) Includes Brazil, Chile, China, Colombia, India, Indonesia, Lithuania, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa and Turkey.

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

Negative surprises in emerging market growth could set off a new round of capital outflows and increase the cost of external financing.

Capital flows returned to emerging economies in February and April of this year, but they remain highly sensitive to any news on the financial health and economic performance of these countries. Changes in risk perceptions could thus trigger an across-the-board increase in sovereign spreads (EMBI) for this group of economies. While the EMBI for Chile has generally stayed below the median of a sample of emerging countries, it tends to approach that value during times of financial stress, showing that this risk indicator becomes more synchronized in these episodes (figure I.9).

Another risk to watch over the coming months is the evolution of commodity prices and the possible impact on commodity-exporting countries. Although prices have tended to stabilize in recent months, they remain relatively low, which could compromise fiscal income in some countries. Consequently, the different credit rating agencies have revised their sovereign ratings downward for oil-exporting countries. The same could occur for other commodity producers, including Chile.

II. LOCAL FINANCIAL MARKETS

Since the last FSR, the cost of short- and long-term financing has remained low in the capital markets, while the slowdown in the primary corporate bond market has deepened.

ASSET PRICES

Financing conditions in the money market in pesos remain loose.

Money market interest rates decreased considerably since the last FSR, following the end of the seasonal period of greater liquidity needs of the banking system. This has been reflected in lower prime-swap spreads, which are below historical levels (figure II.1). Market expectations suggest that the MPR will increase more slowly than projected at the start of this year.

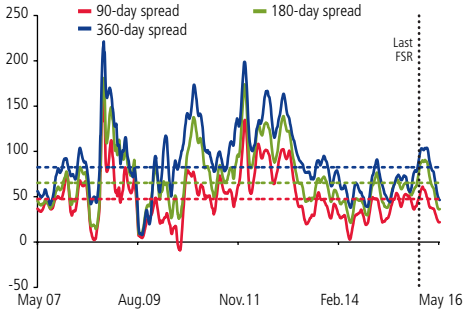
Long-term interest rates remain low, in line with the international context.

Interest rates on sovereign bonds remain low, falling at the margin relative to the last FSR (figure II.2). This has occurred in a context in which external benchmarks have followed a similar trend, and there is still some uncertainty about the speed with which the U.S. Federal Reserve will proceed with normalizing the monetary policy rate (chapter I). There is a risk that adjustments in external factors could generate a sudden hike in local long-term interest rates.

Corporate bond issuance continue to slow in both local and foreign primary markets, while financing costs remain relatively stable.

Corporate bond issuance continue to slow, as described in the last FSR. Total issues in the last 12 months came to US$7 billion, which represents a decrease of 63% relative to the cutoff date of the last FSR (figure II.3). This is consistent with a scenario characterized by lower investment financing needs and the end of the debt restructuring cycle. The risks associated with bond rollovers, following strong issuance in 2012 and 2015, are limited for the next two years (box II.1).

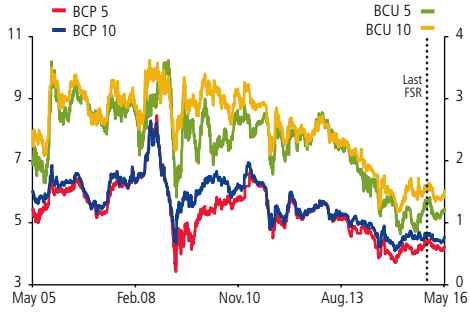
FIGURE II.1
Money market in pesos (1) (2)
(monthly moving average, basis points)



(1) Measured by the average interbank prime-swap spread.
(2) The slashed horizontal lines mark the average of each series for the period 2005–2016.

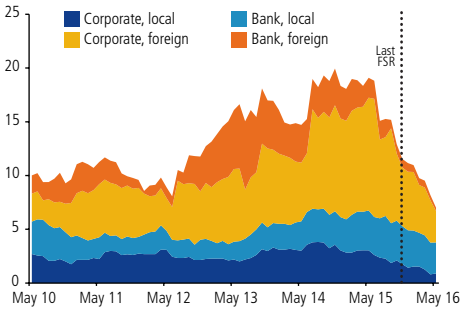
Source: Central Bank of Chile.

FIGURE II.2
Interest rates on long-term sovereign bonds
(percent)



Source: Central Bank of Chile.

FIGURE II.3
Bank and corporate issuance
(US$ billion, 12-month moving sum)



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

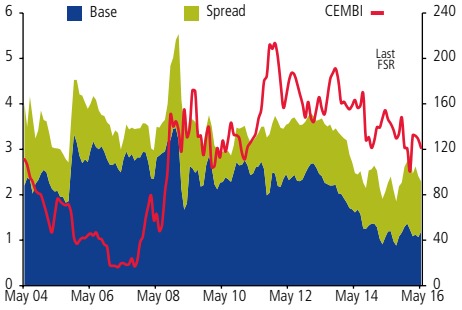
Local funding costs for AA private issuers were fairly constant since the last FSR, due to the stability of spreads required. The only spread that rose markedly (180 bp between October 2015 and January 2016) was that required for BBB issuers, primarily in response to the events surrounding the financial restructuring of *La Araucana* (a family compensation fund). In external markets, financial costs measured by the CEMBI decreased in the period (figure II.4).

The local stock exchange and the peso both followed similar trends to external benchmarks, and volatility indicators remain stable.

The IPSA index in local currency increased 8% since the start of the year, in line with other emerging economies (figure II.5). The volatility of the index has tended to subside since the last FSR, closing the period at around 10% on the cutoff date for this FSR. This is in the lower part of the risk distribution for a broad sample of emerging economies (statistical appendix).

The peso appreciated 3% thus far in the year. This coincides with the trend in other comparable economies, which is mainly due to the global depreciation of the dollar (table II.1). The volatility of the peso rose slightly relative to 2015, to nearly 11% in annual terms and just over the median of a broad sample of currencies (statistical appendix).

FIGURE II.4
Local and external financing costs (*)
(percent; basis points)



(*) Considers UF bonds with a duration of around 5 years, issued by AA-rated private firms.

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

TABLE II.1
Comparison of exchange rates
(percent, local currency against the dollar)

Period	Chile	Commodity exporters (2)	Countries in the region (3)	Dollar index
2012	-7.6	-4.3	-3.0	-0.6
2013	9.8	8.4	8.8	0.3
2014	15.4	11.5	13.8	12.7
2015	16.8	16.1	28.5	9.3
I	3.1	7.4	9.3	9.0
II	3.5	1.4	1.4	-2.7
III	9.0	6.8	12.8	0.0
IV	1.7	-0.1	2.4	2.5
2016 (1)	-2.6	-2.4	-2.6	-3.7
I	-5.8	-4.6	-4.4	-4.2
II	3.2	2.2	1.5	0.5

(1) Data through 18 May 2016.
(2) Australia, Canada, New Zealand and Norway.
(3) Brazil, Colombia, Mexico and Peru.

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

INSTITUTIONAL INVESTORS[1]/

Mutual and pension funds have undergone substantial movements in their portfolios since the last FSR, albeit with no major impact on prices. Life insurance companies (LICs), in turn, have increased their investments abroad and in the real estate sector.

In the latter part of 2015, the fixed-income mutual funds (MF3) suffered significant fund withdrawals, equivalent to over 25% of its total shares between September and December. This had to do with portfolio exposure to a specific issuer and to the negative returns on the funds stemming from reversals in local long-term interest rates. In the most recent period, the equity managed by the MF3 funds has begun to recover, while the money market mutual funds have been relatively stable (figure II.6).

Although the withdrawals from the MF3 funds did not trigger any serious disruptions in the different financial markets, the possibility remains that future episodes of financial stress and the withdrawal of a significant share of equity could generate a real impact on asset prices. This is particularly important given the change in portfolio allocation following the October 2015 episode: fund withdrawals are generally executed via the sale of the most liquid assets, which saw a share reduction of 7 pp (statistical appendix).

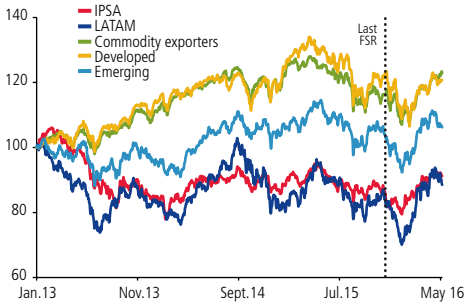
Pension funds, in turn, took their investments abroad in late 2015, after the foreign stock exchanges posted negative returns in the second half of 2015. This flight to foreign markets was essentially executed by substituting local for foreign fixed-income sovereign securities and reducing investments in domestic fixed-term deposits (figure II.7). Notably, the investment dynamics of the last few quarters continues to be influenced by the transfer of accounts between funds (statistical appendix), although this has taken place without a major impact on prices.

With regard to the LICs, investment flows continue to be oriented toward high-risk, high-return securities, as mentioned in past FSRs (figure II.8). In particular, investments abroad, in real estate and, to a lesser extent, in syndicated loans[2]/. This greater risk taking has allowed the LICs to maintain a spread between the portfolio return and the annuity commitment rate of around 100 bp (statistical appendix). The risk exposure of the investment portfolio includes potential credit rating downgrades that could affect international bonds in the short term, in particular those with lower credit quality.

[1]/ In this section, institutional investors are defined as including pension funds, mutual funds and life insurance companies, due to the size of the assets under their management. A broader definition, based on Securities Market Law 18,045, would include other entities that are not analyzed in this chapter.

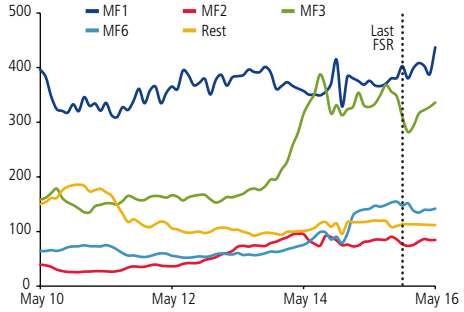
[2]/ General Regulation (NCG) 400 was recently issued, which facilitates life insurance companies' investment in syndicated loans by loosening the requirements for their participation.

FIGURE II.5
Stock market indices (*)
(fixed-base index: 100 = Jan.13, local currency)



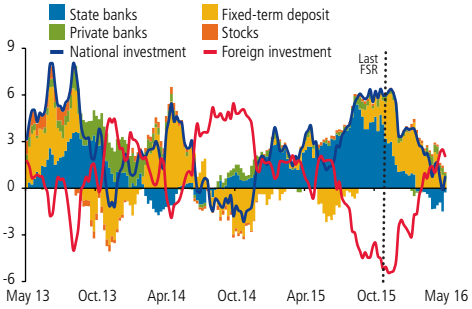
(*) For more details on the series, see set of figures.
Source: Bloomberg.

FIGURE II.6
Mutual fund equity (*)
(UF million)



(*) For more details on the series, see set of figures.
Source: SVS.

FIGURE II.7
Pension fund investment portfolio
(US$ billion, six-month moving sum)

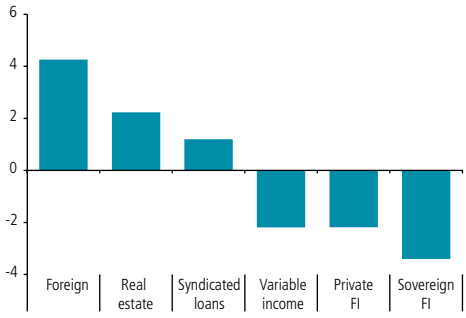


Source: Central Bank of Chile, based on data from SVS.

FIGURE II.8

Change in LIC investments, 2012–2015 (*)

(percent of portfolio)



(*) Updated through December 2015. Includes changes of over 1 pp in investment portfolio assets, except for those that back products with savings.

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

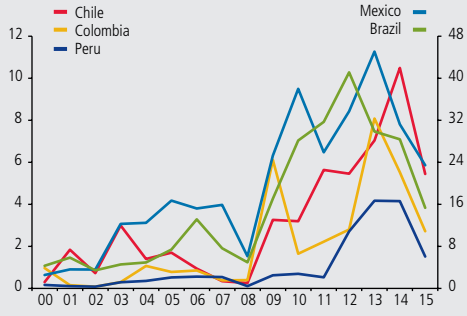
A bill was recently sent to Congress that aims to establish a set of measures to stimulate productivity. Among the measures affecting institutional investors is the incorporation of assets representing private capital, private debt, real estate and infrastructure assets, and investment fund bonds, as new pension fund investment alternatives. In the case of the LICs, the bill would modify the international investment regime, with a possible expansion of the current 20% limit.

BOX II.1
CORPORATE BONDS: MATURITY AND USE OF RESOURCES

Over the last four years, the amount of corporate bonds issued by Chilean firms has reached historical levels. Specifically, in the period 2012–2015, a total of US$37 billion was issued, which is close to the amount issued in the previous eight years. This trend is also found in other emerging countries[1]/. In the region, bond issuance approached US$310 billion in the same period, displaying similar dynamics to Chile (figure II.9).

This box analyzes the recent corporate bond issuance in Chile, in order to identify the risks associated with the maturity profile that firms will face in the coming years, together with the use that it has been given to these resources.

FIGURE II.9
Corporate bond issuance
(US$ billion)

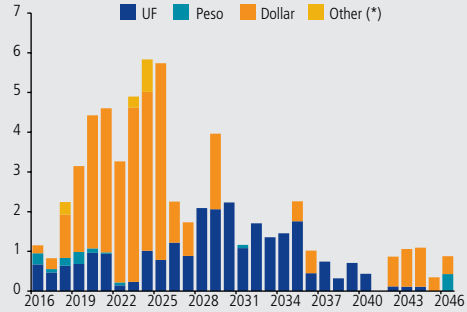


Source: Bloomberg.

