FINANCIAL STABILITY REPORT

Second Half 2013

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SECOND HALF 2013*/

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

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*/ The statistical closing date of this *Financial Stability Report* was 30 October 2013.

PREFACE

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

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

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

The Board

SUMMARY

The main external risks examined in the previous *Financial Stability Report* are still valid. The process of withdrawal of the quantitative easing program in the U.S. (QE) is a primary source of risk. Although this will lead to the normalization of historically favorable external financing conditions for Chile, new periods of volatility in foreign markets during this process cannot be ruled out. If they do occur, they will have an impact on both external lending standards to Chilean institutions and the valuation of the riskier assets in the local market, the exchange rate and possibly Chile's long-term interest rates.

Another risk is a sharp economic slowdown of some large-sized emerging economies, particularly China, due to its potential effect on the price of commodities, including copper. Such a price drop would directly affect the revenues and investment plans of the Chilean export sector.

A deepening of the Eurozone crisis continues to be a significant source of external risk. Despite advances in the field of financial supervision, and that the recession in the region has been left behind, there is still the probability of a new stress episode being triggered in the public and private debt markets. The effects of such an event on external financing, the valuation of risky assets and the exchange rate could be relevant.

Of the three risk scenarios described, the episode of volatility associated with the QE tapering is the most likely. However, a deepening of the crisis in the Eurozone or a severe slowdown in a systemic emerging economy would have a greater impact on the Chilean financial system.

The banking system's capital levels should allow it to remain solvent should economic growth and financing conditions deteriorate significantly. Stress tests show that banks' capital levels are adequate to absorb the losses that could be generated by a macroeconomic risk scenario combining an output contraction comparable to that of the subprime crisis, higher short- and long-term funding costs, and a sharp and significant exchange rate depreciation. A specific exercise—motivated by the risk scenarios identified in the QE withdrawal process—shows a limited exposure of the overall banking system to a sharp rise in the interest rates on long-term securities.

However, some local market developments call for close monitoring. In the real estate sector, mortgage credit growth has remained stable, partly due to delays in the delivery of homes committed in earlier periods. Housing price indices are as dynamic as they have been in recent periods, showing increases in a scenario of strong demand and low inventories. Meanwhile, the expected supply of office space has continued to rise to record highs. In this context, it is important for market players to contemplate in their investment and funding decisions that the price and demand trends might change, especially considering the above described risks from abroad, the expected increase in supply and the foreseen economic slowdown.

Aggregate household borrowing indicators show a marginal decline, although with changes in composition. **In fact, the available evidence suggests that bank debt is still strong, particularly among middle to upper income homes.** To the extent that banks properly evaluate and consider the credit risk inherent in this segment, it should not be a source of vulnerability. However, there are factors that could contribute to an underestimation of these risks. For one, rolling credit has been very dynamic in the past few years. For another, the absence of a consolidated household debt registry is a hindrance to risk evaluation by supervisors and suppliers. Finally, those banks that expanded the most their consumer loans in recent times have experienced a relatively greater deterioration of their non-performing loans indicators, consistently with greater risk taking. So far, provisions have increased accordingly.

Total corporate debt is stable as a ratio to GDP. Financial indicators of companies reporting to the Superintendency of Securities and Insurance (SVS) have also been stable. Nonetheless, a group of **larger firms have seen a significant drop in profits.**

Although in recent years the banking industry as a whole has tended to reduce its dependence on short-term wholesale funding, some small and midsized banks remain highly dependent on it. While wholesale funding plays an important role in market discipline, it is particularly sensitive to changes in the perceptions on issuers' risk and the liquidity of their instruments in the secondary market. In addition, events of recent years show that negative developments in domestic and foreign financial conglomerates may have adverse repercussions on the funding costs in the wholesale market of these groups' related banks. Thus, it is important that the banks' funding base is diversified in terms of counterparts and maturities. Also, that banks' liquidity management include stress tests and contingency plans that appropriately reflect their risks, business strategies, financial situation and financing capacity under varied market conditions. Banks must also properly internalize the economic and reputational risks of exposure to related entities, for which appropriate governance is crucial.

In this context, three regulatory events deserve special attention. First, the Superintendence of Banks and Financial Institutions (SBIF) improved its regulatory framework on corporate governance in the banking industry. Second, based on the possible contagion effects across financial conglomerates, the SBIF enhanced the rules restricting transactions with related parts, increasing its supervision tools in this area. Third, with regard to funding structures, the Central Bank is revising the liquidity legislation for banks in order to strengthen its liquidity management policies, including binding regulatory limits on consolidated basis, standardize the assumptions of internal models, expand the market information on each bank's individual position and advance towards the new Basel liquidity standards.

Finally, and as expected, the Chilean economy has taken a decelerating path, which will affect income growth of households and companies. In recent months, domestic output and demand have slowed, so the economy is projected to grow between 3.75% and 4.75% in 2014. Lower output growth combined with possible volatility episodes in financial markets requires that agents properly adjust their borrowing and lending decisions.

I. EXTERNAL ENVIRONMENT AND FINANCIAL RISKS

The main external risk factors are the potential for markets to overreact to the withdrawal of the monetary stimulus measures in the United States, the emergence of new tensions in the Eurozone and a deterioration of macro-financial conditions in the larger emerging economies.

EVOLUTION OF THE INTERNATIONAL FINANCIAL SITUATION

The announcements by the United States Federal Reserve (the Fed) regarding the normalization of the monetary stimulus triggered significant increases in long-term interest rates.

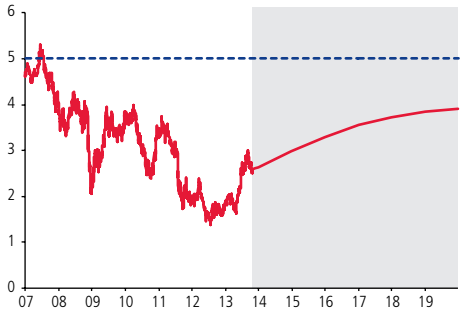
The initial announcements, which coincided with the closing date of the last *Financial Stability Report,* suggested that the process of withdrawing the monetary stimulus measures in the United States would be moved up. This caused an increase in the ten-year Treasury bond rate of over 100 basis points (bp) (figure I.1). Later announcements, in particular in September, indicated that the measures would be maintained, which led to a partial reversal of the hikes.

To the extent that the monetary stimulus measures are, in fact, withdrawn, long-term interests rates should continue to increase. Forwards and historical averages point to additional long-term interest rate hikes of 100 to 200 basis points. This process could involve new periods of volatility, with faster-than-expected increases in long rates followed by subsequent corrections. The reaction of long-term interests rates between May and September can be taken as a stress test for what could happen during the rest of the process: long-term interests rates fluctuated more widely in that period than in 1994, when the Fed unexpectedly increased its monetary policy rate (figure I.2).

Fiscal discussions in the United States also had an impact on financial market volatility.

In late September and early October, the problems the U.S. Government was having in reaching a fiscal agreement also generated volatility in the financial markets. Although an agreement was eventually reached with the U.S. Congress, the temporary nature of the deal suggests that new tensions could arise in response to future negotiations.

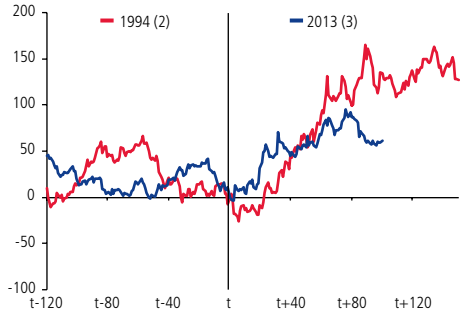
FIGURE I.1
Ten-year U.S. Treasury bond (*)
(percent)



(*) The shaded area represents forecasts based on rate forwards; the dashed line marks the average for 1990-2003.

Source: Bloomberg.

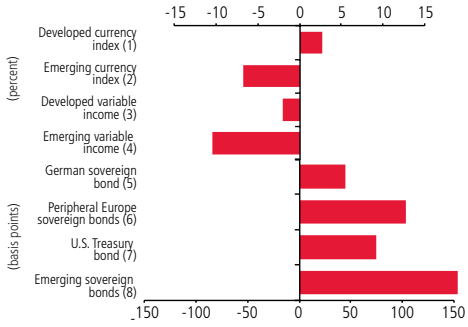
FIGURE I.2
Ten-year U.S. Treasury bond: Evolution around volatility events
(basis points) (1)



(1) Each time interval represents one day.
(2) t corresponds to 4 February, the day on which the Fed began to raise rates.
(3) t corresponds to 22 May, the day on which the Chairman of the Fed announced the possible ending of the extraordinary monetary stimulus.

Source: Bloomberg.

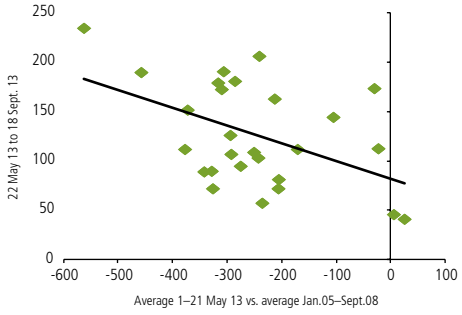
FIGURE I.3
Changes in financial asset prices between 22 May and 1 September 2013
(basis points and percent)



(1) Inverse of the average exchange rate between the U.S. dollar and the main world economies.
(2) JP Morgan Emerging Markets Currency Index.
(3) MSCI Developed Economies Index.
(4) MSCI Emerging Markets Index.
(5) Five-year maturity.
(6) Simple average of five-year bonds from Ireland, Italy Portugal and Spain.
(7) Ten-year U.S. sovereign bond.
(8) EMBI Global composite index.

Source: Bloomberg.

FIGURE I.4
Compression of sovereign spreads in emerging economies (*)
(basis points)



(*) The difference between external debt rates in the indicated periods. The countries included in the sample are Chile, China, Poland, Malaysia, Russia, South Africa, Brazil, Mexico, Panama, Peru, Colombia, Indonesia, Kazakhstan, Philippines, Turkey, Uruguay, Dominican Rep., Lebanon, Serbia, Vietnam, Belize, Jamaica, Hungary, El Salvador, Pakistan, Sri Lanka and Georgia. The black line represents the linear regression adjustment.

Source: JP Morgan.

The increase in long-term interest rates in the United States had a strong impact on global financial markets.

These events had a strong impact on the valuation of financial assets in emerging economies, including decreases in asset value and depreciating exchange rates (figure I.3). The tighter growth outlook for China may have contributed to the drop. At the height of uncertainty, portfolio flows shifted out of emerging economies into developed markets, while emerging sovereign bond issues fell drastically toward mid-year. Stock markets rose and currencies appreciated in the developed economies.

The last *Financial Stability Report* observed that sovereign spreads on emerging economy debt had fallen sharply during the implementation of monetary stimulus measures in the United States. The worsening of the financing conditions for emerging economies in the past few months, in part, reflects a reversal of this situation. Thus, sovereign spreads have risen more in countries that recorded a larger drop in the previous period. These countries also tend to have a lower credit rating (figure I.4).

Going forward, dollar interest rates are expected to rise on sovereign debt in emerging economies, not only because of increases in base interest rates in developed countries, but also due to the pending decompression of sovereign spreads.

The Eurozone continues to present a complex scenario, in which macroeconomic fragility interacts with the banking system and fiscal sustainability.

Growth forecasts for the region have not improved substantially, but the most recent data indicate that the European recession is finally ending. The December *Monetary Policy Report* forecasts a regional growth rate of 1% in 2014 (the same as in June) and 1.4% in 2015. Productivity measures, based on unit labor costs, have been stable.

With regard to fiscal sustainability, the region has recorded some improvements, and several countries have complied with the proposed deficit reduction targets. In the peripheral economies, however, the public sector continues to have very high financing needs, making these countries vulnerable to changes in debt conditions. This is especially the case in Italy, where financing needs for 2014 represent 28% of GDP (figure I.5). At the same time, the emergence of political tension could interfere with the achievement of fiscal targets, especially in Italy and Portugal.

The banks in the Eurozone have relatively high capital levels. While the detailed analysis of their asset portfolios in the context of the stress tests to be carried out by European Central Bank in 2014 represents an important step toward uniform standards of information and a common supervision process, it could be a source of volatility in some economies. Finally, in recent months, steps have

been taken to help decouple bank risk from sovereign risk through the creation of a single banking supervisor and a common deposit guarantee, but progress has been slow.

Growth rates have fallen in emerging economies ….

The emerging economies have slowed, including a number of larger economies. The consensus growth outlook for 2014 has repeatedly been adjusted downward over the past year, pointing to lower rates than in previous years (figure I.6). In particular, China's expected growth rate, while relatively high (just under 7.5% in the coming years), is significantly lower than the double-digit forecasts seen earlier.

…and sharper slowdowns cannot be ruled out, for example in response to a weakening of the Chinese financial system.

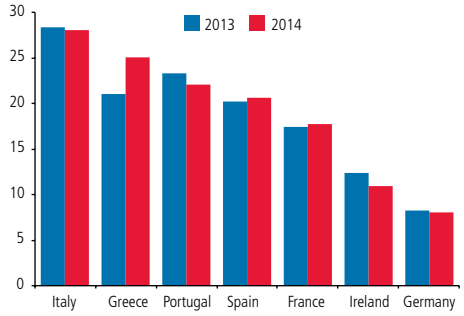
The strong growth of credit in recent years constitutes a potential source of vulnerability in China, especially given the growing role of nonbank intermediaries. The lack of appropriate regulation and supervision of these institutions precludes a precise valuation of the loan stock or the credit and liquidity risks involved (IMF, 2013a). At the same time, bank health could also be affected by their growing exposure to local governments, which take on debt backed by real estate collateral.

An intensification of the policy measures that the Chinese authorities have taken to mitigate these risks could have a greater effect on the country's growth than anticipated. This, in turn, could have a significant impact on the rest of the emerging economies, not only through their commercial ties with China, but also through the effect on commodity prices.

The withdrawal of the monetary stimulus in the United States could have a strong impact on some emerging economies.

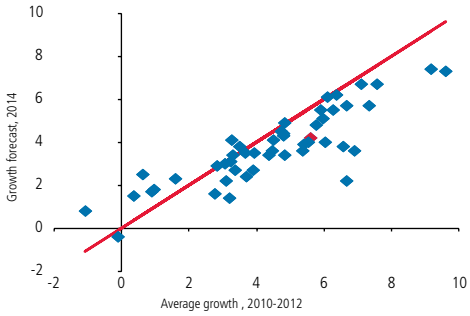
As discussed earlier, the process of withdrawing the monetary stimulus measures in the United States will probably be accompanied by episodes of volatility in the financial markets. As demonstrated by recent episodes, some economies could suffer particularly sharp negative effects, due to vulnerabilities that were built up earlier. Some emerging countries have recorded high credit growth rates, while others display a deterioration in their fiscal position and/or increased inflation, among other factors (figure I.7). In particular, economies such as Brazil, India, Indonesia, South Africa and Turkey exhibit some of these characteristics and have experienced greater exchange rate pressure in recent months.

FIGURE I.5
Sovereign financing needs (*)
(percent of GDP)



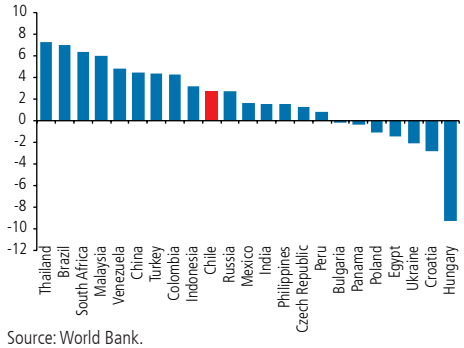
(*) Based on the fiscal deficit and sovereign debt maturities.
Source: IMF.