Maturity and rollover

As of March 2016, the maturity profile of the stock of outstanding bonds indicates that there will be a significant increase in bonds coming due starting in 2019, which will peak in 2024 (figure II.10). The majority are bonds issued abroad in dollars and, to a lesser extent, bonds issued in the local market in UFs. It is worth noting that the firms that have recently issued bonds abroad generally have a low currency mismatch (chapter III).

FIGURE II.10
Corporate bond maturity
(US$ billion)



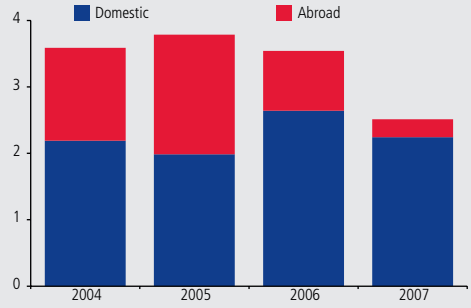
(*) Other: Euros, Swiss francs and Mexican pesos.

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

Internal estimates indicate that in the short term, the issuing firms have sufficient working capital or operating flows to meet these maturities. Alternatively, they should decide to maintain their debt levels, in which case they should roll over the total amount of the bonds coming due. Under this scenario, there currently is room in the primary markets to accommodate the use of this strategy. Taking the level of bond issuance in the pre-crisis period and assuming relatively normal spreads, it should be possible to issue US$3 billion a year without putting great pressure on corporate spreads, assuming that both markets (domestic and international) have the availability, which would allow firms to meet their maturities in the next two years (figure II.11).

[1]/ Tendulkar (2015).

FIGURE II.11
Historical corporate bond issuance
(US$ billion)



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

Finally, this group of firms also has the option of refinancing debt through commercial loans from local banks. The bonds coming due in 2017, 2018 and 2019 represent, respectively, 1.0%, 2.5% and 3.5% of current commercial loans to firms by the banking system.

Based on the maturity profile described above, the bond maturities should not have a significant impact on residual short-term external debt (chapter I).

Use of resources from issuance in foreign markets

Bonds issued abroad can have a strong impact on the debt level and financial structure of the issuing firms. Consolidated financial data from cash flows is used to characterize the use of the resources obtained from issuing abroad for a large group of firms between 2012 and 2014[2]/. In that period, the main use of the resources was to refinance liabilities, which accounts for 71% of the total amount issued (table II.2), followed by the purchase of fixed assets (9%) and the purchase of corporate shares (6%)[3]/.

TABLE II.2
Main uses of resources (*)
(percent of total issuance)

Use	Total
Liability refinancing	70.9
Purchase of fixed assets	9.5
Purchase of corporate shares	5.7
Other	13.9
Total	**100.0**

(*) Excluding state-owned, mining and financial firms. Classification of issues based on consolidated flows of firms.

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

Final remarks

Internal estimates show that in the short term, the issuing firms have the flexibility in working capital or operating flows to meet maturities coming due before 2018. At the same time, there is room in the local market for rolling over medium-term debt without triggering an increase in corporate spreads.

Finally, the resources obtained from issuance in foreign markets were primarily used for refinancing liabilities and for investment. This occurred in a context of relatively low financing costs and the maintenance of a limited exposure to currency risk.

[2]/ The data account for US$10.047 billion issued by 13 firms, excluding mining, state-owned and financial companies (for more details on the sample, see Espinosa et al., 2015).

[3]/ Liability refinancing refers to firms that did not increase their debt level, while the purchase of fixed assets applies to issues that were mainly offset by expenditures on assets.

III. CREDIT USERS

FIRMS

Corporate debt over GDP has been stable at around 120% since the third quarter of 2015 (figure III.1)[1]/

Total debt continued to be driven mainly by FDI loans and foreign bonds (table III.1). While the valuation effect of changes in the exchange rate continues to explain a large share of the growth of external debt, its contribution decreased in the most recent period. In fact, the quarterly contribution of this factor was negative in the first quarter of 2016.

TABLE III.1
Sources of financing (1)
(real annual change, percent)

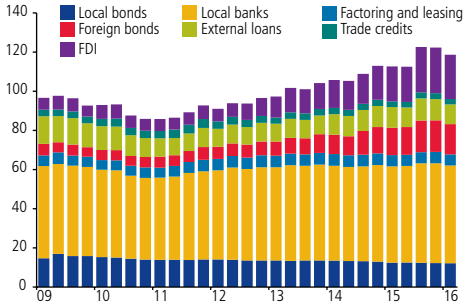
	2010	2011	2012	2013	2014	2015				2016	Share	Contribution to growth
	IV	IV	IV	IV	IV	I	II	III	IV	I		
Local debt	3.4	12.0	7.1	6.5	1.3	2.4	3.6	4.4	3.4	1.7	57.1	1.0
Bank and other loans	4.5	13.8	9.3	6.8	2.4	4.2	5.1	6.4	5.0	2.3	46.9	1.1
Commercial loans (2)	3.3	13.4	9.5	7.4	2.4	4.6	5.9	7.4	5.8	2.8	42.1	1.2
Factoring and leasing	15.3	16.6	7.5	2.7	1.9	1.1	-1.5	-1.7	-1.0	-1.5	4.8	-0.1
Locally listed securities	-0.2	6.0	-0.6	5.1	-3.1	-4.9	-2.6	-3.7	-3.6	-1.2	10.2	-0.1
External debt	6.9	17.7	9.2	27.5	27.2	23.3	22.2	33.3	22.0	13.8	42.9	5.5
Loans	-10.7	6.4	0.4	5.2	14.1	3.9	-0.4	7.6	3.3	-3.5	8.5	-0.3
Trade credits	20.3	28.3	-19.1	-0.7	-3.6	-4.7	-6.2	2.4	-1.2	-7.2	2.3	-0.2
Bonds	24.0	27.8	12.2	42.1	43.3	45.0	49.5	36.9	22.5	12.2	13.0	1.5
FDI loans	22.5	20.3	37.1	50.0	33.0	28.8	26.1	54.6	37.7	28.7	19.1	4.5
Exchange rate	-5.3	8.9	-7.7	11.0	15.8	11.5	13.9	16.6	14.9	8.5		
Total	**4.4**	**13.6**	**7.7**	**12.8**	**10.2**	**9.9**	**10.3**	**15.4**	**10.8**	**6.5**	**100**	**6.5**

(1) For more details on the series and methodology, see the set of figures. Shaded cells are preliminary data.
(2) Includes commercial loans to firms and individuals, foreign trade loans and contingent loans; excludes university loans to individuals.

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

[1]/ According to the last FSR, the total debt of nonbank firms was 121% of GDP in the third quarter of 2015. However, the data on external debt were revised and updated after the publication of that *Report*. Additionally, university debt accounted as commercial debt was removed from commercial loans and included in household debt.

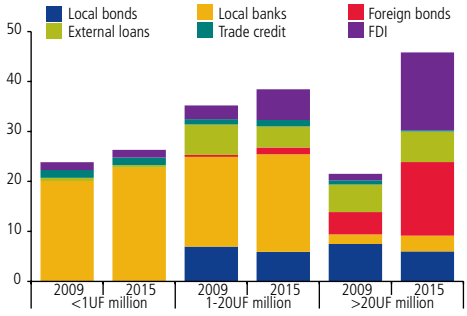
FIGURE III.1
Total debt of nonbank firms (*)
(percent of GDP)



(*) Based on firm-level data, except for factoring and leasing, securitized bonds and commercial papers. Excludes commercial university debt. Preliminary data for 2016. For more details on the series and methodology, see the set of figures.

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

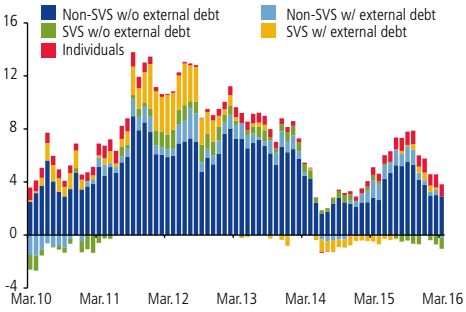
FIGURE III.2
Composition of total corporate debt by debt segment (*)
(percent of GDP)



(*) For more details on the series and methodology, see the set of figures.

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

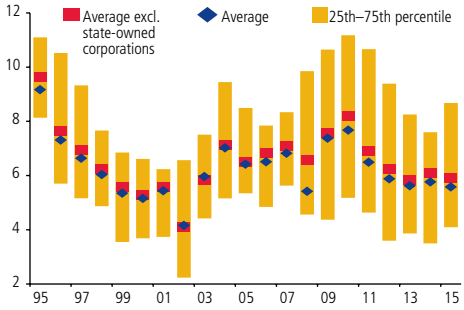
FIGURE III.3
Growth of local bank debt (*)
(percent)



(*) For more details on the series and methodology, see the set of figures.

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

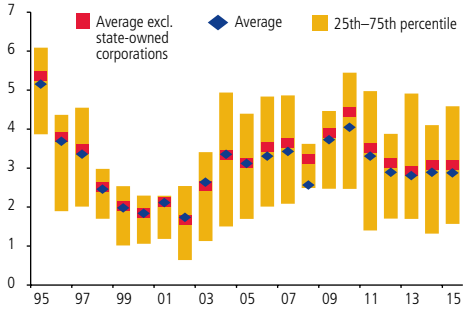
FIGURE III.4
Profitability of the corporate sector (*)
(percent)



(*) Accumulated earnings in 12 months before financial expense plus taxes over total assets.

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

FIGURE III.5
Interest coverage of the corporate sector (*)
(times)



(*) Earnings before taxes and financial expense over annual financial expense.

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

As mentioned in past FSRs, FDI loans originate in a parent-subsidiary relationship. This sets them apart from other sources of financing, given the lower rollover risk on this debt. Moreover, the increase observed in the third quarter is largely explained by a specific operation that was matched by an foreign loan with another related entity.

Foreign currency debt accounted for 56% of total debt. The share of local debt denominated in foreign currency was stable, holding at around 10% of the total since mid-2014 (statistical appendix).

A comparison between 2009 and 2015 reveals that the growth of total debt has concentrated on firms in the highest debt segments. These groups tend to rely less on local sources for financing, which contributed to the strong growth of external debt in the period (figure III.2). The dynamics of debtors in the highest segment explain 81% of the growth of total corporate debt[2]/. Local bank debt, in turn, is concentrated among firms within lower debt segments, for which the local financial market is a critical funding source.

In line with the trend of the past few years, the growth of local bank debt continues to be led by firms that do not report their financial statements to the SVS and do not have external debt (figure III.3). However, SVS-reporting firms with external debt—which contributed strongly to the growth of local bank debt between 2011 and 2012—increased their share of local bank debt in the most recent period, something that had not occurred since mid-2013.

At year-end 2015, the financial indicators of firms in the corporate sector were in line with the levels at year-end 2014, but still tight relative to previous years (figures III.4 and III.5).

Relative to the average of 2004–2013, profitability and interest coverage have declined in the last two years, while indebtedness has increased (table III.2). As mentioned in past FSRs, the firms' financial expense has not increased despite the increase in debt, such that the lower interest coverage mainly reflects the evolution of operating profitability.

Relative to 2014, financial indicators are stable for the sector as a whole. By sector, the poorest performance is found in Foods and in Transport and telecommunications, which contrasts with the improvement in Construction and the consumer sector. In the same period, the indebtedness of a sample of firms that issued bonds abroad between 2012 and 2015 was relatively stable (statistical appendix)[3]/.

[2]/ This growth considers the fact that firms could change debt segments over time. If the debt segment is fixed at the 2015 level, the figure falls to 80%.
[3]/ The sample includes firms that report to the SVS, excluding mining, financial and state-owned companies.

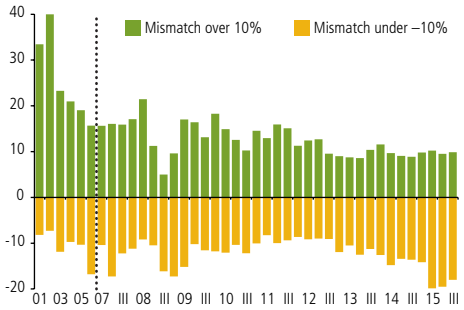
TABLE III.2
Corporate sector indicators (*)
(percent; times)

	Profitability			Coverage			Indebtedness		
	Average 2004-2013	2014	2015	Average 2004-2013	2014	2015	Average 2004-2013	2014	2015
Construction	5.52	3.62	4.65	3.11	2.18	3.66	0.62	0.70	0.69
Consumer	5.66	3.89	4.71	3.07	1.88	2.36	0.74	0.77	0.77
Transport and telecommunications	5.63	5.35	3.08	3.09	2.86	1.55	0.89	1.08	1.27
Food	7.80	7.07	5.86	5.59	4.59	4.12	0.48	0.58	0.57
Services and other	6.92	7.15	7.75	3.04	2.41	2.61	0.96	1.10	1.13
Electricity and energy	8.33	7.97	8.64	3.38	3.67	4.62	0.59	0.58	0.50
Forestry	5.59	5.32	4.68	4.34	3.73	3.06	0.40	0.57	0.54
Total	**6.82**	**6.11**	**5.92**	**3.44**	**3.07**	**3.09**	**0.65**	**0.73**	**0.72**

(*) Consolidated data at year-end. For more details on the series and methodology, see the set of figures.

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

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



(*) To the left of the dotted line, annual data through 2006. To the right, quarterly data. For more details on the series and methodology, see the set of figures.