FIGURE I.6
Growth forecast for 2014 (*)
(percent)



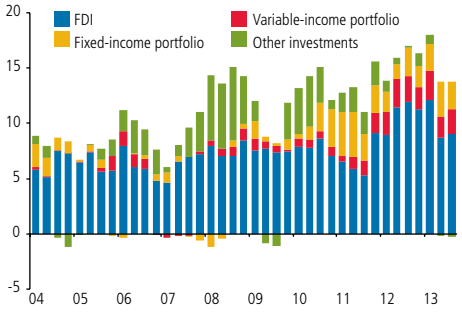
(*) The red line marks the 45° angle.
Source: Consensus Forecasts.

FIGURE I.7
Change in private sector credit
(points of GDP, 2011-2012)



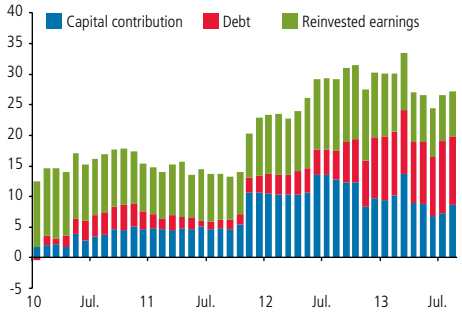
Source: World Bank.

FIGURE I.8
Gross capital inflows to Chile
(percent of GDP, moving quarter)



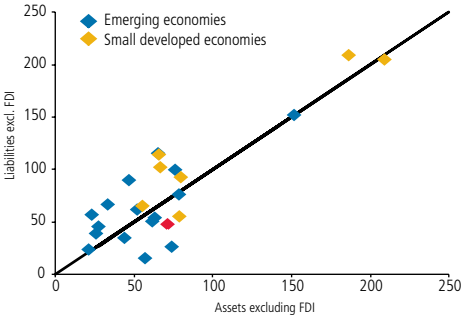
Source: Central Bank of Chile.

FIGURE I.9
Composition of foreign direct investment
(US$ billion, accumulated in twelve months)



Source: Central Bank of Chile.

FIGURE I.10
Stock of liquid foreign assets and liabilities (*)
(percent of GDP)



(*) The sample of emerging economies includes Brazil, Bulgaria, Chile (in red), China, Colombia, Croatia, Slovakia, Slovenia, Estonia, Hungary, Mexico, Panama, Peru, Poland, Czech Republic, Turkey and Venezuela. The small open developed economies are Australia, Canada, Denmark, Israel, New Zealand, South Korea and Sweden. Data for the first quarter of 2013; where data are not available through that date, the fourth quarter of 2012 is used. The black line marks the 45° angle.

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

In this context, Chile has maintained a favorable solvency and liquidity position.

In contrast to the fairly generalized capital outflows recorded by the emerging economies since the last *Report*, Chile has maintained relatively high gross capital inflows of just under 15% of GDP (figure I.8). This trend is particularly noteworthy in portfolio flows, which remain around 5% of GDP, whereas other emerging markets recorded sharp outflows between May and September of this year. The greater external volatility of the period was thus reflected in lower private bond issues abroad relative to the first months of the year, although they recovered substantially in October.

As in previous periods, capital inflows continue to be dominated by foreign direct investment (FDI), which accounted for 67% of foreign liabilities in the third quarter. The parent-subsidiary debt component is still very dynamic and is mainly concentrated in the mining and financial services sectors (figure I.9). In the case of mining, this component is directly associated with the mining investment cycle highlighted in past *Financial Stability Reports*. The maturation of the investment cycle in this sector, described in detail in the last *Monetary Policy Report*, suggests that the amount of FDI, including related-company loans, will begin to decrease over time.

As highlighted in the last *Report*, the large share of FDI in the stock of foreign liabilities makes the Chilean economy more resilient to volatility events in the external financial markets. The aggregate solvency and liquidity indicators for the Chilean economy have remained stable at favorable levels from a historical perspective. With regard to the net international investment position (NIIP), the net debit position fell from 18.2% to 15.7% of GDP[1]/ between the first and third quarters of 2013. The maturity composition is also favorable: the long-term portion of external debt grew from 81.4% in the first quarter of 2013 to 84.4% in the third quarter, while the residual short-term external debt contracted in the same period, from 112% to 108% of unrestricted international reserves. Finally, holdings of liquid foreign assets continue to exceed liquid foreign liabilities, comparing favorably with other emerging economies, with small developed economies and with recent history (figure I.10 and appendix table I.A1)[2]/.

[1]/ GDP at a constant real exchange rate (base index: Sept.13=100).
[2]/ Fore more details on banking system indicators see the Statistical Appendix of the *Financial Stability Report* (www.bcentral.cl).

MAIN EXTERNAL THREATS TO THE STABILITY OF THE FINANCIAL SYSTEM

The main external risk factors for the Chilean financial system are the possibility that markets will overreact to the withdrawal of the monetary stimulus in the United States, the emergence of new tensions in the Eurozone and a deterioration of macro-financial conditions in systemic emerging economies.

An overreaction to changes in the Fed's policies would lead to less favorable offshore financing conditions for the emerging economies, including Chile. This scenario also has implications for the valuation and volatility of risky assets, local long-term interest rates and the exchange rate.

The effects of the materialization of the risks associated with the Eurozone would be qualitatively similar to this scenario, with the exception of the increase in local long-term interest rates.

Finally, a sharper-than-expected slowdown in China or other large emerging economies is especially worrisome due to the effect on commodity prices, including copper. A drop in copper prices would have direct repercussions on Chilean exports and a negative impact on investment in the mining industry, with subsequent effects on sectors that are closely linked to that investment (trade, construction, manufacturing and other services).

The probability of occurrence and the potential impact on Chile vary among these three risk scenarios. The probability of experiencing significant volatility events in response to the possible withdrawal of the U.S. monetary stimulus is higher than the probability of either a worsening of the situation in Europe or a sharper-than-expected slowdown in some key emerging economies. However, the estimated impact of the risk events associated with the withdrawal of the monetary stimulus in the United States is lower than for the other risk factors. This reflects, in part, the fact that the changes in the U.S. monetary policy should take place when the economy is in a recovery phase, such that the withdrawal of the stimulus would be offset by greater external demand and increases in the terms of trade.

II. LOCAL FINANCIAL MARKETS

Money market dynamics continue to be influenced by portfolio effects, while the sensitivity of the fixed-income market to external factors remains low.

MONEY MARKET

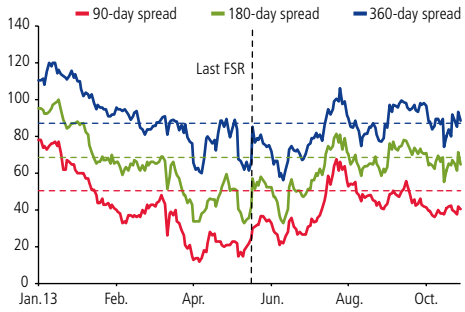
The dynamics in the money market have been influenced by the behavior of local institutional investors.

Since the last *Report*, the average spread between the prime deposit rate in pesos offered by banks and the average interbank swap rate fluctuated moderately at levels around the historical average (figure II.1). This trend reflects the relative stability of the main determinants of the level of the spread, such as the local-external risk spread. The fluctuations in this spread were influenced by changes in the holding of time deposits by institutional agents.

In this period, however, one bank faced misaligned interest rates in the wholesale market relative to the historical trend (figure II.2). These conditions stemmed from contagion effects from the bank's parent company, triggered by the financial situation of one of the companies belonging to the group. The situation began to normalize in the fourth quarter in response to actions taken by the bank and its parent company and the assimilation of the available information, including the limited degree of exposure to related companies (chapter IV).

The pension funds continued to record massive switching between funds by their affiliates following announcements by financial advisors. These announcements have been more frequent in the second half of 2013 (table II.1). The movements have been accompanied by variations in time deposit holdings from 2 to 12% of the stock of deposits managed by the pension funds. According to market sources, the minimal effect of affiliates' changes on deposit holdings during some of these episodes reflects a strategy for obtaining capital gains in a scenario of low expectations for the MPR.

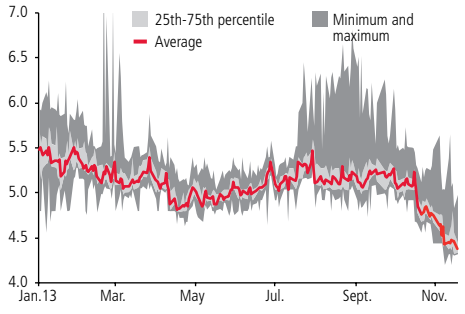
FIGURE II.1
Money market in pesos (*)
(basis points)



(*) Based on the average interbank prime-swap spread. Horizontal lines indicate the series average for 2005-2013.

Source: Central Bank of Chile.

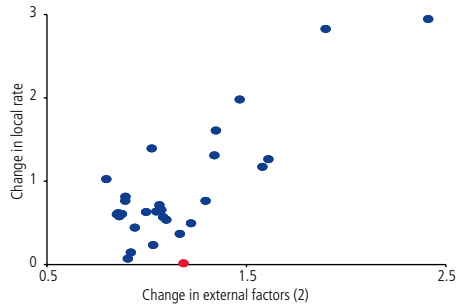
FIGURE II.2
30-day time deposit rates in secondary markets (*)
(percent)



(*) Data as of 19 November 2013.

Source: Santiago Stock Exchange.

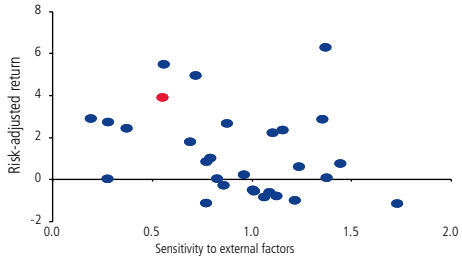
FIGURE II.3
Long-term sovereign rates (1)
(percent)



(1) Change between 30 April and 30 September 2013. Includes Australia, Belgium, Brazil, Chile (in red), China, Colombia, South Korea, Slovakia, Philippines, Finland, France, Holland, Indonesia, Israel, Italy, Japan, Malaysia, Mexico, New Zealand, Norway, Peru, United Kingdom, Czech Republic, Russia, South Africa, Sweden, Switzerland, Thailand and Turkey.
(2) Ten-year U.S. Treasury bond rate plus the five-year CDS rate.

Sources: Central Bank of Chile and Bloomberg.

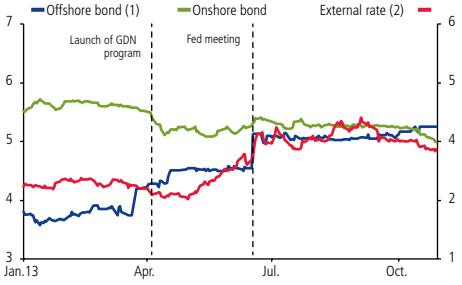
FIGURE II.4
Sensitivity to external factors and the risk-adjusted return (*)
(coefficient)



(*) Based on an uncovered parity model[3]/. The sample of countries is listed in figure II.3. Chile is in red.

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

FIGURE II.5
Ten-year sovereign rates
(percent)



(1) Peso-denominated bond issued by the Treasury overseas in 2010.
(2) U.S. Treasury bond rate plus the Chilean five-year CDS rate.

Sources: Central Bank of Chile and Bloomberg.

The effects of these portfolio reallocations on market rates have been mixed. According to internal estimates, the changes in the pension funds' deposit holdings in April and September would have generated an impact on rates of ±20 basis points[1]/. From a historical perspective, these changes represent approximately half a standard deviation of these rates. The effect on interest rates was limited in January and August, however, because the movements by the pension funds were offset by seasonal fluctuations in mutual fund deposits.

In June, the Superintendence of Pensions implemented measures aimed at providing more information to pension fund affiliates and increasing transparency in the process of changing funds, as well as softening the effects of these changes on the domestic market[2]/. While these measures have only recently begun to enter into effect, and then only partially, data on transfers in September suggest that they may already have had an impact on the volume of transfers.

TABLE II.1
Movements of pension fund affiliates in 2013 (*)
(number of affiliates)

	January	April	July	August	September
Type A fund	73,266	-99,215	94,656	-106,595	77,714
Type E fund	-75,337	124,509	-87,842	129,522	-71,735

(*) Only transfers between funds within a given pension fund administrator (AFP) are reported, such that cases of affiliates that changed both their AFP and their fund type are not included. Includes transfers in all accounts maintained by the AFPs: mandatory savings accounts, voluntary savings accounts, compensation savings accounts, second (non-pension) accounts, voluntary affiliates, employer contract accounts (i.e., matching funds) and Collective Voluntary Pension Savings (APVC). Movements are recorded in the month in which the transfer was effected (which could be different from the month in which the affiliate requested the transfer). Excludes age-based changes in allocation made by default.

Source: Superintendence of Pensions.

FIXED-INCOME MARKET

Long-term sovereign interest rates have not reacted to the changes in international financial conditions.

From late April to September 2013, the local ten-year sovereign bond rate in pesos was practically unchanged. In the same period, the ten-year U.S. Treasury bond rate increased over 100 basis points, in response to expectations that the Fed would soon start to withdraw the monetary stimulus (chapter I). This low sensitivity to offshore rates contrasts with the trends observed in other economies, which recorded significant movements in their sovereign rates in the same period (figure II.3).

[1]/ This calculation is based on the model of the determinants for the prime-swap spread described in the *Financial Stability Report*, Second Half 2010.
[2]/ These are as follows: (i) the creation of an informational screen on profitability for affiliates requesting a change in funds; (ii) the authorization for Type E funds to invest up to 10% in investment vehicles with a small share of restricted instruments; and (iii) the pro rata allocation of massive transfers, when changes exceed 5% of a pension fund's value.

As indicated in the last *Report*, it is not unusual to find periods of low covariance between Chilean interest rates and offshore rates. A simple parity model applied to a broad set of economies suggests that in comparative terms, the local long-term sovereign bond rates have a low sensitivity to offshore rates (a low beta), but a high risk-adjusted nominal return (a high alfa) (figure II.4)[3]/. Internal estimates show that the level of these parameters and their ranking among countries have been relatively stable over time.

Various indicators suggest that the above trend could be associated with idiosyncratic factors in the local fixed-income market.

The low sensitivity of local sovereign bonds contrasts with the high covariance of peso-denominated offshore bonds and U.S. rates. This bond increased 53 basis points between April and September 2013 (figure II.5). The close relation between the offshore bond and international conditions points to a segmentation between the offshore market (which has a high share of nonresident investors) and the local market (which has a low share of this type of investor).

Nonresident investors' holding of public debt issued in Chile is low in comparison with a sample of emerging countries (figure II.6). This could be explained, in part, by frictions in the local debt market, such as the capital gains tax, the cost of securities custody and other administrative costs, and the relatively small size of the sovereign fixed-income market, especially in relation to the institutional investors [4]/.

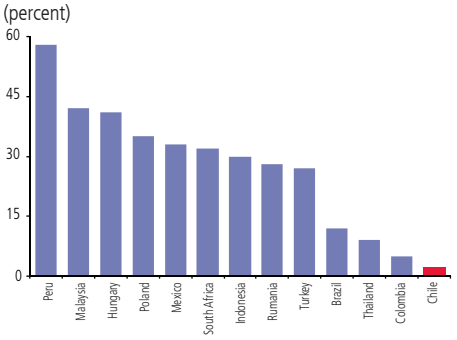
Another indicator is the strong co-movement between the local and international variable-income markets (figure II.7). Investment in variable-income instruments with a strong stock market presence is exempt from the capital gains tax for nonresidents, whereas fixed-income investments are subject to more stringent requirements for the exemption. This is consistent with the hypothesis of segmentation in the local debt market in particular, as opposed to a generalized segmentation at the country level by nonresident investors.