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

The currency mismatch was low and stable for the sample of SVS-reporting firms who keep their books in pesos, both on average and at the extremes of the distribution (statistical appendix and figure III.6).

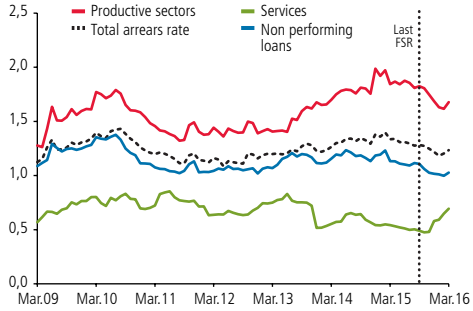
In addition, for the sample of firms that issued bonds abroad between 2012 and 2015, around 10% of total asset and liability items denominated in dollars are at less than one year. Thus, for this duration, the average mismatch is also low, at less than 2% of total assets.

While the impact of the increase in the exchange rate in the last two years has been limited for much of the corporate sector, some firms with high international exposure—through income or assets—report both income and equity effects.

Since March 2015, the arrears ratio (AR) has fallen, mainly due to a reduction in the productive sectors (figure III.7).

Within the productive sectors, the AR continued to decline in Fishing and Construction, as reported in past FSRs, although it remains high. The AR increased in Trade, Transport and Agriculture toward the end of 2015 (statistical appendix). These last three sectors account for a quarter of commercial loans. Services recorded an increase at the margin, due to the default of one specific firm that began a corporate restructuring process.

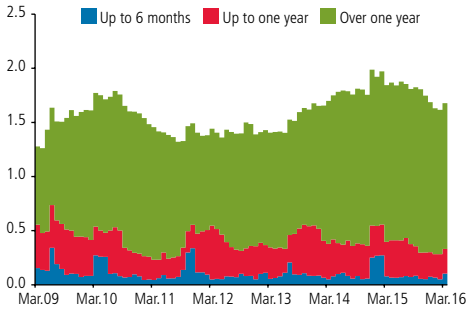
FIGURE III.7
Commercial arrears rate (*)
(percent)



(*) For more details on the series and methodology, see the set of figures.

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

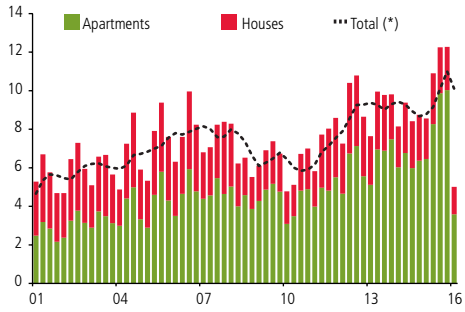
FIGURE III.8
Arrears ratio by firm's maximum delinquency (*)
(percent)



(*) For more details on the series and methodology, see the set of figures.

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

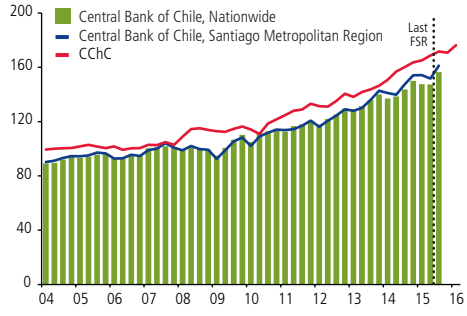
FIGURE III.9
New home sales in Santiago
(thousands of units)



(*) 12-month moving average.

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

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



Sources: Central Bank of Chile and CChC.

A breakdown of the AR in productive sectors, looking at the most delinquent payment, reveals that this indicator is largely explained by firms with delinquent payments that are past due by more than a year, which generally have a lower probability of settling their debt (figure III.8). The dynamics of the past few years show that the probability of settling delinquent debt for firms that are past due by over a year is just a tenth of the probability for firms that have recently become delinquent[4]/. The latter group has been stable over the last few quarters[5]/. Finally, the reduction in this indicator in the past year is mainly due to the write-off of payments that are more than three years past due.

In sum, corporate debt over GDP remains around 120%. Corporate sector financial indicators at year-end 2015 were stable relative to the previous year, but tight respect to historical patterns. The currency mismatch is low, although the exchange rate trend continues to affect firms with investments in the region. Finally, the arrears ratio on the commercial portfolio has fallen on aggregate, which is largely explained by the write-off of payments that are more than three years past due.

REAL ESTATE SECTOR

New home sales in Santiago contracted significantly in the first quarter of 2016. House prices continued to grow at a similar rate to previous quarters.

New home sales in Santiago reached 44,000 units in 2015, whereas only 5,000 units were sold in the first quarter of 2016, which represents a decrease of 41% relative to the same quarter on the previous year (figure III.9). This trend is largely explained by the increase in advance purchases (or off-plan sales) over the course of last year, due to the entry into force of the application of VAT on real estate, as described in past FSRs. Thus, the new house price index for Santiago (CChC) recorded a real annual growth rate of 6.8% in the first quarter of this year, slightly lower than the 7.2% of the third quarter of 2015. The house price index for new and used properties calculated by the Central Bank of Chile posted real annual growth rates of 9.4% at the national level and 9.7% in the Santiago Metropolitan Region in the third quarter of 2015 (figure III.10).

[4]/ See the *Financial Stability Report*, second half of 2015, Box III.1, "Arrears Rate for Commercial Loans."

[5]/ See Fernández (2016) for more details on the transition analysis of nonpayment of commercial loans.

In addition to the application of VAT on real estate mentioned above, the new SBIF regulations on mortgage provisions entered into force in January 2016, after being announced in late 2014.

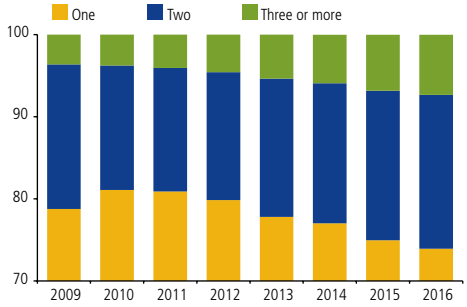
The objective of the new regulation is to ensure that bank provisions adequately reflect the portfolio risk of a given loan, based on the loan-to-value (LTV) ratio and payment status (i.e., whether the loan is up-to-date or delinquent). This will limit the potential impact of real estate market shocks on the banking system. Despite statements to the contrary issued by some industry participants, the new regulation does not prohibit the provision of mortgages with LTV ratios over 80%.

The real estate industry is facing higher-than-usual withdrawal rates on purchase commitments.

The high volume of sales in 2015 could have led to more relaxed standards for signing real estate contracts, stemming from an overly optimistic outlook for the economy and lending conditions. Consequently, a substantial deterioration in the labor market could imply that some buyers will not have access to financing to follow through on their home purchase. Similarly, a low growth scenario could lead banks to tighten mortgage lending standards, which in some cases could mean that the planned down payment is not enough to qualify for the mortgage. Buyers affected by this type of scenario may not be able to meet their commitments.

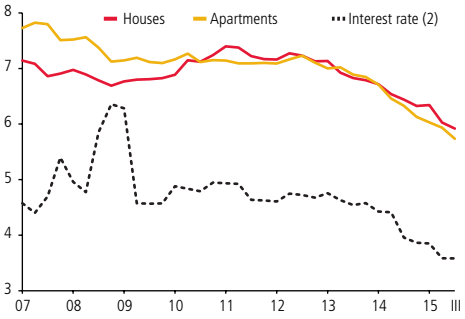
Whereas an increase in the unemployment rate has a direct effect on the withdrawal rate, there are a number of factors mitigating the impact of tighter lending standards. First, real estate agencies would have taken measures against this risk, by conditioning the real estate contract on savings programs for the down payment and undertaking a close review of buyers' credit quality. Second, the contract conditions could be adapted to facilitate closing, for example, by providing flexibility in the delivery date to give buyers more time to gather the down payment. Finally, in the case of withdrawal due to force majeure, the contract could be transferred to another buyer, which would mitigate the impact on sales. In the event that this risk materializes, it could have a significant effect on real estate companies that have not taken adequate safeguard measures and that are not in a financial position to absorb the impact.

FIGURE III.11
Number of loans per debtor
(percent of total)



Source: SBIF.

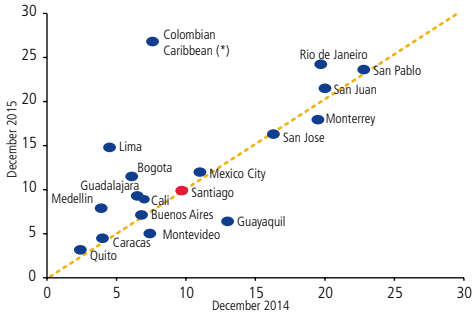
FIGURE III.12
Gross profitability of rentals in Santiago (1)
(percent)



(1) Calculated as the annual rental price divided by the sale price.
(2) Average endorsable mortgage loan rate.

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

FIGURE III.13
Vacancy rate of class A and B offices in Latin America
(percent)



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

Source: JLL (2015).

The number of debtors with more than one mortgage is still on the rise.

The LTV remained around 80%, on average, in the third quarter of 2015, but the increase in the number of mortgage loans per debtor points to a larger share of small investors in the retail market (figure III.11). As mentioned in the last FSR, the gross profitability of the "buy to rent" investment strategy has fallen in the recent period, albeit in line with the lower interest rates on mortgage loans (figure III.12). A scenario featuring a less dynamic economy could reduce that profitability further if there is an increase in the residential vacancy rate, which would put pressure on the payment capacity of highly leveraged debtors.

In the commercial sector, the vacancy rate of A/A+ offices decreased to 8.7% in the first quarter of 2016, which is in line with the rate at year-end 2014. Other Latin American cities recorded a similar trend (figure III.13).

In sum, recent data show that new home sales fell strongly in the first quarter of 2016, which is largely explained by the trend toward off-plan sales in 2015. The house price index continues to grow at similar rates of previous quarters. Because the strong sales volume in 2015 corresponds to homes that are in the construction phase, with delivery expected over the course of this year and next, one of the risks for the real estate industry is withdrawal from purchase agreements. A substantial deterioration of the labor market could exacerbate this risk, whereas a tightening of lending standards should have a smaller impact on the industry.

HOUSEHOLDS

The household debt-to-income ratio (DTI) continues to rise, driven by the mortgage component, while the financial burden-to-income ratio (FIR) has been stable (figure III.14).

In the fourth quarter of 2015, the DTI increased to 62.6%, 1.6 pp over the level reported in the last FSR (second quarter of 2015); this trend is mainly explained by an increase in bank mortgage debt. In the same period, the FIR was stable around 15%[6/]. The latter is an aggregate figure that includes all households, even those who do not have any outstanding debt. A complementary indicator was recently presented in a study by the SBIF, which proposes an estimate of the financial burden associated with bank debt. The results for a sample of

[6/] This FSR presents updated figures for the DTI and FIR, due to an adjustment in disposable income.

bank debtors in 2015 indicate that, on average, they allocate 30% of their income to pay bank debt. This rate is similar across all income segments (SBIF, 2015).

According to the 2014 Household Financial Survey (HFS), 13.4% of families allocate over 50% of the household's monthly income to debt payments, including both bank and nonbank loans. The survey also indicates that 9% of households consider their debt level to be too high.

In 2015, total household debt expanded to 8%, with an increase in the share of consumer debt. Mortgage debt continued to grow at a real annual rate of nearly 10%.

Consumer debt recovered in the fourth quarter of 2015. At the margin, the share of debt with the banking sector increased (table III.3)[7]/. With regard to nonbank lenders, debt held with the family compensation funds (CCAF) decreased in the fourth quarter of 2015, mainly due to the loan contraction of one entity.

The growth rate of both the average bank mortgage debt and the number

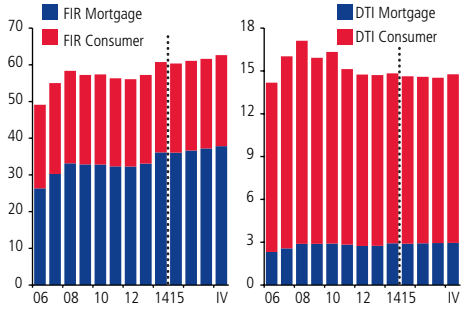
TABLE III.3
Household debt (*)
(real annual change, percent)

	2010	2011	2012	2013	2014	2015				Contri-bution to growth	Share
	IV	IV	IV	IV	IV	I	II	III	IV		
Mortgage	**6.8**	**7.3**	**7.6**	**8.9**	**9.9**	**9.5**	**9.9**	**9.6**	**9.6**	**5.7**	**60.1**
Bank	9.1	8.2	8.3	9.1	10.5	10.3	10.8	10.5	10.6	5.6	54.6
Nonbank	-7.2	0.9	2.5	6.9	4.7	2.6	2.5	1.1	1.1	0.1	5.5
Consumer	**7.4**	**9.3**	**4.4**	**7.4**	**2.3**	**3.0**	**3.3**	**3.2**	**5.2**	**2.1**	**39.9**
Bank	9.4	14.2	9.7	9.1	3.2	3.5	2.4	1.8	3.3	0.8	23.1
Nonbank	4.9	-0.2	-9.8	2.4	0.7	2.6	3.9	2.4	3.1	0.3	9.7
Retailers	6.1	-1.3	-19.3	4.1	1.0	2.9	4.7	3.7	6.2	0.3	5.1
CCAF	3.8	5.2	3.5	4.1	2.5	3.9	4.5	1.9	-0.6	0.0	3.2
Cooperatives	3.2	-5.3	-3.3	-5.6	-4.3	-1.1	0.3	-0.6	1.1	0.0	1.5
Other	6.3	12.7	13.4	9.5	1.5	1.5	5.4	9.3	15.2	1.0	7.1
Total	**7.1**	**8.2**	**6.3**	**8.2**	**6.7**	**6.8**	**7.1**	**6.9**	**7.8**	**7.8**	**100**

(*) For more details on the series and methodology, see the set of figures.

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

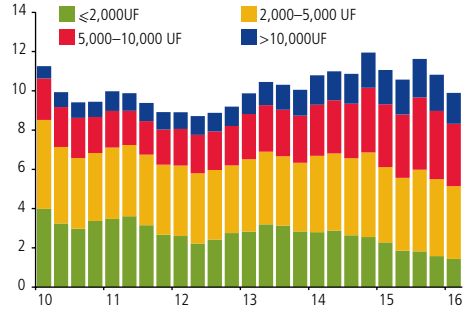
FIGURE III.14
Household indebtedness (*)
(percent of disposable income)



(*) Dotted lines separate annual and quarterly data.

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

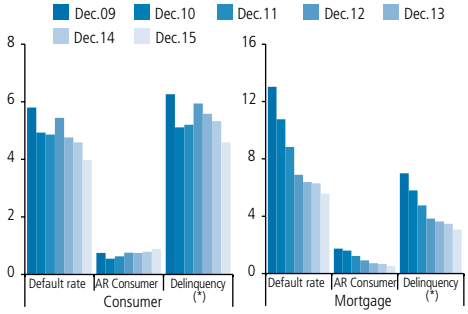
FIGURE III.15
Growth of mortgage loans
(real annual change, percent)



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

[7]/ In the second quarter of 2015, bank loans were affected by the sale of the *Banco Paris* consumer portfolio to an affiliate of Scotiabank.

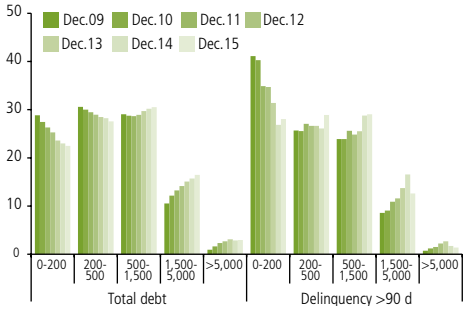
FIGURE III.16
Bank delinquency rates—consumer and mortgage
(percent)



(*) The delinquency rate is the default rate weighted by the debtor's total debt.

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

FIGURE III.17
Distribution of debt and default portfolio by consumer debt segment
(percent of respective total, UF)



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

of debtors was stable. This trend was underpinned by growth of the higher debt segments, consistent with the evolution of house prices (figure III.15 and statistical appendix).

Nonpayment of mortgage and consumer loans has not changed significantly (figure III.16).

Loan delinquency measures for the mortgage portfolio have declined slightly since year-end 2015. The cohort of new mortgage debtors in 2015 exhibits credit characteristics that are associated with a low nonpayment rate (Alegría and Bravo, 2015).

In the bank consumer portfolio, the share of people in default situation decreased in 2015, while the AR deteriorated slightly. This derives from debtors in debt segments under 500 UFs, to which the banking system is reducing its exposure (figure III.17). Loan delinquency ratios for the CCAFs have continued to deteriorate since the last FSR, reaching 9% in December 2015; in the case of retailers, delinquency rates have been relatively stable (statistical appendix).

In sum, household indebtedness continues to follow an upward trend, mainly due to the dynamics of the mortgage portfolio and a recovery of the bank consumer portfolio at the margin. Loan delinquency rates for bank debtors remain stable at low levels. However, there was a slight deterioration in the nonpayment behavior of debtors with consumer loans of less than 500 UF. Given the state of the business cycle and recent data on the labor market, there could be an increase in the probability of some households facing difficulties meeting their financial obligations.

IV. BANKING SYSTEM

Lending activity is growing in line with the economic cycle. Aggregate credit risk indicators are stable, albeit with a marginal deterioration in the commercial loan portfolio. While current capital levels are adequate to absorb the materialization of a severe stress scenario, the buffer has shrunk relative to the past several years.

RECENT EVOLUTION

Lending continues to grow in line with the economic cycle, and the dynamics of mortgage lending have stabilized in the last few months.

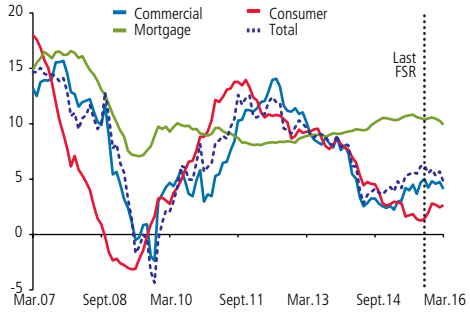
Commercial loans have recorded a stable real annual growth rate since the last FSR, of around 4.5% (figure IV.1). However, the contribution of the exchange rate depreciation declined (figure IV.2). As reported in the *Monetary Policy Report* in March 2016, investment has decreased steadily, in line with the economic cycle. This is reflected in a lower demand for credit by firms, despite low interest rates according to historical standards. This trend is corroborated by the Bank Lending Survey (BLS) for the first quarter of this year, where the main argument for the less dynamic demand from firms is lower investment.

With regard to the real estate sector, the BLS reveals a tightening of supply and weaker demand for residential property, consistent with the reduction in new home sales in the first quarter of 2016 (chapter III).

The cyclical component of the ratio of loans to GDP is within historical ranges, in contrast with crisis episodes (figure IV.3).

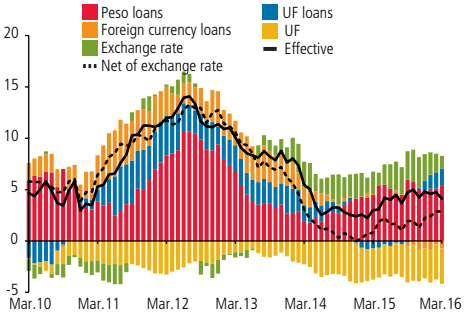
Consumer lending recovered slightly, posting an annual growth rate of 2.7% in March, which was mainly driven by the large banks (4.7% in the same period)[1]/. For medium-sized banks, both installment loans and credit lines recovered, after falling in annual terms throughout most of 2016.

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



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

FIGURE IV.2
Growth of commercial loans (*)
(real annual change, percent)

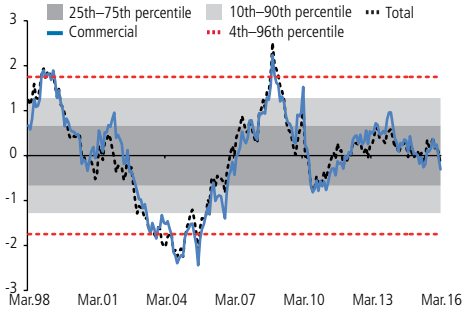


(*) Disaggregated by valuation effects and volume; includes contingent loans.

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

[1]/ To some extent, the system's lower growth could be reflecting portfolio transfers in the last year. This portfolio also includes university loans, which were reclassified in the commercial segment starting in January 2016. If not for these factors, the system's consumer portfolio would have grown 0.5% in annual terms in March.

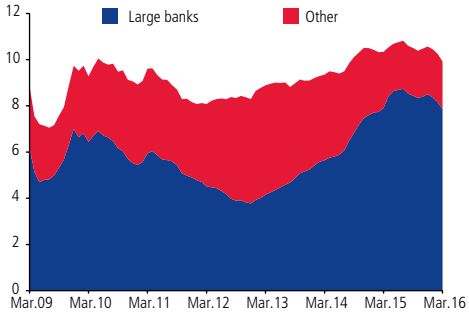
FIGURE IV.3
Cyclical component of the loans-to-Imacec ratio (*)
(number of standard deviations)



(*) Using Hodrick-Prescott filter with a lambda equal to 33 million for the whole period (see Drehmann et al., 2011).

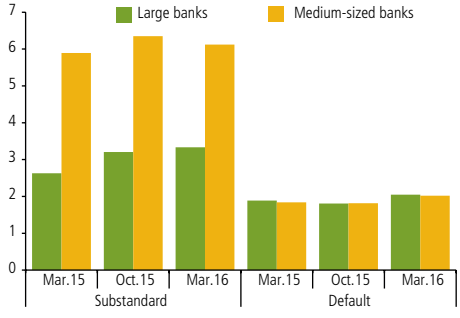
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.4
Growth of mortgage loans
(real annual change, percent)



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

FIGURE IV.5
Composition of the commercial portfolio by risk rating
(percent)



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

The mortgage lending of the system has stabilized in the first quarter of this year. In March, the annual growth rate was 9.9%, falling to 9.3% in April. Once again, this trend is largely explained by the large banks. While this group of lenders spurred the high growth of the mortgage portfolio through mid-2015, the trend has reversed since the start of the first quarter of 2016 (figure IV.4).

The results of the BLS for the first quarter point to a weakening in the demand for mortgage loans, which is mainly attributed to the worsening of clients' employment and income. This has occurred despite the fact that interest rates remain low and stable (3.8% real annual).

Credit risk indicators are stable, although the commercial segment showed some signs of deterioration.

The traditional credit risk indicators, such as nonperforming loans, have been relatively stable for both mortgage and consumer bank debt.

However, there was a marginal deterioration of the portfolio of commercial loans that are individually evaluated for impairment. For large banks, exposure to the substandard and default portfolios increased since the last FSR; for medium-sized banks, the exposure was stable (figure IV.5)[2]/. Another relevant factor is the concentration of delinquency in the commercial portfolio (figure IV.6).

Within the commercial portfolio, some banks have high exposure to nonbank lenders (NBL) in the financial sector.

The financial restructuring of *La Araucana* CCAF highlighted the importance of subjecting nonbank lenders to a regulatory framework that strengthens their corporate governance and credit risk management, so as to reduce the possibility of this type of event (box V.1, FSR, second half of 2015). A sample of the largest commercial debtors and delinquents in the system highlights the exposure of some banks to nonbank lenders (figure IV.7)[3]/. In March 2016, this type of debtor accounted for 41% of total loans in the financial services sector.

Finally, the exposure of the Chilean banking system to Brazil has declined slightly. Thus, with regard to the system's regulatory capital, the portfolio that includes both cross-border loans and loans to local firms with investments in Brazil was 7.2% in March 2016.

[2]/ Substandard includes debtors with loans that are past due by over 30 days and debtors with financial difficulties or a significant impairment of their payment capacity, where there are reasonable doubts about repayment. Default includes debtors with loans that are past due by over 90 days and debtors for which full repayment is unlikely, since they display an impaired or null payment capacity.
[3]/ Here, NBLs include the CCAFs, retailers, car dealers and factoring and leasing companies.

Specific provisions for the mortgage portfolio increased, which contributed to strengthening the coverage of total provisions, but contrasts with the recent reduction of the commercial portfolio.

Specific provisions coverage for total system loans, measured in relation to non-performing loans, increased since the last FSR. This higher coverage is mainly explained by the entry into effect of a standardized methodology for calculating mortgage provisions. Prior to the application of this change, some banks constituted additional mortgage provisions, which were reallocated to specific reserves in January of this year.

The share of personal deposits and pension funds in bank liabilities increased since the last FSR…

At the system level, retail financing through personal deposits increased since the last FSR, especially for large banks. The share of pension funds also increased at a similar magnitude, for both large and medium-sized banks. At the same time, the share of mutual funds decreased sharply, especially for medium-sized banks, as did the share of bonds issued abroad, particularly for large banks (figure IV.8).

….but funding risk was stable for medium-sized banks.

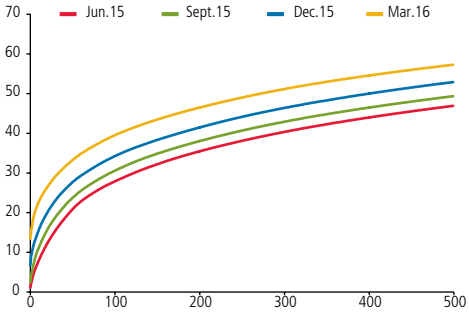
Although medium-sized banks reduced their exposure to mutual funds, this was offset by a larger share of pension fund deposits and external loans. Given that both types of liabilities have been quite volatile in the past, the funding risk for this group of banks was stable (box IV.1, FSR, first half of 2015).

In this context, bank profitability and capitalization are at similar levels compared to the last FSR.

In March 2016, the system's annualized earnings declined marginally relative to the last FSR (October 2015). This time, the interest margin—the main component of operating income—stabilized in the first months of the year, after falling almost 0.3% of assets since mid-2014 (figure IV.9).

The system's capital adequacy ratio (CAR) has remained under 13% since the middle of last year. Considering the capitalizations in the first half of 2016, the system's CAR should have risen above 13% in February 2016. This is still below the 25th percentile of OECD countries and the region, both of which are around 14% (box IV.1).

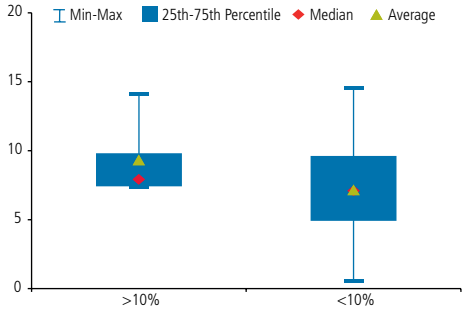
FIGURE IV.6
Distribution of the commercial delinquency in the system (*)
(percent of commercial non-performing loans)



(*) Sample of the most delinquent commercial loans in the system, considering loans past due by 90 days to 3 years.