Future scenarios could include local rate adjustments.

As a result of some recent changes, local rates could become more sensitive to their benchmarks in the coming quarters. The global depositary note (GDN) program, which was launched in April and described in the last *Financial Stability Report,* and the Single Funds Law, which will facilitate exemptions from the capital gains tax for nonresidents in the local fixed-income market, should promote greater integration between the local and international debt markets[5]/.

[3]/ The estimated model is as follows: Ri = □i + □i (Tbond + CDS) + □i. Estimation is robust to specifications that consider different risk measures, gradual adjustment and different estimation windows (which fluctuate between 2005 and 2013).
[4]/ Braun and Briones (2008).
[5]/ In Colombia, withholding at the source on portfolio investment returns for nonresidents was reduced from 33 to 14% in early 2013. This change triggered an adjustment between domestic and offshore sovereign rates. In Peru, the launch of the GDN program in 2007 doubled nonresident holdings of locally issued sovereign bonds.

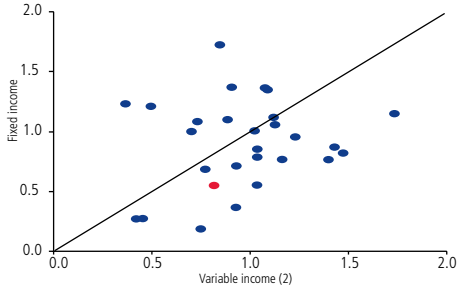
FIGURE II.6
Non-resident share of local fixed-income market (*)
(percent)



(*) Data for the third quarter of 2012.

Sources: IMF, World Bank and Central Bank of Chile.

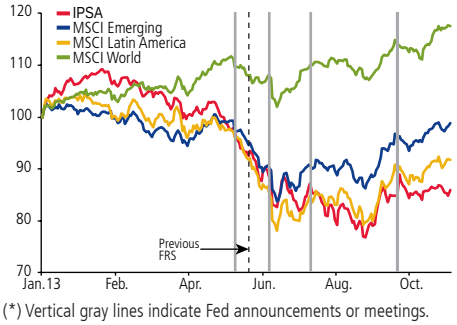
FIGURE II.7
Sensitivity of the fixed-income and variable-income markets to external factors (1)
(coefficient)



(1) Average for the second half of 2013. Includes Australia, Belgium, Brazil, Chile (in red), China, Colombia, South Korea, Slovakia, Philippines, Finland, France, Holland, Israel, Italy, Japan, Malaysia, Mexico, New Zealand, Norway, Peru, United Kingdom, Czech Republic, Russia, South Africa, Sweden, Switzerland, Thailand and Turkey.
(2) Obtained using a model of stock market arbitrage. See the *Financial Stability Report* for the Second Half of 2010.

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

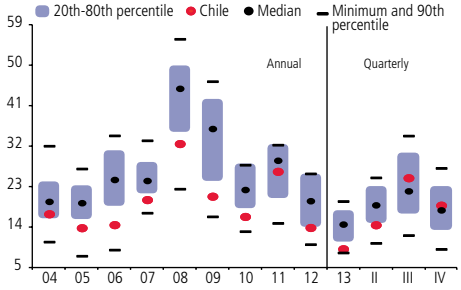
FIGURE II.8
IPSA and international indices (*)
(base index: 01.Jan.13= 100)



(*) Vertical gray lines indicate Fed announcements or meetings.

Source: Bloomberg.

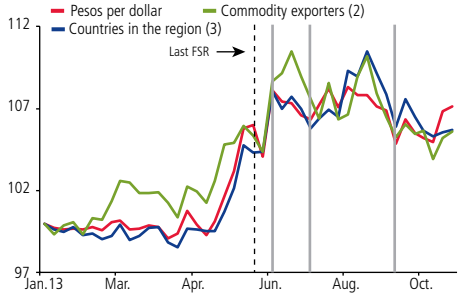
FIGURE II.9
Stock index volatility in emerging countries (*)
(annualized percent, in dollars)



(*) 20-day moving average of the daily variation in the stock index. Includes Chile, Russia, Brazil, Mexico, Peru, Colombia, South Africa, South Korea, China, India, Malaysia, Philippines, Hungary, Poland, Czech Republic and Turkey.

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

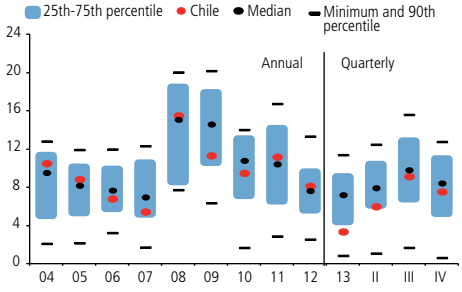
FIGURE II.10
Benchmark parities (1)
(base index: Jan.13=100)



(1) Vertical gray lines indicate Fed announcements or meetings.
(2) Australia, New Zealand, Norway and Canada.
(3) Peru, Brazil, Colombia and Mexico.

Source: Bloomberg.

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



(*) 20-day moving average of the daily variation in the exchange rate. Includes the countries listed in figure II.9 plus the Eurozone, United Kingdom, Japan, Canada, Norway, Australia, New Zealand, Indonesia and Vietnam.

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

This could trigger a higher degree of transmission of external conditions to the local fixed-income market. On the other hand, the greater potential demand for national fixed-income assets should lead to a lower risk-adjusted return (alfa) and greater liquidity in the domestic market, which would reduce the impact of shocks caused by local agents.

STOCK AND FOREIGN EXCHANGE MARKETS

The stock and foreign currency markets have been affected by expectations about the course of U.S. monetary policy.

Since the last *Report*, the local stock index (the *IPSA*) has been influenced by announcements on the monetary stimulus withdrawal in the United States, as have the stock indices of other emerging economies (figure II.8). The evolution of the *IPSA* over the course of the year was similar to other Latin American exchanges, although the local index was stable between September and the statistical closing date of this *Report* while other markets recorded an increase. The volatility of the *IPSA* increased, as was the case in other economies, but stayed within its historical ranges (figure II.9).

The exchange rate movements recorded since the statistical closing date of the last *Report* have also been dominated by international developments. The fluctuations in the peso thus reflect the change in expectations for the monetary stimulus withdrawal in the United States (figure II.10). Moreover, the peso depreciated markedly after the close of this Report, some of which is captured in the December *Monetary Policy Report*. Exchange rate volatility, in turn, increased to values on par with historical averages; this represents a normalization from the low degree of volatility in the first part of the year. This increase was seen at the global level (figure II.11).

In sum, the announcements regarding the end of the Fed's stimulus program have affected the local stock and foreign exchange markets. This suggests that any new noise from this process will again generate heightened volatility in these markets. In the fixed-income market, the baseline scenario projects that there will continue to be a low degree of co-movement between local and offshore rates. The possibility remains, however, that the local market could display higher levels of integration over a medium-term horizon. Consequently, a sudden withdrawal of the U.S. monetary stimulus measures could also have a significant impact on local long-term rates.

III. CREDIT USERS

Business debt has grown in line with economic activity. Financial indicators remain stable on average, but increased fragility has been recorded in specific sectors and in a group of large firms. Inventories are still down in the residential real estate sector, while prices continue to display a growth dynamic. Aggregate household debt indicators remain stable, with a growing share of bank financing and greater concentration in medium- and high-income households.

FIRMS

The debt level and financing sources of firms have been stable relative to GDP.

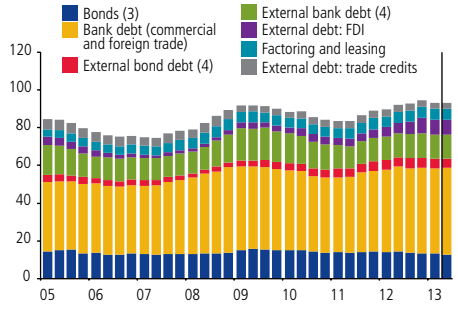
The annual growth rate of business debt slowed in the second quarter of the year (7.9%), such that the level over GDP held at 93% (figure III.1). The main sources for the increased debt continued to be the banking sector, via commercial loans and external loans tied to foreign direct investment (FDI) (table III.1). The latter are concentrated in the financial services and mining sectors. While this growth has been substantial in recent quarters, there is little risk that the debt will be rolled over, given that it derives from a contract between related parties (parent-affiliate).

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

Indicator	Ave.. 2005-07	2008 IV	2009 IV	2010 IV	2011 IV	2012 IV	2013 I	2013 II	Share	Growth contribution (1)
Local debt	12.6	6.8	2.5	3.8	12.1	8.0	7.8	5.3	69.2	3.7
Bank and other loans	13.9	9.2	-1.3	4.3	13.5	10.4	10.1	8.2	55.7	4.5
Commercial loans	12.6	6.2	8.8	1.9	9.6	12.0	10.9	8.4	42.0	3.5
Foreign trade	16.8	32.5	-39.5	11.5	38.5	3.4	8.2	10.5	7.4	0.8
Factoring and leasing (2)	19.7	2.1	-10.2	15.0	16.4	7.9	7.6	4.2	6.3	0.3
Local listed securities (3)	8.1	-1.4	17.0	2.3	7.7	-0.2	-0.5	-5.2	13.5	-0.8
External debt (4)	-0.9	13.4	16.7	4.6	8.4	20.4	17.5	14.4	30.8	4.2
Loans	6.1	19.0	18.8	-9.5	-2.5	9.8	9.4	6.1	13.4	0.8
Commercial credits	3.4	-1.4	-19.6	16.2	12.7	-9.1	-11.7	-11.5	3.3	0.0
Bonds	-11.1	-1.6	51.7	26.1	24.5	13.4	7.9	9.1	5.5	0.5
FDI-related loans	-25.2	36.0	38.1	41.2	24.6	81.2	70.0	55.6	8.6	3.3
Total	**8.6**	**8.5**	**6.4**	**4.1**	**11.0**	**11.6**	**10.6**	**7.9**	**100.0**	**7.9**

(1) Percentage points.
(2) Factoring includes banking and nonbank institutions.
(3) Corporate bonds (except *Codelco*), securitized bonds with nonbank underlying assets and commercial papers, at market value. Balance at second quarter 2013, estimated based on data from CSD and the international investment position.
(4) Includes FDI-related loans. Converted to pesos using the average rate in the moving year.
Source: Central Bank of Chile based on data from Achef, SBIF and SVS.

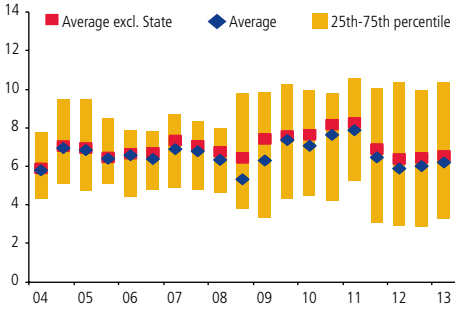
FIGURE III.1
Total debt of nonfinancial firms (1)
(percent of GDP) (2)



(1) The vertical line marks the closing date of the last *Financial Stability Report*.
(2) GDP is for the moving year ending in each quarter.
(3) Corporate bonds (except *Codelco*), securitized bonds with nonbank underlying assets and commercial papers, at market value.
(4) Converted to pesos using the average exchange rate in the moving year.

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

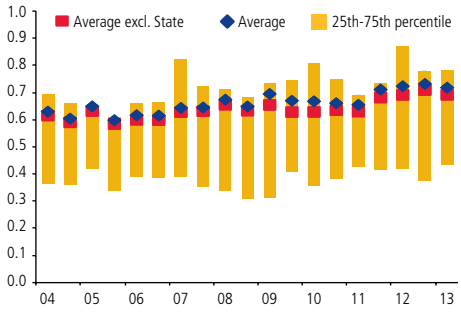
FIGURE III.2
Return on assets (1)(2)
(percent of total assets)



(1) Cumulative earnings of the last 12 months before financial expenses and taxes over total assets.
(2) Data for June and December of each year.

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

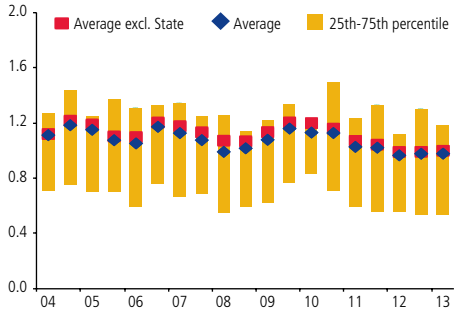
FIGURE III.3
Indebtedness (1)(2)
(percent of total assets)



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

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

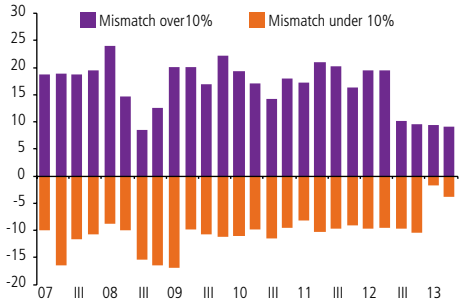
FIGURE III.4
Liquidity (1)(2)
(percent of total assets)



(1) Acid test: current assets less inventories over current liabilities.
(2) Data for June and December of each year.

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

FIGURE III.5
Share of assets held by firms with a greater mismatch (*)
(percent of total assets)



(*) Dollar liabilities minus dollar assets, minus the net derivatives position, as a percent of total assets.

Debt over GDP has also been stable at the sectoral level in the last four quarters. However, there are important sectoral differences in the composition of financing sources. The sectors with the largest share of bank financing are agriculture (including agriculture, livestock, fruit growing, forestry and fishing), commerce and construction, which together account for nearly a third of the banking sector's commercial loans (box III.1).

Financial indicators are stable at the aggregate level, but there are important differences among sectors.

For the set of firms that report their financial statements to the Superintendence of Securities and Insurance (SVS), return on assets was 6.2% in June 2013, or 6.6% if estate-owned companies are excluded. Both values are in line with the averages for the period 2004–2008 (figure III.2). Financial debt was 70% of equity, on average, and has been stable a that level over the last five years (figure III.3). Liquidity—measured as the ratio of current assets less inventories over current liabilities—was also stable (figure III.4).

At the sectoral level, the earnings of SVS-reporting firms indicate that return on assets is below the historical average in the food, construction and forestry sectors (table III.2). Within the food sector, the lower profitability reflects the performance of one specific firm and the fishing subsector. In the forestry sector, the drop is more pronounced when looking at the balance sheets of individual firms.

TABLE III.2
Sectoral profitability
(percent)

	Ave..	2009	2010	2011	2012				2013	
	2002-08	IV	IV	IV	I	II	III	IV	I	II
Food	7.6	10.3	11.8	9.6	8.5	7.1	6.2	3.3	1.9	1.9
Construction	7.8	3.9	4.4	4.0	4.2	5.3	4.3	5.1	5.1	4.9
Consumer	6.4	5.1	5.4	4.2	4.5	4.3	3.6	8.2	8.6	6.8
Electricity and energy	6.1	11.7	9.4	8.5	8.8	8.4	8.8	8.9	8.8	10.5
Forestry	5.4	4.3	7.0	6.9	6.2	5.3	5.1	4.2	4.4	5.2
Services	6.1	5.7	6.9	8.2	8.2	9.3	9.2	8.6	8.7	8.9
Transport and telecommunications	6.8	7.0	8.9	2.3	1.6	3.3	4.3	4.8	5.6	2.9
Total	**6.3**	**7.6**	**8.2**	**6.9**	**6.6**	**6.4**	**6.5**	**6.5**	**6.6**	**6.6**

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

The relatively low profitability of construction and fishing recorded by the corporate sector is mirrored in smaller firms. In a sample of firms subject to first-category tax rates, return on assets fell from 3.9 to 0.6% in construction and from 2.8 to 0.0% in fishing between 2007 and 2012[1]/.

[1]/ The construction sector is discussed in more detail in the section on the real estate sector (in this chapter).

The currency mismatch was stable as of the second quarter of 2013.

The corporate sector had a relatively small currency mismatch as of the second quarter of the year. In a sample of private firms that report their financial statements in pesos to the SVS, the mismatch averaged 1% of total assets, with the distribution concentrated between –2 and 2%. The percentage of firms with a mismatch of over 10% of their assets was below the average for 2007–2012 (figure III.5).

Although it is not possible to calculate a mismatch indicator for businesses that do not report their financial statements to the SVS, banking sector data show that a significant share of commercial loans in foreign currency is directed to the tradables sector (figure III.6). An analysis of derivatives use also indicates that currency hedging is most common in sectors with a higher exposure to foreign trade.

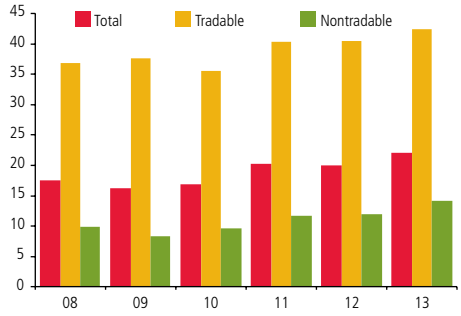
Some risk indicators have deteriorated in recent quarters.

The nonperforming loan (NPL) ratio has increased in recent quarters (figure III.7). Payment behavior has deteriorated for small and medium-sized firms, as well as companies in the construction sector (chapter IV).

The percentage of firms in the corporate sector with negative earnings was just over 25% in June 2013, which together represent 7.5% of assets. These figures are somewhat higher than in the growth period before the subprime crisis but lower than in the Asian crisis (box III.2). In the current economic climate, the increase in this indicator largely reflects the specific circumstances of a group of large firms; no pattern has been found between negative earnings and prior growth levels, the method of financing or sector, with the exception of fishing.

In sum, the corporate sector's financial indicators have been stable, on average, although financial fragility has increased in some specific sectors with low earnings. This is especially notable in some smaller companies in the construction sector, due to their relatively greater exposure to the local business cycle. Finally, some risk indicators point to a deterioration of the corporate position in the most recent period, which contrasts with the favorable economic scenario in recent quarters.

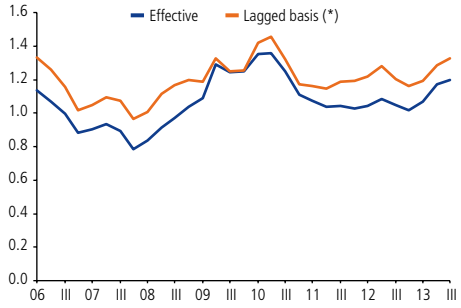
FIGURE III.6
Foreign currency debt (*)
(percent of total commercial debt)



(*) Data for August of each year.

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

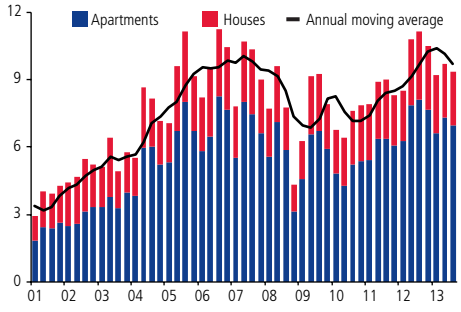
FIGURE III.7
Nonperforming commercial loans



(*) A 12-month lag is used for the comparative basis.

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

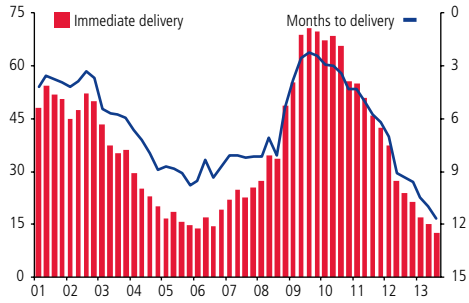
FIGURE III.8
New home sales in Greater Santiago (*)
(thousands of units)



(*) Includes purchase commitments.

Source: Collect.

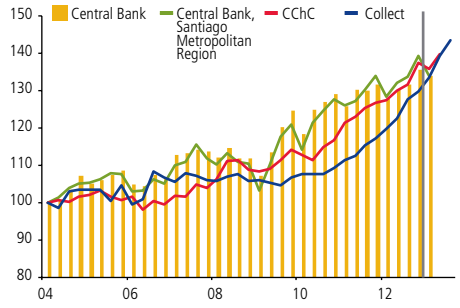
FIGURE III.9
New home sales by project status (*)
(percent, months)



(*) Includes purchase commitments. Right axis in inverse order.

Source: Collect.

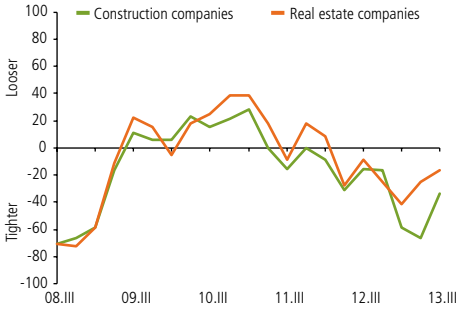
FIGURE III.10
Real housing prices (*)
(base index: Mar.04 =100)



(*) The vertical line marks the closing date of the last *Financial Stability Report*. CChC: Chilean Chamber of Construction.

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

FIGURE III.11
Change in credit supply (1)(2)
(percent of total responses)



(1) After June 2010, considers banks that have loans in the respective segment.
(2) The difference between the number of banks that think loan approval standards are looser and the number that think loan approval standards are tighter, as a percent of total responses.

Source: Central Bank of Chile.

REAL ESTATE SECTOR

Sales in the real estate sector remain high, in a context of low inventories.

New home sales in Greater Santiago remain high at levels similar to the period 2006–2007, but with lower inventories (figure III.8). The percentage of sales with immediate delivery continued to fall, reaching 10% in the third quarter of 2013, while longer delivery schedules have pushed back new home delivery to one year, which is the longest delivery schedule of the last decade (figure III.9). Many new projects are coming on line, however, which should contribute to the recovery of inventory levels and the shortening of home delivery in the medium term.

Aggregate home prices continue the trend of previous periods.

The behavior of average home prices has been in line with the growth of income and the stability of long-term interest rates (figure III.10). There are important differences among communities, however, with sharper increases in the northern regions of the country and in the eastern municipalities of Greater Santiago. In the latter, inventories are especially low and the land supply is limited, which are the likely causes of the price increases.

Credit conditions remain tight for real estate and construction companies.

As of the third quarter, bank lending conditions remained tight for real estate and construction companies (figure III.11). Return on assets was stable for SVS-reporting firms in the real estate sector as of the second quarter of 2013, but lower than in 2007 and 2008. Financial debt was 0.8 times equity for construction companies and 1.5 times for real estate firms. This ratio has risen since 2007–2008, when it was 0.7 and 0.8 times, respectively.

Other sources of information confirm that profitability has fallen for companies

TABLE III.3
Return on assets of firms in the real estate sector
(median, percent)

	2007	2008	2009	2010	2011	2012
SMEs						
Construction companies	3.9	3.5	0.2	2.4	0.9	0.6
Real estate companies	3.2	1.5	0.7	1.4	1.3	1.2
Large firms						
Construction companies	1.8	1.6	1.1	2.2	1.9	1.5
Real estate companies	3.0	4.5	3.3	3.6	3.2	2.9

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

in the construction sector relative to 2007–2008. In line with the estimates in the last *Report*, the smaller construction companies have recorded a sharper drop in earnings than the larger companies (table III.3). According to sources in the sector, the low profitability of these companies is due to the combination of lags in the prices of construction contracts and increases in real labor costs. The larger construction companies have been able to offset this disparity, in part, through earnings from their real estate business. The lower earnings of construction companies is reflected in their bank payment histories (chapter IV). This compression of margins should be reversed in the medium term, as wage growth slows in the sector and new contracts are awarded.

As new office projects come on line, vacancy rates could rise even higher.

As projected in the last *Report*, the office market recorded a strong increase in available space in 2013, which had an effect on vacancy rates and rental prices. This situation could be exacerbated as new projects come on the market in 2013–2014, which are expected to add an additional 500,000 square meters of class A and A+ office space (figure II.12).

In sum, the residential real estate sector continues to be characterized by strong demand and low inventories. Aggregate prices have followed a sustained growth trend, in line with the favorable conditions for housing demand (income and interest rates). Nevertheless, the risk scenarios described in this *Report* could imply significant adjustments in demand conditions, so a note of caution is in order as advised in past *Reports*. On one hand, the risk of a slowdown in demand and the projected increase in supply add a degree of uncertainty to the future evolution of prices. On the other, the low profitability recorded by smaller construction companies makes them more vulnerable to a sharp slowdown in demand in the sector.

HOUSEHOLDS

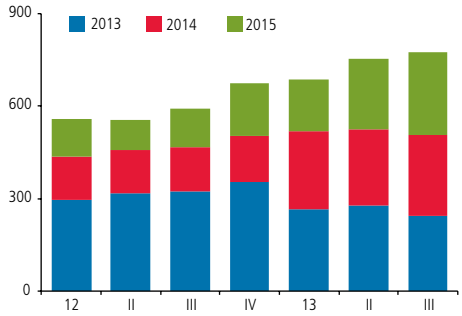
Aggregate debt fell marginally.

In the second quarter of the year, household debt was 55% of disposable income, down slightly from 57% two years ago (figure III.13). The household financial burden also fell slightly in the same period, from 16 to 15% of disposable income (figure III.14).

The growth of household debt continues to be led by bank loans.

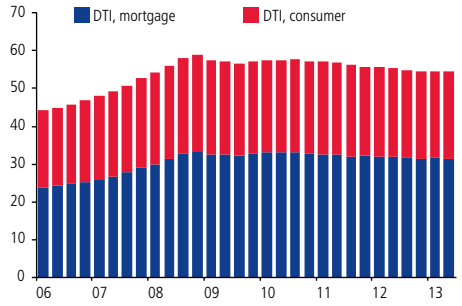
Total household debt grew 8% in the second quarter of 2013, consistent with its long-term trend (figure III.15). One of the major contributors to this growth was bank mortgage debt, which expanded 9% in real annual terms (table III.4). Consumer debt grew 7.5% in real annual terms, driven by bank consumer loans.

FIGURE III.12
Incorporation of new office projects: Class A and A+
(thousands of square meters, forecast)



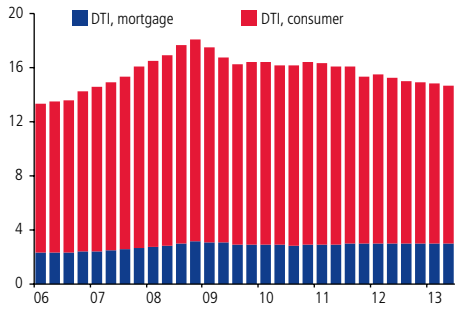
Source: Central Bank of Chile, based on data from Global Property Solutions.

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



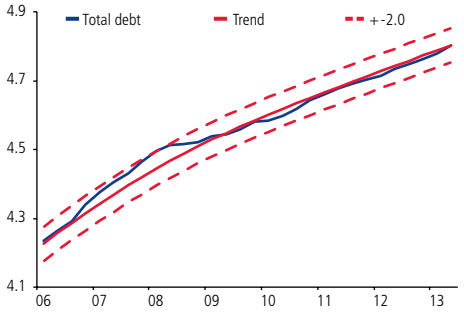
Source: Central Bank of Chile, based on data from the SVS, SBIF and SuSeSo.

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



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

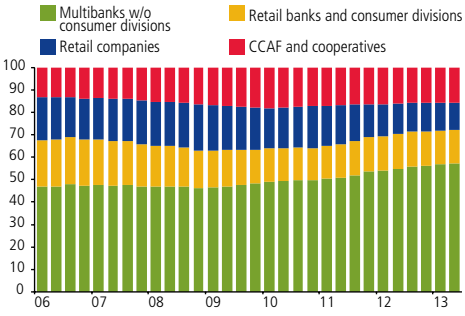
FIGURE III.15
Per capita household debt (*)
(logarithm)



(*) Total debt of households, measured in UF, over the national population.

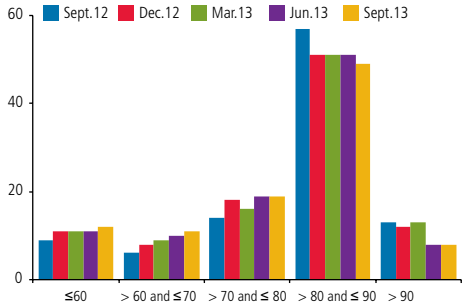
Source: Central Bank of Chile, based on data from the SBIF, SuSeSo and SVS.

FIGURE III.16
Share of lenders in total consumer debt
(percent)



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

FIGURE III.17
Loan-to-value ratio
(percent of total mortgages)



Source: Central Bank of Chile.

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

	2009 IV	2010 IV	2011 IV	2012 I	2012 II	2012 III	2012 IV	2013 I	2013 II	Growth contribution (1)	Share
Mortgage	8.5	7.2	7.0	7.0	7.5	7.7	7.6	8.3	8.4	4.8	57.4
Bank	9.7	9.2	8.0	8.1	8.3	8.3	8.3	8.9	9.0	4.6	51.4
Nonbank (2)	1.1	-5.8	-0.7	-0.9	1.4	3.0	2.0	4.0	4.1	0.3	6.0
Consumer	5.0	6.9	7.0	5.1	5.4	5.6	7.3	7.5	7.5	3.2	42.6
Bank	3.3	8.8	13.3	11.0	10.7	10.4	8.9	9.3	9.6	2.5	26.1
Nonbank	0.2	4.7	-7.6	-9.8	-10.4	-10.2	-2.3	-0.5	-1.1	-0.1	10.3
Retailers	-8.4	6.1	-15.1	-18.5	-19.3	-19.1	-5.6	-2.4	-5.8	-0.3	4.7
CCAF (3)	9.7	3.8	5.2	3.6	2.5	0.6	3.5	3.9	7.3	0.3	3.7
Cooperatives	16.7	2.1	-5.1	-5.5	-4.4	-1.8	-3.3	-3.6	-3.9	-0.1	1.9
Other (4)	36.8	3.6	18.3	18.3	21.4	20.8	21.9	16.6	15.2	0.9	6.3
Total	**7.0**	**7.0**	**7.0**	**6.2**	**6.6**	**6.8**	**7.4**	**8.0**	**8.0**	**8.0**	**100.0**

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

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

Loans from nonbank lenders fell 1.1% in annual terms in the second quarter, continuing the lower growth trend identified in the last *Financial Stability Report*. The nonbank share thus fell to 28% of total consumer debt (figure III.16). In other debt, the growth rate of car loans decreased from 20 to 7% between the second quarter of 2012 and 2013.

The growth patterns of bank mortgage and consumer debt point to an increase in average debt.

The increase in mortgage debt was largely intensive: average debt grew at an annual rate of 7.2% in the second quarter of 2013. This is consistent with rising home prices (table III.5). In contrast, the growth of consumer debt was mainly extensive, that is, driven by a larger number of debtors. The expansion of the number of debtors has slowed significantly in the last two quarters, however, which would imply more dynamic growth of average debt (table III.5).

Lending standards were stable for mortgages…

According to the Bank Lending Survey for the third quarter of 2013, the majority of mortgage loans were granted with a loan-to-value (LTV) ratio of 80 to 90% (figure III.17). While interest rates on these loans rose 20 basis points in the last year, they are still 50 basis points below the average of 2002–2008.