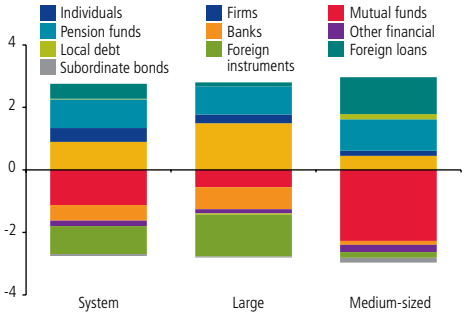
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.7
Banking system exposure to NBLs, March 2016
(percent of regulatory capital)



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

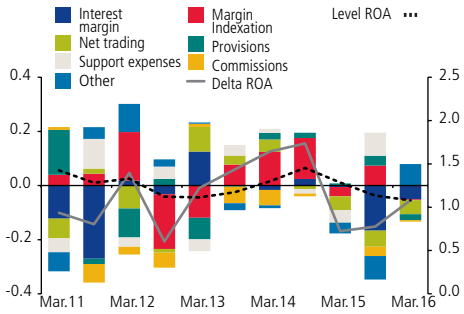
FIGURE IV.8
Change in the composition of bank liabilities (*)
(percentage points)



(*) Difference between September 2015 and February 2016. Excludes other deposits, other financial liabilities, derivatives, taxes, provisions, and other liabilities.

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

FIGURE IV.9
Changes in the main components of system ROA (*)
(12-month moving sum; semi-annual change)



(*) Based on consolidated financial data.

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

RISK FACTORS

A deterioration of labor market conditions can generate greater risk in the household loan portfolio, which thus far has been limited.

Job conditions have worsened recently. In the January–March moving quarter, the national unemployment rate published by the INE increased from 5.9 to 6.3% relative to the immediately prior quarter. This increase was mainly concentrated in the mining and manufacturing sectors.

The delinquency rate on household loans has been stable, but it could increase if the labor market deteriorates further. In this scenario, it is important to consider that the delinquency rate reacts with a lag to job conditions. This is because there is a number of stages that normally precede default, such as the increased use of credit lines and credit cards.

In the commercial portfolio, the risks have thus far been limited, but they could intensify more than in the most recent period, especially if the economic slowdown deepens.

A sharper slowdown of the economy could reduce firms' payment capacity due to lower income generation. This could accentuate the slight drop in the quality of the commercial loan portfolio recorded recently.

Exposure to the Brazilian banking system decreased at the margin. There is still some vulnerability, however, which could be amplified if the country's economic situation worsens.

As mentioned in the last FSR, the banking sector has substantial exposure to nonbank lenders. A sharp downturn in output could undermine the payment capacity of debtors that use these firms, which would in turn make it difficult for the NBLs to meet their financial obligations with the banking system.

In the event of a sharp increase in interest rates, repricing risk could be exacerbated if banks cannot pass through the higher costs.

Stress tests show that the impact of repricing risk is relatively small[4]/. However, this assumes that the banks can pass through funding rate shocks to their assets. Internal estimates suggest that with a 90% pass-through of funding costs, this risk could double for the system as a whole.

[4]/ Repricing risk considers the short-term impact on income generation from net interest and indexation sensitive to changes in interest rates (*Compendium of Financial Regulations* III.B.2.2).

ASSESSMENT OF THE STRESS SCENARIOS[5]/

Stress tests indicate that the banking system has an adequate financial position to face the materialization of a severe stress scenario.

The stress tests use macrofinancial and accounting information for the banking system as of December 2015. Credit risk is calculated by estimating a model that relates loan loss provisions—which reflect the credit risk of the banks' portfolios—primarily with economic activity. Market risk is calculated based on three types of exposure: currency, valuation and repricing. These risks are evaluated under a stress scenario.

The stress scenario considers a drop in GDP in the short term and low growth in the medium term. Specifically, output would reach –4.9% in annual terms in the most critical quarter and then converge in the medium term to growth of 1.3% in late 2017. This scenario aims to replicate past episodes of financial fragility (figure IV.10)[6]/.

Relative to the starting point in the last FSR, based on data for June 2015, the banking system exhibits lower profitability and capitalization levels. The system's return on equity (ROE) is 1.0 pp lower (14.5 versus 15.5%) and the CAR is 0.4 pp lower (12.6 versus 13.0%).

The tests show that under the stress scenario, the system's ROE becomes negative, at –4.6 pp of Tier 1 capital, which is similar to the –4.7% found in the stress tests in the last FSR (table IV.1). At the individual level, banks that together represent 60% of the system's Tier 1 capital (51% in the last FSR) would record negative earnings under the stress scenario (figure IV.11). Finally, banks with a CAR of over 11% represent 11% of the system's Tier 1 capital (43% in the last FSR) (figure IV.12)[7]/.

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.

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

	2015 Second half	2016 First half
Initial ROE	**15.5**	**14.5**
Market risk	**-1.8**	**-1.3**
Valuation	-1.0	-0.8
Repricing	-1.1	-0.8
Currency	0.3	0.3
Credit risk	**-22.0**	**-21.4**
Consumer	-9.6	-9.4
Commercial	-10.3	-9.7
Mortgage	-2.2	-2.4
Margin	**3.7**	**3.6**
Ending ROE	-4.7	-4.6

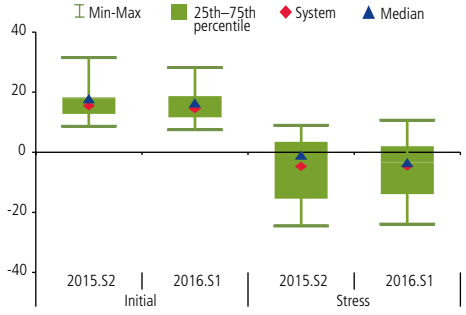
Source: Central Bank of Chile, based on data from SBIF.

FIGURE IV.10
Annual GDP growth rate (*)
(percent)

(*) The shaded area indicates the exercise window.

Source: Central Bank of Chile.

FIGURE IV.11
Impact of different scenarios on ROE (*)
(earnings over Tier 1 capital)



(*) Data are weighted by the Tier 1 capital of each institution. Calculations do not consider treasury, foreign trade and consumer banks that have left the system. Minimums correspond to the 1st percentile.

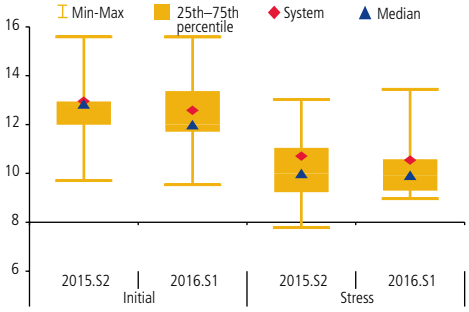
Source: Central Bank of Chile, based on data from SBIF.

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

[6]/ The UF interest rate forecast for December 2016 for one- to three-year loans and for mortgages of over 20 years are 5.6 and 6.2%, respectively.

[7]/ Includes reinvested earnings.

FIGURE IV.12
Impact of different scenarios on CAR (*)
(regulatory capital over risk-weighted assets)



(*) Data are weighted by the Tier 1 capital of each institution. Calculations do not consider treasury, foreign trade and consumer banks that have left the system.

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

Although current capital levels are adequate for absorbing the materialization of a severe stress scenario, the buffer is smaller than in recent years.

As mentioned above, the banking system's capital solvency is below that of similar countries in the region. The lower capital levels are reflected in the results of the stress tests. The share of banks with a CAR over 10% in the stress test has fallen over the last year or so, representing around 50% of the system's core capital in this test, versus over 80% in 2011–2014. A similar pattern is found when the banks are weighted by total assets (statistical appendix).

BOX IV.1
CAPITALIZATION OF THE BANKING SYSTEM AND INTERNATIONAL CONVERGENCE

The stress tests carried out for this FSR indicate that the capitalization of the Chilean banking system is adequate to absorb the losses deriving from a severe stress scenario. However, the buffer has shrunk over the past couple of years (chapter IV). At the same time, the system's capital solvency has tended to diverge from similar economies at the international level.

This box examines in more detail the recent dynamics in the local banking system's capitalization level, in comparison with international trends.

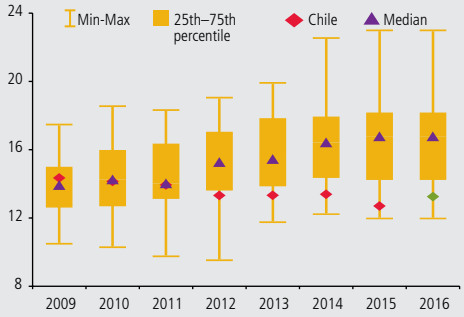
Capital adequacy ratio

The gap between the capital adequacy ratios (CAR) for Chile and for comparable countries, both in the region and in the OECD, has increased since 2012 (figure IV.13).

Chile's position for 2016 would improve if the recent capital increases—of nearly US$1.0 billion—and the regulatory change implemented by the SBIF were taken into account[1]/. Estimates indicate that the system's CAR would increase by 65 bp. Even so, the CAR would still be below the 25th percentile of the OECD countries. Relative to countries in the region (LAC)[2]/, Chile would move from the bottom of the sample to the 10th percentile of the sample.

However, there is some heterogeneity in the criteria for calculating the CAR in different countries. These differences range from the definition of regulatory capital to the factors and items considered in risk-weighted assets. One alternative for addresing this point is to look directly at leverage, measured as Tier 1 capital over total assets. Under this measure, Chile's position in 2015 is maintained relative to the LAC countries and is around the average of the OECD sample.

FIGURE IV.13
International comparison of the CAR (*)
(percent)



(*) Regulatory capital over risk-weighted assets of a sample of OECD countries. Considers actual capital increases in 2016 for Chile, plus the effect of the reduction in the conversion factor for contingent loans (20 bp). Maximum corresponds to the 90th percentile.

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

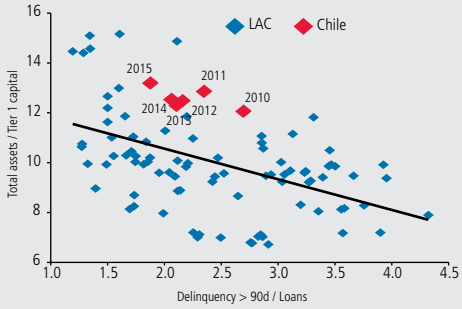
Portfolio quality

Another point to consider is that the portfolio quality of the local banking system is relatively high in relation to other countries. A lower level of credit risk is consistent with a tighter capital position. A comparison of jurisdictions with a similar portfolio quality to Chile shows that the majority of these countries have lower leverage ratios (figure IV.14). Over the last few years, Chile has moved in the direction of lower credit risk, accompanied by lower capital.

[1]/ On 29 March 2016, the SBIF announced a reduction in the conversion factor for contingent loans corresponding to revolving credit lines, from 50 to 35%. This change, which entered into effect in May, gives the banking system a buffer of approximately US$15 billion to increase the limit on this type of loan. If these contingent loans do not increase, the regulatory change would free up nearly US$47 million in provisions, increasing the system's return-on-equity by 22 bp and the CAR by 20 bp.

[2]/ The LAC countries included in the sample for FSIs are as follows: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru and Uruguay.

FIGURE IV.14
Comparison of Chile and LAC: delinquency and leverage
(percent; times)



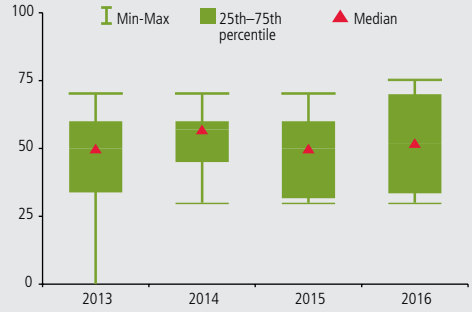
Source: Central Bank of Chile, based on data from IMF.

As mentioned in the last FSR, a natural source for strengthening the capital base is retained earnings. While the CAR has declined since 2011, there were no changes in dividend policies, which could have counteracted the trend (figure IV.15). If distributed dividends had been 30% of earnings over the last 5 years—instead of the 53% that was actually distributed, on average—the local banking system would currently have a CAR of over 15% (figure IV.16). This would put Chile in the median of the distribution of LAC countries.

Conclusions

As mentioned in the last FSR, the banking sector's capital solvency has diverged from comparable countries in the region and at the international level. This highlights the importance of the risk factors described in this FSR, especially given the less dynamic external and local macroeconomic scenario.

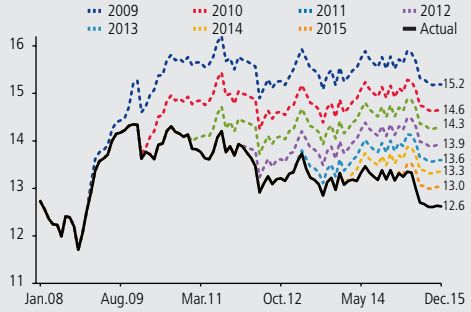
FIGURE IV.15
Distribution of earnings by the local banking system (*)
(percent)



(*) Based on a representative sample equivalent to 80% of system assets. Percentiles weighted by size of total assets.

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

FIGURE IV.16
Impact of minimum dividends on CAR (*)
(percent of risk-weighted assets)



(*) Distribution of dividends equivalent to 30% of earnings starting in the reference year. Approximate values.

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

V. FINANCIAL REGULATION

This chapter reviews the most important issues in the debate on financial regulation at the local and international levels in the first half of 2016[1]/.

NATIONAL REGULATION[2]/

SBIF modifies the percentage of the credit equivalent amount for revolving credit lines.

The SBIF has ruled that the credit equivalent amount for revolving credit lines, when the debtor does not have impaired loans, can be set at 35% of the unused amount[3]/. Previously, the requirement was set at 50%. This is one of 22 measures announced by the Executive Office in March to boost productivity and increase the economy's growth capacity. It was published in Bank Circular 3604, to modify the *Compendium of Accounting Regulations*, Chapter B-3.

This measure reduces risk-weighted assets, producing an accounting improvement in the capital adequacy ratio (CAR).

Regulation to verify the solvency of a bank's controlling shareholders.

Law 20,789 (FSB Law), passed in October 2014, establishes solvency requirements for a bank's controlling shareholders, which until then were only enforceable at the start-up or takeover of the respective entity[4]/.

Following a period of public consultation, in December 2015 the SBIF published the new Chapter 1-17 of its banking regulations (*Recopilación Actualizada de Normas, RAN*), which implements the aforementioned solvency requirements. Specifically, the new RAN chapter stipulates the financial information that a bank's controlling shareholders must report to the SBIF, for the purpose of verifying compliance with the new requirements.

[1]/ Information on the volume of transactions carried out by the payment systems is available in the statistical appendix.
[2]/ Tables V.1 and V.2 list the main measures passed and published for public consultation, respectively, in this half.
[3]/ The credit equivalent amount is an intermediate calculation to determine the risk weight of certain assets, mainly derivatives and contingent assets. These are transformed to their "credit equivalent amount," which is then multiplied by the respective risk weight.
[4]/ For more details on the FSB Law, see FSR, second half of 2014.

The law states that in the case of noncompliance with the new requirements and the failure to rectify this situation within the period established by the supervisor, it will be assumed that, for the purposes of Article 24 of the General Banking Law, the bank has undergone serious incidents that put into question its financial stability. In this scenario, the SBIF has the legal authority to appoint a delegate inspector or, subject to approval by the Central Bank of Chile Board, an interim director.

SVS issues regulations to strengthen risk management and internal control in insurance companies and released the fourth draft of the methodology for determining insurance companies' risk-based capital (RBC).

The SVS modified and complemented its regulations on corporate governance, risk management systems and internal control in insurance companies (NCG 408), incorporating stronger requirements for the company's directors. These include the introduction of a requirement to formalize the definition of the company's risk appetite, establishing a quantitative measure of the risk that the company is willing to assume in order to meet its strategic plan, taking into account the interests of its shareholders and clients, as well as the regulatory requirements. This measure must be linked to the company's strategic, financial and capital planning. The new regulations also introduce the concept of an own risk and solvency assessment (ORSA) to be incorporated in the company's risk management system. The ORSA, which is to be carried out at least once a year, must take into consideration current and future solvency and the risks to which the company is exposed, and it must serve as the basis for defining stress scenarios and evaluating the capital necessary for facing them. In addition, every two years the insurers must carry out an own assessment of the degree to which their corporate governance structures comply with the principles established in NCG 309 and define a plan of action, which must be approved by the company's board of directors and submitted to the SVS.

In May, the SVS published for public consultation the fourth version of the methodology for determining RBC in insurance companies, in the context of the new risk-based supervisory scheme. The insurers must carry out an exercise applying the methodology, whose results will allow a better calibration of the formula and the proposed factors[5]/. The new requirements will be incorporated into the insurance regulation on the approval of the bill on Risk-Based Supervision of the Insurance Industry, which is currently being discussed in Congress. The bill incorporates the recommendations of international agencies, such as the International Association of Insurance Supervisors (IAIS) and the Solvency II regime developed by the European Union, and also takes into account the specific characteristics of the Chilean insurance market.

[5]/ The risk-based supervisory approach establishes individual capital requirements as a function of the risks to which a company is exposed, taking into account aspects of corporate governance and management that help mitigate these risks.

INTERNATIONAL REGULATION[6]/

Basel III and risk-weighted assets

The Basel III standards aim to strengthen bank solvency, measured by the ratio of regulatory capital to risk-weighted assets (RWA), known as the capital adequacy ratio (CAR)[7]/. Specifically, Basel III focuses on the numerator of the CAR.

With Basel III, the BIS initially privileged strengthening the quality of instruments eligible to make up regulatory capital. Thus, the Tier 1 capital requirement was raised, some additional deductions were included, and the use of hybrid instruments was limited. Additionally, the amount of regulatory capital was increased to add a core capital buffer, to be used as the last barrier in the face of bank resolution procedures. RWAs, in turn, are obtained from the sum of credit, market and operational risk-weighted assets. These risks can be quantified using standardized methodologies (established by the Basel Committee on Banking Supervision, BCBS) or internal methodologies (that is, established by the bank itself and approved by the supervisor). The use of internal methodologies introduces variability in the calculation applied by banks in different jurisdictions, which hinders the comparability of solvency indicators and reduces the intended effects of Basel III.

While the measurement of RWAs was not initially subject to review, the Basel Committee has been working at least since 2013 on designing new standards for the calculation of RWAs in terms of both standardized and internal methodologies, in order to strengthen the calculation framework and reduce variability. The definition of the new standards is currently in the final phase. The final document on market risk was published in January of this year, and in March two consultative documents were published for public consultation, on operational and credit risk, respectively[8]/. The main elements of these documents are explained below.

Minimum Capital Requirements for Market Risk (BCBS, 2016a)

The review considers three areas: (i) the boundary between the banking book and the trading book, to reduce the incentives for regulatory arbitrage[9]/; (ii) review of internal models, to advance toward a calibration that better takes into account tail risks and market liquidity risks, imposing limits on the reduction in

[6]/ Table V.3 lists the main documents published on regulatory issues at the international level in this first half.
[7]/ Basel III also introduces a limit on the leverage ratio—namely, capital divided by total (unweighted) assets, including off-balance-sheet positions—which must be over 3%.
[8]/ The committee has committed to publishing all the final documents in 2016.
[9]/ Bank balance sheets are separated into the banking book and the trading book. According to Basel, the assets allocated to these books have different risks, which is reflected in a different effect on RWAs.

capital requirements for instruments used for hedging and diversification and allowing supervisors to approve or withdraw approval on models for individual trading desks; and (iii) standardized methodology[10]/.

Standardized Measurement Approach for Operational Risk (BCBS, 2016c)

The proposal mainly consists in eliminating the possibility of measuring operational risk using internal models. The document presents a new standardize model to replace the current one.

Reducing Variation in Credit Risk-Weighted Assets: Constraints on the Use of Internal Model Approaches (BCBS, 2016b)

The BCBS consultative document presents three key changes to credit risk: (i) the elimination of the option of measuring credit risk using internal models for certain types of exposure; (ii) the adoption of limits for certain parameters in internal models; and (iii) greater specification of parameter estimation for internal models. In addition to these measures, the Committee indicates that it is studying an RWA floor to replace the current requirement, which is tied to Basel I[11]/.

Agreement between U.S. and European regulators on the application of a common regulatory and supervisory approach for central counterparties.

In 2009, the G20 committed to making the use of central counterparties (CCP) mandatory for sufficiently standardized derivatives contracts. Given that a large share of derivatives transactions are cross-border in nature, the CCPs need to be able to operate in different jurisdictions, and the applicable regulations in these different jurisdictions need to be equivalent. Therefore, the authorities in the largest derivatives markets have created protocols for the recognition and authorization of foreign CCPs, so that they can be used by investors in those markets.

The United States and the European Union have the largest derivatives markets in the world. Whereas the United States has established a case-by-case CCP recognition program, the European Union uses a standardized procedure for verifying the regulatory equivalence by jurisdiction.

[10]/ The standardized model is a common calculation methodology used by different banks. In contrast, internal models are developed internally by a given bank; they grant more leeway in calculating risks.
[11]/ According to the current floor, established under Basel II, the RWAs used to calculate the CAR cannot be less than 80% of the RWAs deriving from a calculation based on the Basel I methodology of 1988.

In February of this year, the European Commission and the U.S. Commodity Futures Trading Commission (CFTC) announced an agreement for applying a common approach to the recognition of CCPs in the derivatives market. The objective of this agreement is to facilitate the operation of European CCPs in the United States and, in turn, to support the continued service delivery by U.S. CCPs to European companies. To implement this agreement, in March the European Commission adopted an equivalence decision on the CFTC regulatory requirements for CCPs, which will allow the European Securities and Markets Authority (ESMA) to recognize U.S. CCPs[12]/. At the same time, the CFTC approved a Substituted Compliance Framework with regard to the European Market Infrastructure Regulation (EMIR) requirements, which will allow European CCPs to provide services in the United States[13]/.

These regulatory convergence plans constitute an important step toward the harmonization of infrastructure standards at the global level, promoting financial stability and the mitigation of cross-border contagion risks.

In December, ComDer—the Chilean CCP for the OTC derivatives market—started the application process to be recognized by ESMA as a qualified central counterparty (QCCP), which would allow investors in the European market and their affiliates to process transactions through ComDer. In this process, ESMA will review the design, characteristics and safeguards of the CCP; verify that Chilean regulation and supervision are equivalent to EMIR; confirm that Chile has enacted rules against money laundering and terrorist financing, in accordance with the general guidelines applicable in the Eropean Union; and ensure that Memoranda of Understanding are established to formalize cooperation agreements between local and European authorities.

[12]/ http://europa.eu/rapid/press-release_IP-16-807_en.htm.
[13]/ http://www.cftc.gov/PressRoom/PressReleases/pr7342-16.

TABLE V.1
Main regulations issued in the first half of 2016

Date	Organization	Regulation	Material and objectives
18.Dec.15	SVS	NCG 400	Modifies the current requirements for insurance companies to invest in syndicated loans, strengthening this investment alternative for insurers.
22.Dec.15	SBIF	BANK CIRCULAR 3597 NEW RAN CHAPTER 1-17: FINANCIAL REPORTING. SOLVENCY OF CONTROLLING SHAREHOLDERS	Verifies compliance with solvency requirements on the part of the controlling shareholders of banks, namely, to always have consolidated net equity equal, in the corresponding proportion, to the bank's Tier 1 capital.
24.Dec.15	SBIF	APPENDICES TO CHAPTER B-1 OF THE COMPENDIUM OF ACCOUNTING NORMS FOR BANKS	Defines the mandatory requirements for entities that wish to use internal models, as well as the characteristics of the methodologies and how the SBIF will evaluate their definition and later use.
11.Mar.16	SP	CIRCULAR 1946	Publishes the list of national open corporation stocks that meet the requirements defined for the Pension Fund Investment Regime, to be considered in general investment categories.
01.Apr.16	SVS	NCG 408	Incorporates new concepts to the regulation issued in 2011, such as risk appetite, own risk and solvency assessment (ORSA) and a periodic own assessment of corporate governance best practices.
06.Apr.16	SBIF/SVS	NCG 409 BANK CIRCULAR 3605	Establishes requirements for the Mandate Management Special Registry.

TABLE V.2
Main regulations published for public consultation in the first half of 2016

Date	Organization	Regulation	Material and objectives
10.Dec.15	SP	FINALIZED PUBLIC CONSULTATION MODIFICATIONS TO THE PENSION FUND INVESTMENT REGIME	Defines methods for measuring derivatives exposure and operating exposure to clearing houses and central counterparties.
02.Feb.16	SVS	FINALIZED PUBLIC CONSULTATION COMPLEMENTARY REPORT ON THE REGULATORY BILL ON KNOWLEDGE ACCREDITATION	Communicates the various considerations that arose from the public consultation on this regulation and provides an opportunity for the public to formulate new observations and submit additional information to help perfect the regulation to be issued by SVS.
08.Feb.16	SVS	FINALIZED PUBLIC CONSULTATION REGULATIONS ON PEOPLE AND ENTITIES CONSIDERED TO BE INSTITUTIONAL INVESTORS	Determines which market operators (people and entities) will be considered institutional investors, in accordance with Law 18,045 on the Securities Market, and defines the scope of that definition. This version of the regulation in consultation also specifies that this classification will only be applied to agents with a significant market share.
31.Mar.16	SP	FINALIZED PUBLIC CONSULTATION MODIFICATIONS TO THE UNEMPLOYMENT FUND INVESTMENT REGIME	Modifies the investment regime for unemployment funds with regard to the significance criteria, in order to bring them in line with the criteria applied to pension funds and to modify the width of the band for the rewards and penalties scheme for unemployment fund administrators.
31.Mar.16	SP	FINALIZED PUBLIC CONSULTATION MODIFICATIONS TO THE PENSION FUND INVESTMENT REGIME	Prohibits investment in foreign capital funds, which will no longer be registered with and supervised by the SVS.
05.May.16	SVS	PUBLIC CONSULTATION DRAFT OF METHODOLOGY FOR DETERMINING RISK-BASED CAPITAL IN INSURANCE COMPANIES' RISK (FOURTH VERSION)	Fourth version of the methodology for calculating risk-based capital, in the framework of the new Risk-Base Supervision (RBS) approach used by the SVS.