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

	2011				2012				2013	
	I	II	III	IV	I	II	III	IV	I	II
Consumer	12.2	13.1	13.8	13.3	11.0	10.7	10.4	8.9	9.3	9.6
Debtors	5.2	7.4	7.8	8.1	10.0	9.3	9.1	9.6	7.6	6.6
Average debt	6.6	5.3	5.5	4.8	0.9	1.3	1.2	-0.7	1.5	2.8
Mortgage	9.6	9.1	8.7	8.2	8.1	8.3	8.3	8.3	8.9	9.0
Debtors	4.2	4.1	3.5	2.6	2.2	2.2	2.3	2.3	2.4	1.7
Average debt	5.2	4.8	5.1	5.4	5.7	6.0	5.9	5.9	6.3	7.2

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

…while the standards for consumer loans remained tight, as described in the last *Report*.

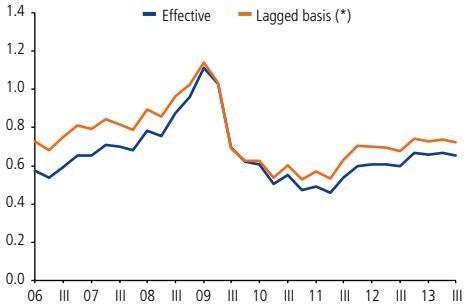
The Bank Lending Survey reveals that lending conditions are tight for consumer loans, especially in terms of the credit scoring criteria. The movement in the average bank interest rate on these loans varies by amount. For loans under 200 UF, the interest rate increased 400 basis points in the last two years, whereas rates were stable for loans over 200 UF.

The dynamics of lending from nonbank sources and bank consumer divisions (chapter IV), the tightening of bank lending standards, the change in holding at the extensive margin and the rate differentials by loan amount confirm the increase in the relative supply of credit to medium- and high-income households highlighted in the last *Report*.

Default indicators have been relatively stable.

Default indicators for the bank consumer portfolio have been stable, although they are somewhat high considering the favorable economic conditions. The NPL ratio for consumer loans increased after mid-2011, settling at 0.7% of loans between the second quarter of 2012 and 2013 (figure III.18). For nonbank lenders, delinquency of 90 days or more did not register any significant changes between the second quarter of this year and the last, staying at just under 5% of the loan stock (figure III.19).

FIGURE III.18
Nonperforming bank consumer loans
(percent of loans)



(*) A 12-month lag is used for the comparative basis.

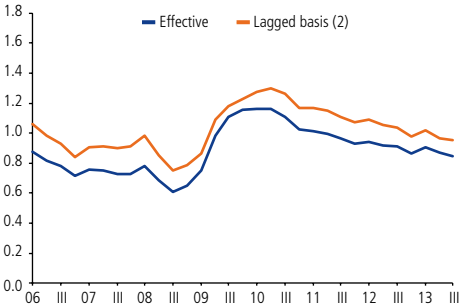
Source: Central Bank of Chile, based on data from the SBIF.

FIGURE III.19
90-day delinquency of nonbank lenders (*)
(percent of loans)

(*) A three-month lag is used for the comparative basis. Quarterly data.

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

FIGURE III.20
Nonperforming mortgage loans (1)
(percent of loans)



(1) Excluding Banco Estado.
(2) A 12-month lag is used for the comparative basis.

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

The NPL ratio for mortgages has fallen in the last three years, reaching 0.9% of the loan stock in the second quarter of 2013 (figure III.20). This is in line with the behavior of delinquency of 90 days or more in the mortgage portfolio (chapter IV).

In sum, total debt has expanded in line with household income. However, three points need to be taken into account: (i) the change in the composition of consumer debt financing sources (with a larger share of bank financing); (ii) an increase in mortgage debt due to higher average debt; and (iii) the maintenance of tighter conditions on smaller consumer loans. This reinforces the message of the last *Report*, namely, that both the debt level and the financial burden could be rising in medium- and high-income households.

To the extent that banks adequately evaluate and consider the credit risks inherent to this segment, the trend should not represent a source of vulnerability. However, two factors could contribute to underestimating the risks. First, revolving loans have recorded strong growth in recent years (chapter IV; and *Financial Stability Report,* First Half 2013). Second, the absence of a consolidated debt registry makes it harder for lenders and supervisors to assess the credit risk of households.

BOX III.1 THE SECTORAL EVOLUTION OF CHILEAN BUSINESS DEBT

This box presents a sectoral analysis of debt by type of lender, identifying each sector's dependence on the different sources of financing. The objective is to augment the aggregate analysis of business debt, which cannot identify the specific characteristics of the debt level and composition that differentiate the economic sectors.

The analysis uses data on local bank debt reported by the SBIF; data on local bonds from the SVS; and data on external debt compiled by the Central Bank of Chile. Based on these data, all financing sources are classified by economic sector, using the SBIF nine-sector classification[1]/, with the exception of commercial loans deriving from imports and debt from leasing and factoring[2]/[3]/.

The debt amount can be characterized by the following stylized facts (figure III.21):

(a) The sectors with the highest absolute debt level are financial services (including conglomerates) and community services (including state-owned companies).

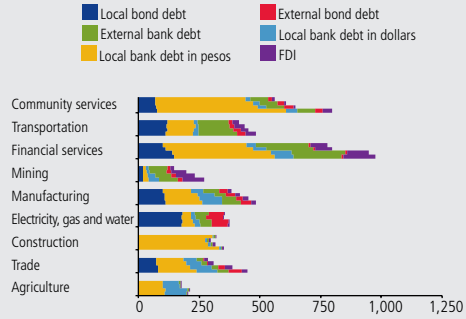
(b) The sectors with the most exposure to dollar-denominated debt are the tradables sectors: agriculture, mining and manufacturing (figure III.6).

(c) The sectors with the greatest dependence on local bank financing are agriculture and construction. In contrast, electricity, gas and water (EGW) and mining have a low dependence on this source of financing.

(d) With regard to bond financing, EGW in particular has a large amount placed in both the internal and external markets, which is consistent with the project implementation and operation horizons in the sector.

(e) External financing through foreign direct investment (FDI) (parent-affiliate) is concentrated in mining and financial services. In the former, the increase of recent years is related to the growth cycle of investment in the sector, as described in past *Reports*.

FIGURE III.21
Total debt by economic sector and source of financing, 2009-2012 (*)
(UF million)



(*) Each bar represents data for December of each year, starting at the top with 2009 and ending with 2012.

Sources: Central Bank of Chile, SBIF and SVS.

The indebtedness level, scaled by the annual sales of each sector, indicates the following (figure III.22)[4]/[5]/

(a) The debt level, relative to sales, was stable in almost all sectors.

(b) In mining, the debt level started to rise in 2011, which is directly related to the investment cycle in this sector. The debt component with the largest increase is FDI (parent-affiliate).

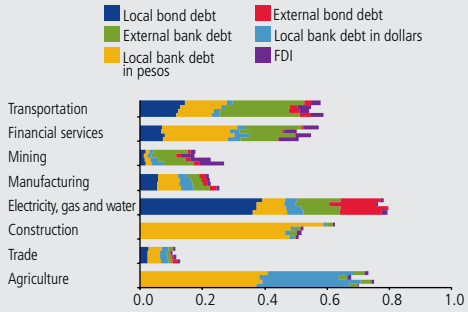
[1]/ For more detail on the methodology used, as well as the precise definition of sectors and its agreement with the Economic Activity Classification, see Fernández and Vásquez (2013).
[2]/ That is, the analysis includes over 90% of the debt reported in this *Financial Stability Report*. Therefore, the conclusions presented in the box should be interpreted as applicable to the group of debt used.
[3]/ In the financing sources included in figure III.1, local bank debt is differentiated by currency (pesos versus foreign currency/dollars).

[4]/ The community services sector is excluded because it reports very low sales relative to debt. Sales are used for scaling because aggregate data on sectoral assets are not available.
[5]/ Using sectoral GDP as a debt deflator did not result in any major differences.

(c) In construction, debt to sales fell significantly between 2009 and 2010. This movement offset an increase of similar magnitude recorded in 2008 and 2009, which reflected a sharp decrease in sales that was not matched by a similar reduction in the debt level. This event highlights the cyclical nature of the sector[6]/.

In sum, the analysis finds significant sectoral differences in terms of the financing sources used, which translates into a heterogeneous exposure to the different lenders.

FIGURE III.22
Total debt over annual sales by economic sector and source of financing, 2009-2012 (*)
(times)



(*) Each bar represents data for December of each year, starting at the top with 2009 and ending with 2012.

Sources: Central Bank of Chile, SBIF and SVS.

[6] / The 2008 data used for this analysis are not available for all types of debt, but the available data on the local banking system provide a sufficient basis for analyzing the sector. Thus, the amount of debt in 2008 is similar to the amount reported for 2010.

BOX III.2 EVOLUTION OF THE SHARE OF FIRMS WITH NEGATIVE EARNINGS

In this box, the analysis of the corporate risk indicator based on firms with negative earnings is extended to cover the last 20 years[1]/. This analysis complements the tracking of central trend indicators (average and median). From the perspective of financial stability, extreme indicators are important for identifying vulnerabilities in the corporate sector.

Background

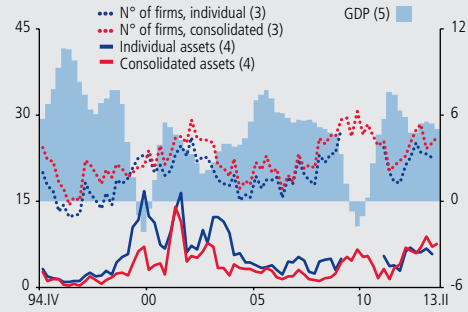
The data sources used in this box support the measurement of earnings before and after financial expenses. The former is the best available approximation of operating income; the latter allows a more precise identification of the impact of financing conditions on the profitability of firms.

The available data provide financial indicators at both the consolidated and individual levels[2]/. The former provides an aggregate view of the economic group, independently of the business or country from which the flows originate, whereas the use of individual balance sheets allows the identification of flows by type of business. Both are used for the robustness of the analysis.

Evolution of the indicator

From a historical perspective, the number of firms with negative operating income generally parallels the business cycle (figure III.23). Thus, the share of these firms increases during the Asian and subprime crises, as does the percentage of assets held by firms with negative operating income. These results are robust to the use of consolidated or individual balance sheets; the main difference is that the individual level shows a more prolonged deterioration than the consolidated level.

FIGURE III.23
Firms with negative earnings (1)(2)
(percent)



(1) Earnings before financial expenses and taxes over total assets.
(2) Values subject to revision. The information on individual firms after 2009 is obtained from reports provided to the SVS by the firms for statistical purposes only and is not IFRS data.
(3) Number of firms with negative earnings over total firms.
(4) Assets held by firms with negative earnings over total assets.
(5) Annual change of annualized quarterly GDP, chained.

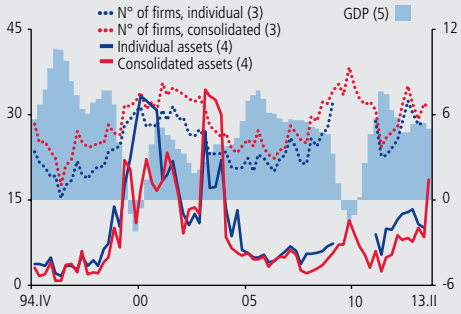
Source: Central Bank of Chile, based on data from the SVS.

However, this pattern is not observed in the most recent period, in that the number of firms with negative operating income is relatively high despite the favorable economic climate. Of these firms, fishing is the only sector the exhibits fairly generalized losses. Nevertheless, the largest share of the increase in the risk indicators does not follow a specific pattern, but rather reflects idiosyncratic factors in a set of larger firms.

[1]/ Excluding state-owned companies.
[2]/ The source for individual data changed in 2009. From 1994 to 2008, the data are from the Uniform Codified Statistical Forms, with individual reports for all firms. As of 2009, only consolidated statements are required for some firms, following convergence with IFRS. The SVS has compiled additional data on firms for statistical purposes only; this is the basis for the individual-level results starting in 2010 (Fernández and Espinosa, 2013).

The analysis using earnings after financial expenses finds a different evolution (figure III.24). Under this measure, the percentage of assets held by firms with losses, while increasing at the margin, is relatively stable over time and is substantially lower than during the Asian crisis[3]/. This reflects the current favorable financial conditions, especially compared with 1999 and 2001.

FIGURE III.24
Firms with losses (1)(2)
(percent)



(1) Losses are defined as negative earnings before taxes over total assets.
(2) Values subject to revision. The information on individual firms after 2009 is obtained from reports provided to the SVS by the firms for statistical purposes only and is not IFRS data.
(3) Number of firms with losses over total firms.
(4) Assets held by firms with losses over total firms.
(5) Annual change of annualized quarterly GDP, chained.

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

In sum, from a historical perspective, the risk indicators are relatively low, especially earnings after financial expenses. However, these indicators have deteriorated in the most recent period, mainly linked to some larger firms.

[3]/ The exception is the last quarter, where the increase in the number of firms with losses at the consolidated level reflects an isolated case. The same occurred in the fourth quarter of 2002.

IV. BANKING SYSTEM

Bank lending has eased, which is consistent with the slowdown in economic activity. Although credit risk indicators have deteriorated as expected, the impact of the risk scenarios described in this Report *on bank solvency remains limited.*

The slowdown in economic activity has translated into lower lending activity at the margin, which should continue in the coming months.

Since the last *Financial Stability Report*, total loans in the banking system have stabilized at a real annual growth rate of around 9% (10% average in April), while there is increasing convergence between groups of banks and loan segments (figure IV.1 and appendix table IV.A1).

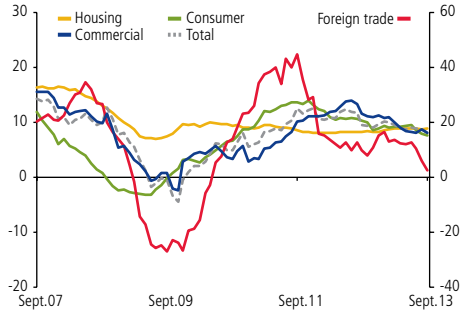
Financing conditions remain favorable.

In the local market, long-term rates have been stable, and money market spreads are around the system's historical averages (chapter II). The solidity of the banking sector explains the high international credit ratings of the larger institutions at the global level and their ability to access external debt and credit markets.

However, since the last *Report*, one bank faced misaligned interest rates in the short- and long-term wholesale market relative to its historical trend, together with a lower turnover of its deposits in the secondary market, despite having a strong solvency position (chapter II). The situation began to normalize in the fourth quarter. The rise in the cost of financing stemmed from lower demand for that bank's instruments on the part of some institutional investors, due to concerns about the financial situation of the parent group. The subsequent normalization reflected the recovery of investors' confidence following actions taken by the bank and its parent company and the assimilation of the available information, including the limited degree of exposure to related companies.

This episode provides two lessons. The first is that wholesale funding is highly elastic to changes in the perception of an issuer's risk and the liquidity of the secondary market for its instruments. This corroborates the concern for the risks of short-term wholesale funding, raised repeatedly in various *Financial Stability Reports* and reinforced by the review of liquidity standards being carried out by the Central Bank (chapter V).

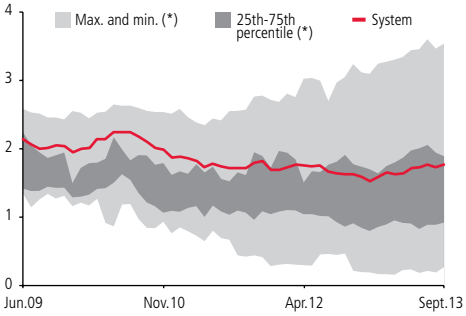
FIGURE IV.1
Annual growth rate of loans (*)
(percent)



(*) Annual change in UFs, except for foreign trade loans, which are in dollars.