TABLE V.3
List of documents reviewed

Document	Title	Organization	Solvency / Liquidity	Infrastructure / Transparency	SIFIs	Resolution	Risk mgmt. / Governance	Supervision	Other
1	Interest Rate Risk in the Banking Book	BIS - BCBS	*						
2	Revisions to the Basel III Leverage Ratio Framework—Consultative Document	BIS - BCBS	*						
3	Frequently Asked Questions on the Basel III Leverage Ratio Framework	BIS - BCBS	*			*			
4	Reducing Variation in Credit Risk-Weighted Assets—Constraints on the Use of Internal Model Approaches – Consultative Document	BIS - BCBS	*						
5	Pillar 3 Disclosure Requirements—Consolidated and Enhanced Framework — Consultative Document	BIS - BCBS		*					
6	Literature Review on Integration of Regulatory Capital and Liquidity Instruments	BIS - BCBS	*						
7	Standardised Measurement Approach for Operational Risk—Consultative Document	BIS - BCBS	*						*
8	Minimum Capital Requirements for Market Risk	BIS - BCBS	*						
9	Guidance on Credit Risk and Accounting for Expected Credit Losses	BIS - BCBS				*			
10	Identification and Measurement of Step-in Risk—Consultative Document	BIS - BCBS						*	
11	Revisions to the Standardised Approach for Credit Risk—Second Consultative Document	BIS - BCBS	*						
12	Payment Aspects of Financial Inclusion	BIS - CPMI		*					
13	Clearing of Deliverable FX Instruments	BIS - CPMI - IOSCO						*	
14	Fixed Income Market Liquidity	BIS - CGFS						*	
15	Electronic Trading in Fixed Income Markets	BIS - MC						*	
16	Second Thematic Review on Resolution Regimes	FSB			*				
17	Possible Measures of Non-Cash Collateral Re-Use	FSB						*	
18	The Impact of Storage and Delivery Infrastructure on Commodity Derivatives Market Pricing	IOSCO		*		*			
19	Cyber Security in Securities Markets—An International Perspective	IOSCO				*			
20	The Prudential Regulation Authority's Approach to Banking Supervision	BoE-PRA					*		
21	The Prudential Regulation Authority's Approach to Insurance Supervision	BoE-PRA					*		
22	Pillar 2 Liquidity —Consultation Paper	BoE-PRA	*	*					

Source: Institutional websites.

BOX V.1
RECENT DEVELOPMENT OF CREDIT AND DEBIT CARDS AS A MEANS OF PAYMENT IN CHILE AND THE WORLD

This box presents some indicators on the development and market penetration of credit and debit cards as a payment means in Chile, including a comparison with other countries. The analysis suggests that while this market in Chile has grown significantly in recent years, it is comparable to countries at a similar level of development.

There is thus considerable room for innovation and development, on both sides of the market: namely, users; and businesses that are in the network. The analysis draws on data on both card holding (user perspective) and card acceptance and points of sale (business perspective).

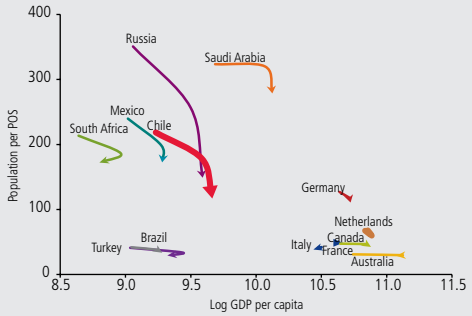
Card holding in Chile

Card holding has increased steadily over the past several years, with the exception of the international financial crisis period. As of June 2015, there was a total of about 40 million activated cards in Chile, of which approximately 28 million were active. The number of active cards per member of the active population[1]/ was 3.3 times in December 2014 (statistical appendix).

Availability of sales terminals

As of December 2014, there were approximately 161,000 businesses affiliated with Transbank, the main operator in the market, and almost 217,000 point-of-sale (POS) terminals. The universe of affiliated businesses represents about 14% of the total number of firms in the retail, hotel and restaurant sectors. With regard to the availability of POS terminals in the population, coverage is about 101 people per terminal, on average, as of December 2014.

FIGURE V.1
Population per POS vs GDP per capita: 2009, 2011 and 2013
(population/POS; dollars) (*)



(*) Data as of December of each year, except for the first POS datum for Chile (Transbank), which is for December 2010.

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

In comparison with other countries, the penetration of POS terminals in Chile from 2009 to 2013 was very strong, although coverage is still far below that of developed countries, where congestion levels are under 100 people per terminal (figure V.1)[2]/. The strong growth in Chile coincides with the growth of income, which is one of the most important determinants on both the business side and the household consumption side.

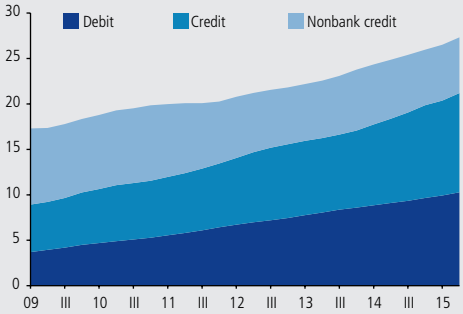
Use and share of cards as a means of payment in household consumption

The share of household consumption that is paid for with cards is a broad measure that reflects the development and functioning of the payment system. From 2009 to 2015, the total volume of transactions using cards (including debit cards and bank and nonbank credit cards) increased from 17.4 to 27.3% of consumption (figure V.2). The growth was relatively higher in debit cards (10.3% of consumption in June 2015), and for the first time, the total volume of debit transactions is close to surpassing that of credit cards (10.9%).

[1]/ The active population corresponds to labor force participants.

[2]/ Brazil has a very high penetration relative to the emerging economies in the region, at 29 people per terminal.

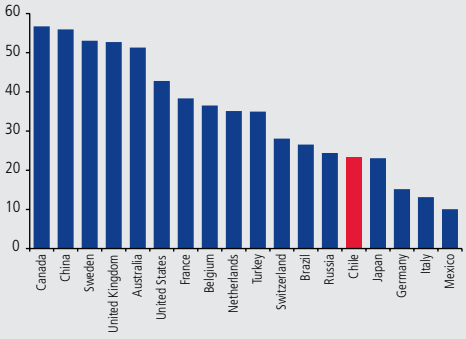
FIGURE V.2
Total card expenditures
(percent of total household consumption)



Sources: Central Bank of Chile and SBIF.

Comparatively speaking, penetration in Chile is above some medium-income emerging economies, such as Colombia, Jamaica, Peru and Poland, and below Brazil (figure V.3). Cultural factors could explain the lower than expected penetration for a given level of development.

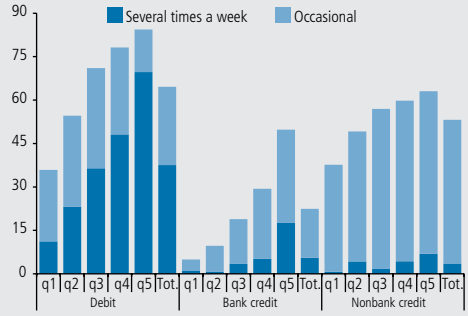
FIGURE V.3
Penetration of card use in consumption, 2014
(percent of household consumption)



Source: Central Bank of Chile, based on data from BIS, IBGE and OECD.

The 2014 Household Financial Survey shows that the use of cards varies widely by income, and that these differences are strongly associated with the type of product. For example, looking at both frequent and occasional use, only 36% in the first income quintile use debit cards, versus 84% in the highest quintile. The difference is even larger for bank credit cards: 5% in the first income quintile versus 50% in the highest quintile (figure V.4).

FIGURE V.4
Card use by income quintile (*)
(percent)



(*) Excludes household heads who state that they do not have or have never used credit/debit cards.

Source: Central Bank of Chile.

With regard to the intensive margin, the average amount per transaction has been stable at around 50,000 pesos for bank credit cards, 20,000 pesos for debit cards and 25,000 pesos for nonbank credit cards (statistical appendix).

Conclusions

The data on card holding, acceptance and penetration suggest that the development of electronic payment means in Chile is not significantly different from comparable economies. In contrast, the development of other financial services markets in this country is more advanced, on multiple dimensions, than other economies with a similar income level[3]/.

From this perspective, there is considerable room for promoting greater development of the payment market in Chile, by facilitating the entry of new issuers and allowing the participation of a larger number of network service providers for merchants. In this sense, the bill to allow nonbank entities to issue prepaid cards that is currently being discussed in Congress is an important contribution, to the extent that it increases the diversity of the entities participating in this market.

[3]/ Chile ranks 19 out of 144 on financial market development in the *Global Competitiveness Report 2014–2015*, published by the World Economic Forum.

BOX V.2
FOUNDATIONS OF FINANCIAL REGULATION AND THE REGULATORY PERIMETER

In most advanced economies, a majority of the activities and entities that compose the financial system are subject to specialized regulatory and supervisory schemes, which pursue the following objectives:

i. Protect public confidence and people's savings. For example, the public trusts that it will be possible to recover money deposited in a bank or receive the return on investments made through pension funds, investment funds and similar entities. That confidence is critical for financial statilbity[1]/.

ii. Reduce information asymmetries between suppliers and users of financial products and services, considering that the cost of evaluating and purchasing such services is high, especially if the consumer has an inadequate financial education.

iii. Contain externalities that make the social cost of a crisis or insolvency event exceed the private cost and the additional cost of regulation[2]/. Due to the high level of interconnection among agents, a problem in one or more financial entities can have consequences for the rest the financial system and for the real economy, the mitigation of which could require the use of public resources.

Depending on the size of the risk to financial stability and public trust, or the size of the associated externalities, an activity or product will be subject to different levels of regulation and supervision. Some financial services, where these elements are absent or judged to be minor, could even have very light regulatory schemes, as in the case of lending from own resources or some of the investments made by qualified investors.

Where merited based on the described objectives, jurisdictions dictate laws, standards and regulations that establish differentiated regulatory requirements and supervisory schemes across entities and activities. This interaction between laws, standards, entities and supervisory practices defines a regulatory perimeter.

The outer edge of the regulatory perimeter is dynamic, as new laws or regulations are passed to incorporate new activities or exclude activities that are no longer widely used[3]/.

In general, financial activities are subject to compliance with basic requirements, such as the following: (i) apply for a license or authorization to provide the service; (ii) once the authorization is granted, consent to supervision by a supervisory agency; (iii) demonstrate the integrity or suitability of the directors of the company providing the service; (iv) meet minimum capital and liquidity standards; and (v) adopt a specific legal form of organization. In the case of activities that present a higher risk to financial stability, there could be additional prudential requirements and greater supervision.

Situation in Chile

The activities that are carried out in the Chilean financial system can be classified into three categories, depending on the applicable regulatory and supervisory schemes:

1. Financial activities that can only be undertaken by authorized entities.

These include activities that entail a higher probability of compromising people's confidence and a greater implicit risk to the financial system. Some examples include the following:

[1]/ As reference, the Bank of England states that "Financial stability – public trust and confidence in financial institutions, markets, infrastructure, and the system as a whole – is critical to a healthy, well-functioning economy."
[2]/ Brunnermeier et al. (2011).

[3]/ For example, the international discussion on shadow banking centers on whether the regulation of credit intermediation by entities that are outside the banking system should tend toward something in line with the regulatory framework governing banks, so as avoid regulatory arbitrage.

i. Deposit taking[4]/. This activity can only be undertaken by banks and savings and loan cooperatives authorized by the SBIF, in accordance with the GBL[5]/.

ii. Money brokerage. The act of receiving money and delivering it to another person is also restricted to banks, unless authorized by law.

iii. Securities brokerage. This activity can only be undertaken by stock brokers, securities dealers and other corporations that have been expressly authorized by the SVS, in accordance with the Securities Market Law (SML).

iv. Issuance of listed securities. This requires SVS authorization, in accordance with the SML.

v. Mandatory retirement savings. Only pension fund administrators can receive retirement savings, with authorization by the Superintendency of Pension, in accordance with the pension legislation (DL 3500).

vi. Foreign exchange operations that must be carried out in the formal exchange market (FEM). Only banks and entities that are expressly authorized by the Central Bank of Chile to operate in the FEM can channel these transactions.

vii. Issuance and operation of electronic payment means. Entities operating in this area must comply with Central Bank of Chile regulations and be registered in the SBIF Registry.

2. Financial activities that are only subject to specific regulations.

These activities can entail the risks described above, but on a smaller magnitude. Consequently, the respective regulators have deemed it unnecessary for entities operating in these areas to request prior licensing or authorization. Examples include the following:

i. Lending. These entities are subject to SBIF supervision only with regard to compliance with the conventional maximum rate.

ii. Derivatives contracts. In the case of contracts involving foreign exchange operations, payments must be reported to the Central Bank of Chile and channeled through the FEM.

iii. Remission of money from/to other countries and foreign exchange operations that do not have to be channeled through the FEM. Entities that perform these activities must report any suspicious operations to the Financial Analysis Unit to prevent money laundering.

3. Financial activities that are not subject to specific regulations[6]/.

In general, this category comprises financial innovations. Precisely because they are new (at least in the local market), innovations do not necessarily fall under current regulatory frameworks, which can sometimes affect their development. In these cases, the authorities need to assess the most appropriate regulatory response for channeling the financial innovation, rather than hindering it. Some examples in this category include crowdfunding[7]/ and virtual currency.

Although not innovations, some other activities are included in this category, at least for now, including nonbank leasing and factoring, off-exchange trading platforms and financial consulting services.

Supervision of the regulatory perimeter

Entities that provide services or perform activities that fall within the regulatory perimeter, but do not comply with the requirements defined for those services or activities, are infringing the law and regulations. The best response to such cases is not necessarily the development of new regulations.

Supervisory systems have limited resources, which are naturally focused on the primary entities that perform regulated activities. Therefore, the supervision of entities that invade the regulatory perimeter depends on reported complaints.

Consequently, investors who interact with entities that provide financial services have an individual responsibility, for example, to investigate whether a given entity is duly registered with the sectoral supervisors, which will help reduce or limit the

[4]/ Unless the activity is covered by another regulatory body, as stipulated in Article 39 of the General Banking Law (GBL).
[5]/ Savings and loan cooperatives with equity of over 400,000 UF are subject to SBIF supervision. Smaller institutions are subject to the regulatory framework established in the Cooperatives Law.