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

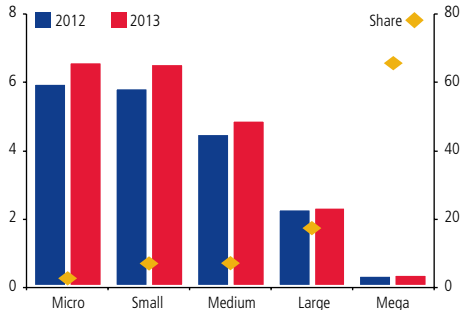
FIGURE IV.2
Delinquency of 90 days or more: commercial portfolio
(percent)



(*) The distribution excludes banks in the consumer, treasury and foreign trade niches.

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

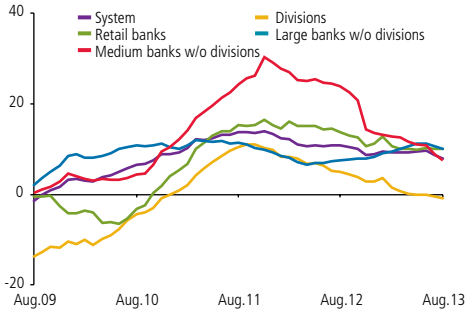
FIGURE IV.3
Delinquency and share of commercial loans (*)
(percent del total)



(*) Projection of a sales classification proposed by *Corfo* of the volumes of commercial debt in the SBIF debtor system. For the purposes of classification, the historical maximum debt amount is used, in order to increase the stability of the segmentation presented.

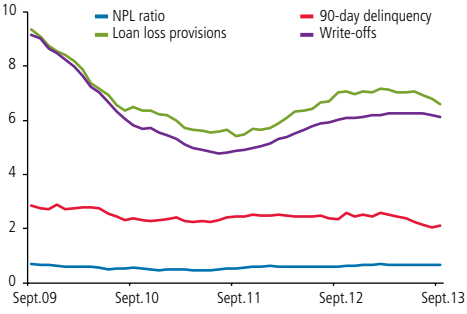
Source: Central Bank of Chile, based on data from the SBIF.

FIGURE IV.4
Risk indicators for bank consumer loans
(percent of loans)



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

FIGURE IV.5
Risk indicators for bank consumer loans
(percent of loans)



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

The second lesson is that in the absence of a supervisory framework for financial conglomerates, it is crucial to maintain and refine a regulatory framework that minimizes cross-exposure within the conglomerates. The new SBIF regulations on operating assumptions for related companies represent an important advance for the banking system. Similarly, the draft bill on Risk-Based Supervision is a step in the right direction for the life insurance companies (chapter V and box V.1).

Default indicators increased in the commercial portfolio in the recent period.

In the commercial portfolio, delinquency of 90 days or more has increased at the system level since the last *Report*, although the average is still below 2009–2010 levels (figure IV.2).

The payment behavior of small and medium-sized enterprises, in particular, has deteriorated (figure IV.3). There are also signs of a deterioration in the payment behavior of companies in the construction sector. The banking industry's heterogeneous exposure by sector and size and the exposure of some banks to large firms facing complex financial situations explains the wide dispersion of delinquency of 90 days or more among different banks.

Banks responded by increasing specific provisions, which explains the higher loan loss provisions since the last *Report*. The banking system has thus maintained a provisioning coverage ratio of more than one (figure IV.A1 in the appendix).

This trend could be accentuated in response to negative news from the corporate sector and increased sensitivity to the cycle in some segments.

Some of the recent news on problems in some firms in the corporate sector has not yet been fully incorporated on the bank balance sheets as of the statistical closing date of this *Report*. Therefore, loan loss provisions could continue to increase. The financial situation in the construction, forestry and fishing sectors is also a concern (chapter III). Of these three sectors, construction has the greatest weight in the banking system portfolio (13% of commercial loans, on average, versus 1% each for fishing and forestry)[1]/.

The strong growth of micro and small businesses in the growth phase of the cycle implies an increase in credit risk, as this segment is more sensitive to the cycle and has higher default rates (figures IV.3 and appendix figure IV.A2). The risk is partially mitigated by the fact that some of the loans are guaranteed by the state, and their share of the total commercial portfolio is low (10% for the system as a whole)[2]/.

[1]/ According to SBIF data, the banking system's exposure to the forestry sector (forests and forest products) is less than 4% of commercial loans in the majority of institutions. The same applies to fishing. Exposure to construction is higher, exceeding 10% of commercial loans in half of all institutions.
[2]/ Between January and August 2013, *Corfo* provided guarantees to smaller firms equivalent to US$3.2 billion; this was an increase of 38% relative to the same period of the previous year.

In the consumer portfolio, risk indicators have stabilized for the system, but they have risen relatively more in banks that were more active in past periods.

The annual growth rate of consumer loans continued to drop in specialized consumer divisions (figure IV.4), consistent with a strategy of targeting medium- and high-income households (chapter III). Write-offs increased in 2012 and the first half of 2013, mainly in these same divisions, which contributed to stabilizing consumer credit risk indicators in the last few months (figure IV.5).

Nevertheless, the delinquency index increased more sharply in banks that have been more dynamic in this portfolio starting in 2010, although the increase was generally accompanied by an adequate provisioning coverage ratio of over 1.9 times (figure IV.6).

Profitability shows signs of recovering, and solvency levels remain high, albeit while falling at the margin.

The favorable trend in the net interest margin supported an increase in return on assets since the last *Report* (figure IV.7). The recovery of the net interest margin reflected lower average financing costs at the system level and the entry into commercial segments with higher margins. However, loan loss provisions continue to represent a negative contribution to earnings, such that the projected increase in credit risk, especially in the commercial portfolio, could cause a reversal of this improvement.

The capital adequacy ratio (CAR) has fallen since the last *Report*, due to an increase in risk-weighted assets combined with a stable Tier 1 capital level[3]/. Even so, the system-wide CAR is still close to 13%, and all individual banks have a CAR of 10% or higher (figure IV.8).

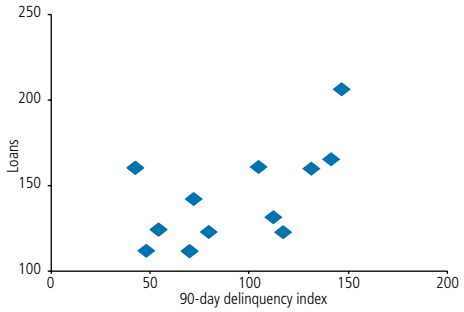
RISK FACTORS

If the economy slows more than expected, credit risk could rise in institutions with a greater exposure to cyclical sectors.

In the current economic climate, the construction sector is a particular concern, due to its weight in the banking system's commercial portfolio and the relatively deteriorated financial situation of the smaller firms in the sector (chapter III).

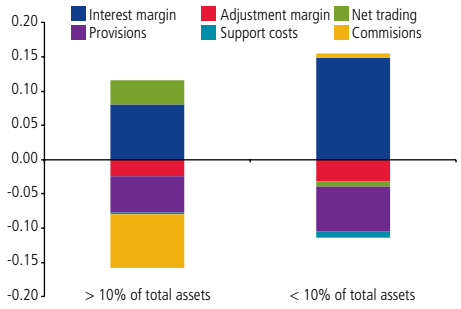
A sharper-than-expected economic slowdown could also increase consumer credit risk. The recent delinquency trend suggests that this increase would be greatest in the portfolios of banks that were more dynamic in the last period. The current stock of revolving loans is another element of concern, although their growth rate has slowed at the system level (9% in the last year, versus 14%

FIGURE IV.6
Consumer loans at Sept.13
(base index: Sept.10=100)



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

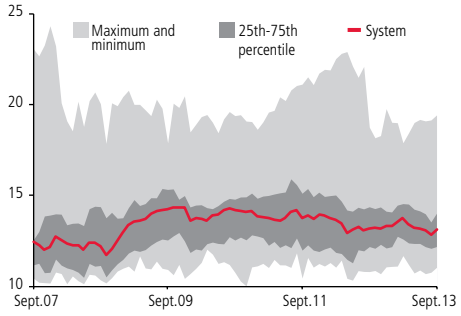
FIGURE IV.7
Change in the main components of ROA: Sept.13-Dec.12 (*)



(*) Based on consolidated balance sheets.

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

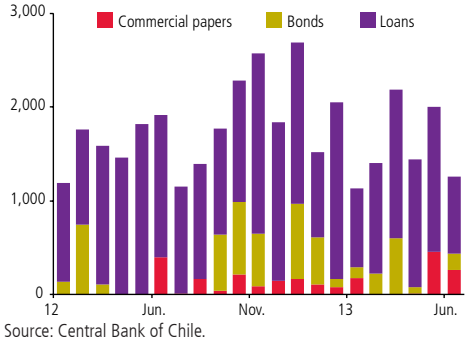
FIGURE IV.8
Capital adequacy ratio (CAR)
(percent of risk-weighted assets)



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

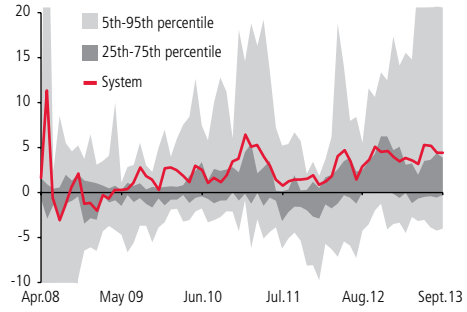
[3]/ Capital contributions of nearly US$500 million have been announced but have yet to be implemented.

FIGURE IV.9
External financial flows
(US$ million)



Source: Central Bank of Chile.

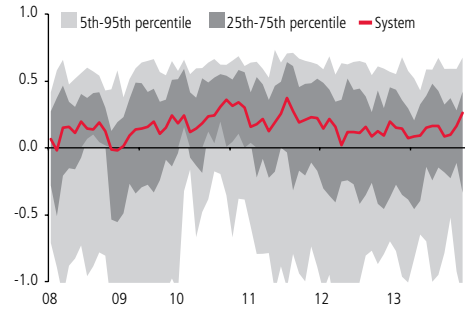
FIGURE IV.10
Foreign currency balance (*)
(liabilities minus assets)



(*) Excluding foreign trade and treasury banks.

Source: Central Bank of Chile.

FIGURE IV.11
Foreign currency mismatch at 30 days (*)
(liabilities minus assets, times Tier 1 capital)



(*) Excluding foreign trade and treasury banks.

Source: Central Bank of Chile.

between July 2011 and 2012) (appendix figure IV.A3). With this type of loan, it is easy to underestimate a portfolio deterioration. Moreover, the interest rate rises if a debtor defaults on payments, which can lead to a substantial increase in loan payments and thus in the debtor's financial burden.

The banking system could face periods of volatility in the wholesale funding markets…

One of the volatility factors in the local market is the effect of announcements by local financial advisors, which have become more frequent since the last *Report* (chapter II). The monetary stimulus and fiscal situation in the United States also has a potential impact on local long-term interest rates. Finally, the materialization of any of the external risk scenarios could cause a deterioration in the banking system's external financing conditions (chapter I).

Over the last few years, the banking industry has tended to reduce its dependence on short-term wholesale funding, yet some small and medium-sized banks remain highly dependent on this source. While wholesale funding plays an important role in market discipline, it is very sensitive to changes in the perception of an issuer's risk and the liquidity of the secondary market for its instruments.

…which highlights the importance of having a diversified funding matrix.

As the preceding section highlights, it is important for the banking system to have a diversified funding structure, progressively reducing its dependence on local short-term institutional sources and implementing a prudent asset management strategy that, depending on quality, could provide liquidity in times of stress. Consequently, the smaller banks' strong dependence on institutional time deposits remains a source of concern (box IV.1).

It is also important for the banks' liquidity management to include the development of stress tests and contingency plans that appropriately reflect their risks, business strategies, financial condition and funding capacity under different market conditions (chapter V).

The recent issue of U.S. commercial paper by the largest banks is thus a positive development (figure IV.9). Despite being a short-term obligation, commercial paper diversifies the banks' wholesale funding sources at maturities similar to the local money market and improves the distribution of the external creditor matrix. These banks must be careful, however, that these alternative sources do not replace other funding sources that are more stable or longer term.

In the next half, long-term interest rates and the exchange rate could potentially be subject to new episodes of volatility.

Given the complexity of economic policy management in the United States and its potential impact on the local market (chapters I and II), the scenario of a gradual

increase in long-term sovereign and corporate rates, in both pesos and foreign currency, must be complemented by additional scenarios involving faster hikes or possible overreactions in these rates, as well as greater exchange rate volatility.

Although market and liquidity risk are reasonably contained for the bulk of the system (figures IV.10 and IV.11), it is important for the banks to prudently manage their currency risk and their exposure to fluctuations in long-term interest rates, given the current global conditions.

STRESS TESTS[4]/

Stress tests show that the banking system is in an appropriate financial position to absorb the materialization of a severe stress scenario.

The stress tests use macro and accounting information for the banking system as of June 2013. Credit risk is calculated by estimating a model that relates provisions—which reflect the payment behavior of debtors—primarily with economic activity, under baseline and stress scenarios.

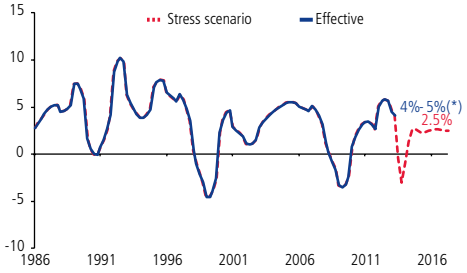
The stress scenario considers a drop in output in the short term and slower growth in the medium term, with negative growth rates for the third and fourth quarters of 2013 (–1.7% on average) and the first quarter of 2014 (–1%). Growth then converges to a rate of 2.5% in 2016. This set-up replicates the impact of important episodes of financial fragility in the past few decades, which were characterized by a short, but sharp slowdown that eased off in the medium term (figure IV.12).

For the purposes of calculating market risk, three types of exposure are evaluated: currency, valuation and repricing. Currency risk (or foreign exchange risk) is assessed in a scenario characterized by a sharp depreciation of the Chilean peso against the U.S. dollar and its impact on the foreign currency mismatch on the banks' balance sheets. Valuation and repricing risks depend on interest rate fluctuations, so they are evaluated in the event of a shock to the spot and forward yield curves, respectively. Valuation risk is calculated as the loss caused by a fluctuation in spot rates for different maturities and its effect on assets in the trading book. Repricing risk is measured as the loss deriving from refinancing liabilities—based on banking book data—in the face of an increase in future rates and depending on fluctuations across the forward yield curve.

The stress scenario affecting market risk contemplates a 20% exchange rate depreciation, equivalent to the sharpest fluctuation recorded in a 15-day period from 2000 to the present, which occurred in 2008 (figure IV.13). To complete the set-up, the scenario includes shocks that shift the spot and forward yield curves,

[4]/ This analysis is based on the methodology decribed in Jara, Luna and Oda (2007) and Alfaro and Sagner (2011). Both the analysis and the results are regularly reported to the SBIF.

FIGURE IV.12
Annual growth rate of GDP
(quarterly data, percent)



(*) Forecast in the baseline scenario in the September *Monetary Policy Report*, with a 2014 growth rate in the range of 4-5%.

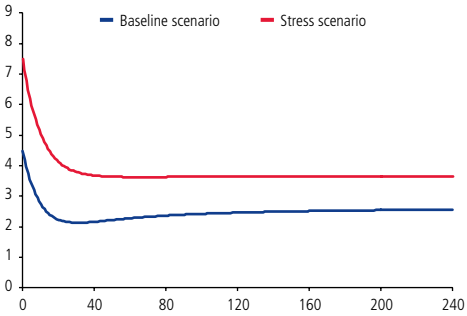
Source: Central Bank of Chile.

FIGURE IV.13
Exchange rate shock
(percent)

(*) 20% depreciation in 15 days is the maximum recorded since 2000.

Source: Central Bank of Chile.

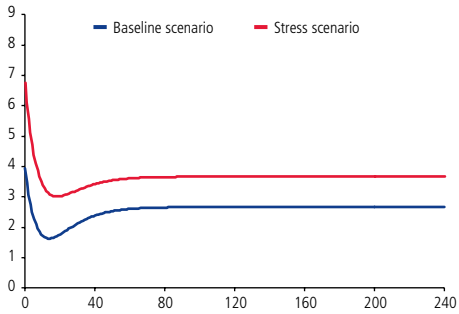
FIGURE IV.14
Structure of spot indexed interest rates (*)
(percent, months)



(*) The estimation of the interest rate structure under the baseline scenario is made using the Nelson-Siegel model, with data for June 2013.

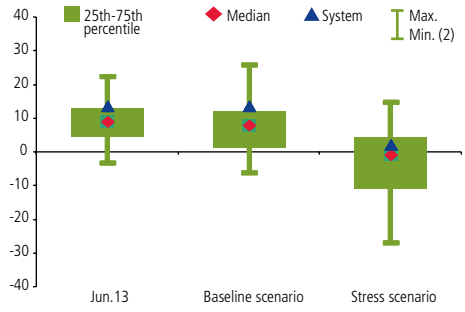
Source: Central Bank of Chile.

FIGURE IV.15
Structure of forward indexed interest rates
(percent, months)



Source: Central Bank of Chile.

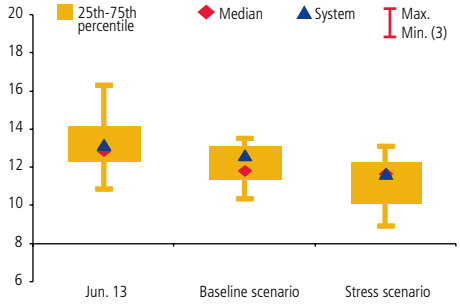
FIGURE IV.16
Impact of different scenarios on return on equity (1)
(net income over Tier 1 capital)



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

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

FIGURE IV.17
Impact of different scenarios on the capital adequacy ratio (1) (2)
(effective equity over risk-weighted assets)



(1) Data are weighted by the Tier 1 capital of each institution.
(2) The calculations exclude foreign trade and treasury banks.
(3) The maximum is the 90th percentile.
Source: Central Bank of Chile, based on data from the SBIF.

in both cases with an increase of 300 basis points in the short-term interest rate and 100 basis points in the long-term rate (figures IV.14 and IV.15)[5]/.

In comparison with the stress tests carried out for the last Report, which used data for December 2012, the initial situation that serves as the starting point for the current stress test is somewhat less favorable. The return on equity (ROE) for the banking system is 0.8 percentage points lower (13.6 versus 14.4%), and the CAR has fallen 0.1 percentage point (from 13.3 to 13.2%).

The stress tests show that under the stress scenario, the ROE would fall to 2.1 percentage points of Tier 1 capital (table IV.1), compared with 5.2 percentage points in the stress test described in the last Report. At the individual level, the banks that would have negative earnings under the stress scenario account for 47% of the banking system's Tier 1 capital (figure IV.16), versus 43% in the last stress test. For the majority of the banks, however, which together represent 62% of the system's Tier 1 capital, the CAR would remain above 11% (figure IV.17)[6]/.

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

	Stress scenario
Initial ROE	13.6
Market risk	-1.5
Valuation	-0.5
Repricing	-1.0
Currency	0.0
Credit risk	-14.1
Consumer	-8.7
Commercial	-4.4
Home mortgage	-1.0
Margin	4.2
Final ROE	2.1

A second stress scenario was also analyzed in which only the long-term interest rates rise (250 basis points), given the risks of an increase in long rates identified in this *Report* (chapters I and II). The effects are modest and lower than the results under the last scenario. Nevertheless, some institutions with mismatches on longer-term papers would experience a larger impact on their earnings due to this shock.

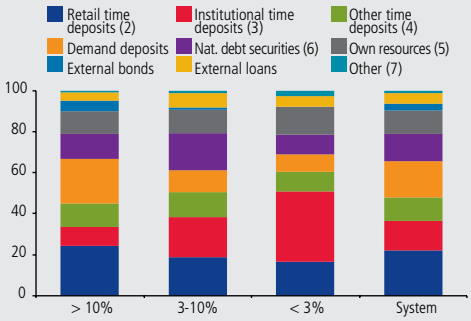
Finally, bear in mind that stress tests are an analytical tool that contribute to identifying financial strengths and weaknesses in a given moment of time. Given their partial nature, they do not necessarily uncover all the effects of specific risk scenarios. Consequently, they should not be interpreted as projection exercises.

[5]/ The baseline scenario considers an activity level and interest rates consistent with the forecasts presented in the *Monetary Policy Report* in September 2013. Specifically, the economic growth rate used for this year is in the range of 4.0 to 4.5%, while the interest rates on UF-denominated loans between 1 and 3 years and on mortgage loans over 20 years forecast for December 2013, are 5.0 and 4.6%, respectively.
[6]/ These results consider the reinvestment of earnings.

BOX IV.1 INSTITUTIONAL DEPOSITS IN THE CHILEAN BANKING SYSTEM

Time deposits are the main source of financing for the Chilean banking system, accounting for nearly 50% of the system's total liabilities (figure IV.18). They are followed by demand deposits (18%), debt instruments in the local market (13%), equity (11%) and external liabilities (8%).

FIGURE IV.18
Sources of financing of the banking system, August 2013
(percent of total liabilities) (1)



(1) Total liabilities net of contingent liabilities and fair value of derivative instruments.
(2) Natural persons and nonfinancial firms.
(3) Mutual funds and pension funds.
(4) Other wholesalers, state-owned companies and the external sector.
(5) Tier 1 capital, provisions, net fair value of derivative instruments and earnings.
(6) Local bonds and letters of credit.
(7) Residual in comparison with balance sheet data.

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

Retail time deposits (characterized by a large number of depositors and relatively low individual amounts) tend to be more stable, even during periods of financial stress. In contrast, wholesale time deposits tend to be more sensitive to market volatility, since they are concentrated among a few creditors with better access to information and more sophisticated investment decisions[1]/.

Consequently, the presence of a large share of retail deposits in the banking system's loan financing has traditionally been considered a contributing factor for greater stability[2]/. Based on an international comparison, the Chilean banking system has a relatively low indicator in this regard (table IV.2), which is explained, in part, by the high levels of household pension savings in the institutional sector[3]/. These institutions recirculate a portion of the savings in the banking system, through deposits (short term) or the purchase of debt securities (long term).

TABLE IV.2
Retail deposits to loans (*)
(percent)

United States	139	Canada	96	Germany	77
Argentina	136	Colombia	95	Italy	64
Japan	133	South Korea	86	Chile	60
United Kingdom	99	Turkey	85	Finland	55
Peru	98	Spain	78	South Africa	52

(*) Excluding interbank loans.

Sources: FSI, IMF.

Given this structural characteristic of the Chilean economy and the risks that short-term financing implies for the stability of the financial system—as clearly demonstrated in the last international crisis—the *Financial Stability Report* has warned against the risk of a strong dependence on wholesale deposits. This box describes the banking sector's exposure to deposits from the pension funds (PFs) and mutual funds (MFs), which are the main institutional actors in the time deposit market (hereafter, "institutional deposits").

Mutual funds versus pension funds

In general, the degree of dependence on institutional deposits is inversely proportional to the relative size of the banking entities (the larger the bank, the lower its dependence). Large banks (which have an extensive network of branches and represent over 10% of system assets) capture the bulk of retail and demand deposits in the industry, and their dependence on institutional deposits thus tends to be lower.

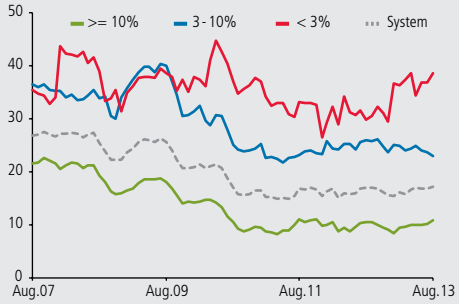
The banks significantly reduced their dependence on institutional deposits for financing loans between 2009 and 2011. This stemmed primarily from a change in PF investment decisions in response to the increase in their overall limit on offshore

[1]/ See Ansidei and others (2012) for an analysis of the impact of the crisis on U.S. money markets; see Jara and Winkler (2005) for an analysis of liquidity and funding risk in the Chilean banking system. Some of the volatility of wholesale deposits is also capture in the discussion of the weights on institutional deposits applied by Basel III, in the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) (BIS, 2010).
[2]/ In a broad literature review, the BIS (2013) shows that retail deposits that are not exchange traded reduce the probability of severe insolvency problems or the cost of resolution in the case of bank failure, and they are associated with more stable lending activity in times of stress.

[3]/ According to data from the Household Financial Survey for 2011–12, almost 75% of households declare some type of contribution to the obligatory pension system, while only 8% declare savings in the form of financial assets. For more information, see Avanzini and Perez (2013).

investment in late 2007[4]/ and changes in their relative portfolio returns. The trend eventually stabilized at around 10 percentage points below the average of the previous period. The pattern was recorded in all but the smallest banks, with a market share of under 3% of system assets. These latter institutions recorded an increase in the share of their loan portfolio financed through institutional deposits from 30 to 40% in the last year, while their loan growth rate was 14% in real annual terms on average (figure IV.19).

FIGURE IV.19
Dependence on PFs and MFs (*)
(percent of loans)



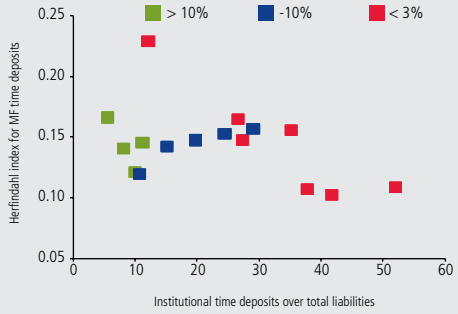
(*) Excluding foreign trade and treasury banks.
Source: Central Bank of Chile.

Through early 2009, over half of all institutional deposits originated from the PFs, but the MFs have become increasingly important in this segment. Thus, of the over US$36 billion in institutional deposits in the banking system as of July 2013, only 30% came from the PFs, with a residual maturity of six months, on average. In the case of deposits from the MFs, nearly 80% are Type 1 funds, which according to regulations are short-term instruments with a maximum average duration of 90 days[5]/.

Although the small banks have a high exposure to institutional deposits, they tend to display greater diversification within this segment, that is, a lower concentration by MF manager (figure IV.20). Moreover, these banks usually mitigate the liquidity risk associated with their strong dependence on institutional deposits by carrying a larger share of liquid assets on their balance sheets and using a proportionally larger share of own resources in their funding structure.

[4]/ The limit was gradually increased between August 2007 and September 2011. For more details, see http://www.bcentral.cl/prensa/comunicados-consejo/disposiciones-normativas/index.htm and http://www.bcentral.cl/prensa/comunicados-consejo/otros-temas/04112010.pdf.
[5]/ The time deposits that make up Type 2 mutual funds represent 10% of total deposits from the MF industry; 8% for Type 3 funds; and 2.8% for the rest of the fixed-income MF time deposits.

FIGURE IV.20
Concentration of wholesale financing
(percent)

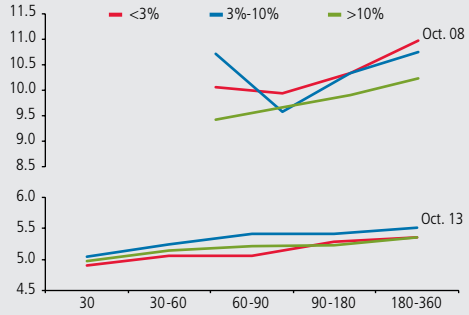


Source: Central Bank of Chile, based on data from the SVS and SP.

In sum, the banking system has generally reduced its dependence on internal short-term wholesale funding sources and, in some cases, increased the diversification of these sources. However, it is important to continue making progress in this direction, exploring more stable, longer-term alternatives. At the same time, the banks need to implement a prudent asset management, in which the growth of lending is not based on volatile funding sources.

Finally, the Central Bank is currently in the process of reviewing some of the rules governing bank liquidity management in Chile (chapter V).

FIGURE IV.21
Yield curves for time deposits in pesos
(percent annual, secondary market rates)



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

V. FINANCIAL REGULATION

This chapter reviews the most important regulatory developments at the local level and the most important issues in the debate on financial regulation at the international level in the second half of 2013.

NATIONAL REGULATION

Important regulatory developments in this half include the publication of banking regulations and the draft bill on risk-based supervision for life insurance companies. With regard to banks, the SBIF published guidelines to improve the regulatory framework on banks' transactions with related debtors and on corporate governance in banks. The Central Bank is currently in the process of reviewing the liquidity rules governing the banking sector. The first of these is directly related to the implications of financial conglomerates for the complexity of the system (box V.1).

Complementary guidelines to the regulations on bank transactions with related debtors

In November 2013, following a period for public comment, the SBIF published the definitive version of complementary articles to the regulations on bank transactions with related debtors, contained in Chapter 12-4 of the SBIF Updated Compilation of Regulations (*Recopilación Actualizada de Normas*, or RAN).

The SBIF is in the process of refining its regulatory guidelines to ensure that, even given the speed with which markets evolve, it can fulfill the supervisory objectives consigned to it under the General Banking Law. To this end, the SBIF has increased the number of situations in which it can be assumed that a loan has been granted to a related party, whether by ownership or by management.

By ownership, the guidelines now include cases in which it is not possible to verify, within the entity receiving the loan, the identity of participants or contributors that together own stock or shares representing 10% or more of equity; the pension funds and mutual funds are excluded from this assumption.

By management, the guidelines now include funds originating from the debtor's loans which are destined to finance, whether directly or indirectly, a natural or legal person related to the creditor bank. Finally, the system for reporting on positions with related persons has been improved.

Regulatory changes to improve corporate governance in banks

In November, the SBIF published changes to its regulations on the supervision of management and solvency (Chapter 1-13 of the RAN), which incorporate new guidelines to strengthen the role of bank corporate governance, mainly in risk management. The changes take into account international standards and recommendations in this area, as well as observations received during the period for public comment.

The SBIF established a supervisory judgment on the minimum standards of good corporate governance in a banking institution, based on factors such as the capacity of corporate governance to define objectives, corporate values, verification policies approved by the board, effective internal control and auditing processes, and the safeguarding of transparency within the entity. The regulations also emphasize that the board must disclose information of public interest, including a series of minimum reporting requirements.

A key aspect of the reform, as indicated by the SBIF, is that within the regular processes for the supervision of management and solvency, greater emphasis and a specific analytical process will be given to the corporate governance practices of each supervised bank.

Complementary modifications were introduced to specific rules applicable to the board members (chapter 1-4 of the RAN) and auditing committee (chapter 1-15). These changes emphasize the board's role as an official body entrusted with the management of the bank; define guidelines on the organizational characteristics of the advisory committee on which board members participate; and increase the requirements of the auditing committee in terms of the independence and qualifications of committee members. One important modification—for which compliance may be difficult for some entities—is the requirement that the directors who make up the auditing committee cannot participate in the bank's revenue and earnings.

Liquidity rules

The Central Bank is currently in the process of reviewing the liquidity rules governing the banking sector, contained in Chapter III.B.2 of the *Compendium of Financial Regulations*, in order to fine-tune the rules and increase convergence with international standards. The draft of the new regulation will be published for public comment in the first quarter of 2014.

The main objectives are as follows:

(a) To strengthen liquidity risk management policies in the banking system, establishing minimum criteria for developing stress tests and contingency plans.