[6]/ Although they are not governed by a specific regulatory framework, they must comply with all applicable general regulatory frameworks (taxation, prevention of money laundering and terrorist financing, and foreign exchange regulations).
[7]/ This issue was addressed in box V.1, FSR, first half 2015.

occurrence of losses due to fraud or embezzlement. They should similarly consult with the respective supervisors whenever there are doubts about the nature of a given entity. The exercise of this responsibility and the formation of solid investment decisions is more effective when people have an adequate financial education, so it is highly important to move forward in this area.

Summary

Financial regulation is based on clear economic foundations, including upholding the public's confidence in the system, reducing information asymmetries and limiting negative externalities. Depending on the prevalence of these elements, different financial activities and entities are subject to varying degrees of regulation and supervision via a set of laws, regulations and practices that establish a regulatory perimeter.

This perimeter is dynamic and gradually incorporates new activities and entities. However, the invasion of the regulatory perimeter without complying with the established requirements does not constitute an innovation, but rather a violation of the regulations, which generally results in losses for investors. The opacity of entities that undertake these practices and the limited availability of resources for monitoring them hinders their direct supervision, which therefore rests fundamentally on public complaints. Consequently, public financial education and information contrtibute not only to the formation of investment decisions, but also to preventing abuse of the public trust and the resulting damages.

REFERENCES

Alegría, A., and J. Bravo. 2015. "Análisis de riesgo de los deudores hipotecarios en Chile." Working Paper N° 766. Central Bank of Chile.

BCBS. 2016. "Standardised Measurement Approach for Operational Risk." Consultative Document. Bank for International Settlements. March.

BCBS. 2016. "Reducing Variation in Credit Risk-Weighted Assets—Constraints on the Use of Internal Model Approaches." Consultative Document. Bank for International Settlements. March.

BCBS. 2016. "Minimum Capital Requirements for Market Risk." Standards. Bank for International Settlements. January.

BIS. 2016. Quarterly Review. Bank for International Settlements. March.

BoE. 2016. Inflation Report. Bank of England. May.

Borio, C., L. Gambacorta and B. Hofmann. 2015. "The Influence of Monetary Policy on Bank Profitability." BIS Working Paper N° 514. October.

Central Bank of Chile. 2014. Financial Stability Report. Several issues.

Central Bank of Chile. 2015. Financial Stability Report. Several issues.

Brunnermeier, M. K., A. Crockett, C. Goodhart, A. Persaud and H. Shin. 2009. "The Fundamental Principles of Financial Regulation." Geneva Reports on the World Economy. Centre for Economic Policy Research (CEPR). June.

Drehmann, M., C. Borio and K. Tsatsaronis. 2011. "Anchoring countercyclical capital buffers: the role of credit aggregates." BIS Working Paper N° 355. November.

Espinosa, C., J. Fernández and F. Vásquez. 2015. "Empresas chilenas emisoras de bonos en el exterior ¿En qué utilizan los recursos?" Mimeo. Central Bank of Chile.

Fernández, J. 2016. "Transición e impago de deudas comerciales." Mimeo. Central Bank of Chile.

JLL. 2015. Jones Lang LaSalle. Office Market Overview Latin America. Year-end.

SBIF. 2015. "Informe de Endeudamiento de los Clientes Bancarios." December.

Tendulkar, R. 2015. "Corporate Bond Markets: An Emerging Markets Perspective." Volume II. Staff Working Paper of the IOSCO Research Department. September.

GLOSSARY

Arrears rate: Also called portfolio in arrears. 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 commercial loans to firms, the delinquent installments are past due by up to three years; for commercial loans to households, up to one year; for consumer loans, up to 180 days.

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.

Banking book: Comprises all positions in derivate and nonderivative financial instruments that are not included in the trading book.

Banks, large: Banks with a large market share and wide diversification of operations (loans and derivative and nonderivative financial instruments).

Banks, medium-sized: Banks with a smaller market share but equally diversified operations as the large banks.

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.

Basel I: Agreement published in 1988 by the Basel Committee on Banking Supervision (BCBS), with the objective of creating an international standard for risk management and operations in the banking system.

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

Central counterparty (CCP): 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).

Commitment rate: The average sales rate of life insurance companies weighted by the stock of life annuities.

Conventional maximum interest rate: The upper limit on lending interest rates for non-indexed operations in local currency with a term of 90 days or more. Since December 2013, the rate is calculated separately for two loan classes (0 to 50 UF and 50 to 200 UF), where an additional 21 and 14 pp,

respectively, are added to the current interest rate between 200 and 5000 UF, following the end of a convergence period. It is set by the SBIF, and exceeding this limit is sanctioned by Law 20,715.

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

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.

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

Default rate (DR): The ratio between the number of debtors with arrears of over 90 days and the total number of debtors in the corresponding portfolio.

Delinquency 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 with arrears of over 90 days from the maturity date. The full amount of the loan is considered delinquent for accounting data, versus the total debt for administrative data.

Deposit insurance: Bank funds—common to a particular financial system—that serve as a guarantee for deposits from retail agents.

Emerging Market Bond Index (EMBI): An indicator calculated by JPMorgan that measures the return on government bonds issued by emerging market countries (sovereign bonds), with a specific structure and liquidity.

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

Federal Open Market Committee (FOMC): The internal agency in charge of the U.S. Federal Reserve's monetary policy, composed by 12 members who meet eight times a year. The committee issues a policy declaration after each ordinary session summing up the economic outlook and policy decisions from the meeting.

Federal Reserve System (Fed): U.S. Federal Reserve, the central bank of the United States.

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

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

G20: An international forum for cooperation and consultation among developed countries and emerging economies, on issues related to global economic stability. Members include the seven most industrialized countries in the world (G7), Russia, the European Union and a group of other economies, including Brazil, India, China and South Africa.

House price index (HPI): Estimated using a stratification or mixed adjustment methods, based on anonymized administrative records from the Chilean IRS on actual transactions on new and used residences at the national level.

Hybrid instruments: Instruments that combine characteristics of two or more instruments. The term is generally used to refer to instruments with both equity and debt characteristics.

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: Measure of the banks' debt level over equity; used as a complementary tool to capital adequacy requirements.

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.

Loan-to-value (LVT) ratio: The ratio of a given loan to the value of the underlying asset purchased, usually a home.

Loans in default: Debtors and their loans for which there is little chance of recovery, due to a weak or null capacity to pay. This portfolio includes debtors who must undergo a forced debt restructuring, as well as any debtor with arrears of 90 days or more in the payment of interest or principal on a loan.

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.

MF1: Type 1 mutual funds, which invest in short-term debt instruments with a duration of 90 days or less. This mutual fund invests in short-term debt securities and medium- and long-term debt securities. The duration of a Type 1 fund's investment portfolio must be 90 days or less. Shares are invested in short-, medium- and long-term debt instruments.

MF2: Type 2 mutual funds, which invest in short-term debt instruments with a duration of 365 days or less. This mutual fund invests in short-term debt securities and medium- and long-term debt securities. The duration of a Type 2 fund's investment portfolio must be 365 days or less. Shares are invested in short-, medium- and long-term debt instruments.

MF3: Type 3 mutual funds, which invest in medium- and long-term debt instruments, with a minimum duration of over 365 days. This mutual fund invests in short-term debt securities and medium- and long-term debt securities. A minimum and maximum duration are defined for the investment portfolio. This information must be contained in the definition adopted by the fund, and it must be longer than 365 days. Shares are invested in short-, medium- and long-term debt instruments.

MF6: Type 6 mutual funds, which can be freely invested. These funds are not classified under the definitions of types 1 through 5. The investment policy is unrestricted, but while they are not subject to regulated guidelines, they must establish internal regulations.

MOVE: Index of the normalized implied volatility on one-month U.S. Treasury options, weighted on the 2-, 5-, 10- and 30- year contracts.

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

Nonbank lenders: Includes retailers, family compensation funds, savings and loan cooperatives supervised by the SBIF, nonbank leasing and factoring companies, car dealers, etc.

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

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 be transferred to the nonperforming portfolio if acceleration clauses are enforced.

Office class (A+, A, B, C): Classification used to categorize offices according to their characteristics, from high to low. The characteristics considered are location, access, floor plan size, absence of pillars, ceiling height, access control, closed-circuit TV, security equipment, fire detectors and extinguishers, air conditioning, elevator speed, structured cabling and whether the building has the Leadership in Energy and Environmental Design certification.

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.

Operational risk: Exposure to losses deriving from deficient internal processes, personnel and systems or external events, including legal risks but excluding strategic and headline (or reputational) risk.

Over-the-counter (OTC): A term used to describe the trading of financial instruments directly between two parties, without going through the organized securities exchanges.

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

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

Qualifying central counterparty (QCCP): A foreign CCP recognized by the European regulator, subject to the provision that CCP's operations and the domestic rules and regulations are consistent with established standards.

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

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).

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

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

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 (RWA): 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.

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 regulatory capital.

Substandard loans: Individually evaluated loans to firms with a significant worsening of their payment capacity and little cushion for meeting their financial liabilities in the short term. The loans in this portfolio are more than 30 days delinquent.

Substituted compliance framework: Recognition by the U.S. authority that a foreign CCP meets equivalent requirements to U.S. regulations in its jurisdiction of origin.

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

Trading book: Comprises all positions in nonderivative financial instruments that, in accordance with accounting standard, are classified as "held-for-trading securities," as well as all positions in derivative financial instruments that have not been designated for accounting purposes as hedging instruments.

Trading desk: A group of intermediaries that implement a well-defined business strategy and operate with a clear risk management structure.

Vacancy rate: Square meters available for rent or sale, calculated over the current stock.

VIX: Chicago Board Options Exchange (CBOE) stock volatility index, based on S&P 500 index options contracts (at one month).

VXY: Currency volatility index, based on foreign exchange forward options, weighted by turnover.

ABBREVIATIONS

Achef: *Asociación Chilena de Empresas de Factoring* (Association of Chilean Factoring Firms).
AR: Arrears Rate.
BLS: Bank Lending Survey.
BCBS: Basel Committee on Banking Supervision.
BCP: Central Bank bonds denominated in Chilean pesos.
BCS: *Bolsa de Comercio de Santiago* (Santiago Stock Exchange).
BCU: Central Bank bonds denominated in UFs.
BIS: Bank for International Settlements.
BoE: Bank of England.
bp: Basis points.
CAR: Capital adequacy ratio.
CCAF: *Cajas de Compensación y Asignación Familiar* (Family Compensation Funds).
CChC: *Cámara Chilena de la Construcción* (Chilean Chamber of Construction).
CCP: Central counterparties.
CEF: *Consejo de Estabilidad Financiera* (Financial Stability Board).
CEMBI: Corporate Emerging Markets Bond Index.
CFTC: United States Commodity Futures Trading Commission.
CGFS: Committee on the Global Financial System.
COMEX: Foreign trade.
CPMI: Committee on Payments and Market Infrastructures.
CSD: Central Securities Depository.
DC: Domestic Currency.
DR: Default Rate.
DTI: Debt-to-income ratio.
EM: Emerging Market Economies.
EMBI: Emerging Market Bond Index.
EMIR: European Market Infrastructure Regulation.
EPFR: Emerging Portfolio Fund Research.
ER: Exchange Rate.
ESMA: European Securities and Markets Authority.
FDI: Foreign Direct Investment.
Fed: The U.S. Federal Reserve System.
FEM: Formal Exchange Market.
FFR: Federal Funds Rate (Fed's policy rate).
FI: Fixed income.
FIR: Financial burden-to-Income Ratio.
FOMC: Federal Open Market Committee.
FSB: *Financial Stability Board.*

FSI: Financial Soundness Indicators.
FSR: Financial Stability Report.
FTD: Fixed-term deposit.
FX: Foreign currency.
GBL: General Banking Law.
GDP: Gross domestic product.
HFS: Household Financial Survey.
HPI: House Price Index.
IAIS: International Association of Insurance Supervisors.
IBGE: Brazilian Geographical and Statistical Institute.
Imacec: Monthly Indicator of Economic Activity.
IMF: International Monetary Fund.
INE: *Instituto Nacional de Estadísticas* (National Statistics Institute).
IOSCO: International Organization of Securities Commissions.
IPoM: Monetary Policy Report.
IPSA: Selective Stock Price Index.
IRS: Chilean Internal Revenue Service.
LAC: Latin America and the Caribbean.
LATAM: Latin America.
LICs: Life insurance companies.
LTV: Loan-to-Value ratio.
MC: Markets Committee.
MF: Mutual funds.
MOVE: Merrill Lynch Option Volatility Estimate.
MPR: Monetary policy rate.
SMR: Santiago Metropolitan Region.
NBL: Nonbank Lender.
NCG: *Norma de Carácter General* (General Regulation).
NIIP: Net international investment position.
NPL: Nonperforming loan ratio.
OECD: Organization for Economic Cooperation and Development.
OTC: Over-the-counter.
PFAs: Pension fund administrators.
POS: Point-of-sale.
pp: percentage points.
PRA: Prudential Regulation Authority.
RAN: *Recopilación Actualizada de Normas* (SBIF banking regulations).
RBC: Risk-based capital.
ROA: Return-on-assets.
ROE: Return-on-equity.
RWA: Risk-weighted assets.
SBIF: *Superintendencia de Bancos e Instituciones Financieras* (Superintendence of Banks and Financial Institutions).

SML: Securities Market Law.

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

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

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

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

VAT: Value added tax.

VI: Variable income.

VIX: Chicago Board Options Exchange Volatility Index.

Alejandro Zurbuchen S.
LEGAL REPRESENTATIVE

CENTRAL BANK OF CHILE
Institutional Affairs Division
Publications Department
JUNE 2016

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

BANCO CENTRAL
DE CHILE

FINANCIAL STABILITY REPORT First half 2016