(b) To include binding regulatory limits on a consolidated basis, in addition to individual limits, so as to take into account the liquidity management of bank affiliates, in particular in banks established overseas that are affiliates of Chilean financial institutions.

(c) To standardize the assumptions of internal models for banks authorized to use them.

(d) To add variables for monitoring the liquidity position of each bank, including the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), as proposed in Basel III; reports on concentration by creditor, instrument, currency and maturity; and the rollover rate of wholesale funding sources.

Some of these changes are aimed especially at achieving a more robust management of wholesale funding sources, in order to mitigate the risk factors described in box IV.1 and chapter IV of this *Report*.

Draft bill on risk-based supervision of the insurance companies

Given the prominence of life insurance companies in Chile, their interconnection with the financial system and the expected growth of life annuities, it is critical for these companies to adequately manage their risks. The draft bill currently being considered in Congress represents an important advance in this area. The bill, which is in line with international recommendations by the IMF, the World Bank and the OECD, incorporates capital charges that are aligned with the companies' risks (ex post insurance and ex ante incentives); increased capital requirements for longevity risk and reinvestment risk in low rate scenarios; greater risk management requirements; and expanded preventive powers for the SVS.

With regard to exposure to related entities (also addressed in chapter IV), modifications are being considered that would integrate the current individual limits on investment with related entities (7.5% on investments and 5.0% on real estate) to a single, combined limit of 7.5%, which would reduce the maximum exposure from 250% of equity to 150%. While these changes represent an improvement, the new limits are still high.

Finally, tables V.1 and V.2 present the main regulations published and opened for public comment, respectively.

INTERNATIONAL REGULATION

Offshore effects of the Dodd-Frank Act

The United States passed the Dodd-Frank Act in June 2010, thereby launching a deep reform of the country's financial regulation system. The reform included changes in the institutional structure of regulation, an expansion of the universe of regulated entities and limitations on the types of operations that banks can undertake. How the law is ultimately applied will depend on the rules and regulations that must be implemented in all the affected areas, some of which are still under debate.

The elements of the reform that are relevant for Chile include the requirements that could be applied to entities that carry out transactions outside the United States. This section reviews the restrictions that could be applied to U.S. banks with regard to investment and trading operations made on the banks' own accounts (Title VI of Dodd-Frank, also known as the Volcker Rule), together with the potential effects of these measures on Chilean market agents; and the increased requirements on derivative transactions (Title VII of Dodd-Frank).

The Volcker Rule (VR)

This section of the law limits the permissible activities of banks that take in public deposits and are covered by state guarantees. Specifically, the VR prohibits banking entities from undertaking the following activities: (1) engaging in proprietary trading; (2) investing in private equity funds and hedge funds; and (3) owning hedge funds or private equity funds[1]/. The VR thus recaptures the spirit of the Glass-Steagall Act, which separated investment banking from commercial banking and which was in effect from 1933 to 1999.

For the purposes of the VR, proprietary trading is defined as trading investments in which the bank takes a position as principal, primarily in securities and derivatives. The prohibition does not extend to the same type of investment in which the bank is acting as broker or agent, as opposed to using its own money.

With regard to the investment or ownership of hedge funds and private equity funds, the prohibition only applies to funds that do not have to register with the Securities and Exchange Commission (SEC) because they are beneficially owned by not more than one hundred persons or are owned solely by qualified purchasers[2]/.

The banking entities affected by these prohibitions include not only U.S. commercial banks, but also foreign banks that have affiliates or agencies in the United States or that own commercial banks in the United States. These agencies and their branches are called foreign banking organizations (FBOs). The proposed regulation provides exemptions to the proprietary trading and private fund prohibitions for qualified FBOs and their subsidiaries, based on the geographic location of their operations, to the extent that the activities in question are conducted "solely outside the United States" (the so-called SOTUS exemption).

In the case of proprietary trading, the SOTUS exemption would imply that no U.S. infrastructure or platform can be used in the financial institution's transactions; and no personnel working in the United States can be directly involved in the transactions. In the case of private funds, the exemption requires that the funds must be established outside the United States and cannot be offered to U.S. residents.

[1]/ Some general aspects of the VR were discussed in the last *Report*.
[2]/ Exceptions to the general registration requirement on SEC registration are contained in sections 3(c)(1) and 3(c)(7) of the Investment Company Act.

Finally, even if an FBO qualifies for the above exemptions and its operations comply with the condition of being conducted "solely outside the United States", it must comply with a series of additional requirements in order to receive the exemptions, including having a mechanism in place to manage conflicts of interest, imposing restrictions on operations involving high-risk assets, applying limits on transactions with related parties in the case of equity funds and establishing a ongoing compliance program to ensure that the FBO's trading and fund activities continue to adhere to the requirements of the exemptions.

These prohibitions on the activities of FBOs and the requirements for the SOTUS exemptions are being debated at the international level, and the regulatory process is still under development. It is therefore necessary to monitoring regulatory developments related to the VR. At the same time, financial entities that qualify as FBOs, or their subsidiaries, must be able to establish whether their proprietary trading and fund activities will remain exempt from the VR prohibitions and under what conditions.

For Chile, the development of this international debate and the form that is ultimately adopted is relevant as there are a number of local banks that could qualify as FBOs or subsidiaries of FBOs. As such, they would be subject to the VR and would either have to comply with exemption requirements or eliminate their proprietary trading.

Derivatives regulation

Title VII of the Dodd-Frank Act seeks a comprehensive reform of the derivatives industry in the United States, extending the regulatory perimeter to include the majority of derivatives transactions that were deregulated under the Commodity Futures Modernization Act of 2000.

For legal and regulatory purposes, the law uses the term swap to define a wide range of derivatives contracts. The supervisory structure continues to be centered on the Commodity Futures Trading Commission (CFTC) and the SEC, which are responsible for supervising different types of derivatives and market participants. Thus, the SEC regulates swaps based on a single security or loan and narrow-based security indices (security-based swaps), including credit default swaps; while the CFTC has regulatory authority over commodity swaps, general indices and U.S. federal government securities.

The law defines four categories of entities that will be subject to the new requirements, based on their importance in the derivatives market.

(a) Swap dealer (SD): entities that are market makers in derivatives or that act as a swap counterparty in the ordinary course of their business.

(b) Major swap participant (MSP): derivatives market participants that are not swap dealers, but that hold substantial derivative positions which could generate significant adverse effects in the United States or that are highly leveraged without being subject to bank capital requirements.

(c). Financial end user (FE): conglomerate, private fund, or natural or legal person whose main line of business is banking or financial activities.

(d) Nonfinancial end user (NFE): market participants that are not covered by the previous categories.

The new safeguards required by the law include market conduct standards. Market participants that are classified under either of the first two categories (SD and MSP) must satisfy market conduct standards developed by the supervisory agencies in the areas of fraud, limits on derivative positions, know-your-counterparty rules, transparency with counterparties in terms of derivatives risk, conflicts of interest, etc. SDs and MSPs must also comply with new capital and margin requirements. The law holds that these regulations safeguard the security and solidity of market agents and that they are appropriate for the risks associated with the transactions in question.

The law also establishes requirements related to the infrastructure for derivatives transactions, namely, the use of centralized clearing, the reporting of transactions to trade repositories and the use of transaction platforms for trading certain instruments. In this regard, a new type of regulated entity was created, called a swap execution facilities (SEF), defined as a system in which multiple participants can execute or trade derivatives, accepting bid-offer quotes from various participants in the system. In practice, this broad definition encompasses a large number of entities that were previously unregulated.

The requirement that swap transactions involving U.S. residents be executed through an SEF entered into effect in October. Market sources indicate that uncertainty surrounding compliance with this rule has significantly reduced the flow of transactions with U.S. counterparties, and a large share of these transactions has been redirected to other markets.

The magnitude of the impact of this legislation on entities established in Chile will depend on several factors, including the level of cross-border derivatives transactions and the jurisdiction of the parties involved. For example, given the current state of the regulations, an operation between a Chilean agent and one based in the United States must be negotiated, cleared and settled using U.S. financial infrastructure[3]/.

Chilean banks will be subject to these regulations in any transactions involving U.S. counterparties. The specific regulations to be applied will depend on the counterparty's category under the regulation (SD, MSP, FE or NFE).

[3]/ Although a central counterparty entity could potentially register in the United States as a derivative clearing organization or request an exception to this registration requirement.

Each category has different requirements. The most controversial rules are those that have a cross-border impact. In particular, given the level of bank secrecy and confidentiality in many jurisdictions, the obligation for swap dealers to report all their clients' derivative transactions to the corresponding U.S. authority.

The cross-border impact of Dodd-Frank has necessitated an increase in coordination efforts at the international level. For example, in the context of the European Market Infrastructure Regulation (EMIR), the European Commission and the CFTC have developed protocols to establish the mutual recognition of jurisdictions as equivalents, so that the respective regulatory frameworks do not overlap or leave gaps that would allow some kind of arbitrage.

The new international regulatory framework has positive aspects such as the increase in market transparency and centralized clearing and settlement. However, the complexity of implementation imposes costs that could be substantial.

Finally, table V.3 the main documents published on regulatory issues at the international level, which focus on solvency and liquidity; infrastructure and transparency; and resolution.

TABLE V.1
Main regulations issued in the second half of 2013

Date	Organization	Regulation	Subject and purposes
14-06-2013	SVS	MEMORANDUM 2108	Promotes competition and transparency among suppliers of third-party portfolio management services.
17-06-2013	SVS / SBIF	NCG 347, memoranda 3.551 for banks, 153 for cooperatives and 64 for affiliates	Strengthens transparency and competition in the public tender process for mortgage loan insurance.
03-07-2013	SVS / SP	NCG 348	Improves understanding of the different pension options offered by the AFPs and life Insurers, through the creation of new certified pension quotations and improvements in the transmittal letter that is sent with the quotations.
22-07-2013	SBIF	MEMORANDUM 40	Safeguards the confidence in and stability of the payment system for nonbank credit cards, by ensuring an adequate risk management.
30-07-2013	SVS	NCG, MEMORANDA 2114, and 2115	Issues regulations deriving from the change in insurance contract provisions in the Commercial Code. These regulations establish the minimum content for the text of new insurance policies and gives instruction on related matters.
30-07-2013	SP	RESOLUTION 51	Modifies the Pension Funds' investment scheme to increase flexibility in Type E portfolio management under scenarios of massive fund switching, in order to mitigate the potential impact on local prices.
21-10-2013	SVS	NCG 352	Modernizes the requirements for the listing of foreign securities in Chile.
13-11-2013	SBIF	MODIFICATION OF RAN CHAPTERS 1-4, 1-13 and 1-15. MEMORANDA 3,558 and 3,559	Systematizes the elements of good corporate governance.
19-11-2013	SBIF	MEMORANDUM 3,561 MODIFICATION OF RAN CHAPTER 12-4	Establishes the general circumstances or situations under which it can be assumed that there is a relationship between a person and a bank through ownership or management ties.

TABLE V.2
Main regulations published for public commentary in the second half of 2013

Date	Organization	Regulation	Subject and purposes
02-07-2013	SBIF	EXTENSION OF FINAL PUBLIC COMMENT PERIOD COMPENDIUM OF ACCOUNTING REGULATIONS – S&Ls	Accounting provisions for savings and loan cooperatives (S&Ls) that are subject to supervision by the SBIF, which will enter into effect in 2014.
12-07-2013	SVS	FINAL PUBLIC COMMENT PERIOD MODIFICATION OF SECTIONS I to IV of NCG 275	Raises the operating standards of external auditing firms, with an emphasis on the technical qualifications and independence of partners and participants.
28-10-2013	SVS	PUBLIC COMMENTARY REGULATIONS TO SUPPLEMENT THE LISTING OF FOREIGN SECURITIES IN CHILE	Facilitates the underwriting of foreign securities listings in the SVS registry, by the administrators. Strengthens the role of stock brokers and securities agents in the foreign securities market.
		MODIFICATION OF NCGS 215, 240 and SUPPLEMENT TO NCG 352	Expands the markets in which foreign securities transactions can be carried out.
29-10-2013	SVS	PUBLIC COMMENTARY REGULATION TO RAISE THE STANDARDS OF STOCK BROKERS IN TERMS OF THEIR CLIENT RELATIONS	Raises standards on conflicts of interest, investor profiles and transaction registration, thereby regulating the actions of stock brokers and securities agents in terms of their client regulations.

TABLE V.3
List of documents reviewed

Document	Title	Organization	Solvency / Liquidity	Infrastructure/ Transparency	Resolution	Risk mgmt../ Governance	Shadow Banking
1/	Revised Basel III leverage ratio framework and disclosure requirements - consultative document	BIS	x	x			
2/	Capital treatment of bank exposures to central counterparties - consultative document	BIS	x			x	
3/	The non-internal model method for capitalising counterparty credit risk exposures - consultative document	BIS	x				
4/	Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement	BIS	x				
5/	Capital requirements for banks' equity investments in funds - consultative document	BIS	x				
6/	Liquidity coverage ratio disclosure standards - consultative document	BIS	x	x			
7/	Margin requirements for non-centrally cleared derivatives - final document	BIS	x				
8/	Recovery of financial market infrastructures - consultative report	BIS		x	x	x	
11/	Authorities' access to trade repository data	BIS		x			
12/	Public quantitative disclosure standards for central counterparties - consultative report	BIS		x			
13/	Interim Peer Review of the FSB Principles for Reducing Reliance on CRA Ratings	FSB		x		x	
14/	Guidance on Identification of Critical Functions and Critical Shared Services	FSB			x		
15/	Guidance on Recovery Triggers and Stress Scenarios	FSB			x		
16/	Guidance on Developing Effective Resolution Strategies	FSB			x		
17/	Consultative Document: Information sharing for resolution purposes	FSB			x		
18/	Consultative Document: Application of the Key Attributes of effective resolution regimes to non-bank financial institutions	FSB			x x		
19/	Consultative Document: Assessment Methodology for Key Atttributes of effective resolution Regimes for Financial Institutions	FSB					
20/	Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities	FSB					x
21/	Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos	FSB					x

Source: Website of each institution.

BOX V.I FINANCIAL CONGLOMERATES IN CHILE

In general terms, a financial conglomerate is *any group of companies that is controlled by a single managing company or dominant influence, including a financial holding company, and that has material financial assets in at least two of the regulated financial sectors (banking, insurance and securities)*[1]/.

In Chile, financial conglomerates can also involve pension fund administrators (AFPs), which thus represent another regulated activity that must be added to the general internationally accepted definition given above. Mixed conglomerates, which comprise both financial and nonfinancial companies, are another important actor in the local financial context.

Main considerations

The advantages of conglomerates have to do with the existence of economies of scale and scope in the different sectors of the financial industry. There are potential efficiency gains, in terms of cost reduction and innovation in financial products and services, which can translate into lower prices for the financial consumer. There is also the possibility of diversifying the sources of return and risk of individual firms by creating a broad portfolio of products and services for the conglomerate supply.

These advantages, together with competitive pressures and client needs, have fostered the formation of conglomerates. However, empirical evidence shows that this type of advantage does not necessarily materialize, and the market often applies a discount in the valuation of firms belonging to this type of structure[2]/.

Independent of whether the potential benefits of financial conglomerates are realized and to what extent, their presence creates space for different sources of risk that could affect the stability of the financial system as a whole.

These vulnerabilities include problems of transparency, which weaken the position of market participants and supervisors to evaluate the risk profile of the group and of the individual companies therein; the risk of contagion from financial problems, which is reinforced by this type of operation, even in the absence of cross-exposure; the presence of conflicts of interest at the level of the board of directors or upper management, which may be reflected in transactions within the group that adversely affect the regulated entities within the conglomerate; regulatory arbitrage, when certain operations are channeled through the entity with the lowest regulatory costs, which is not necessarily optimal from the perspective of financial stability or traditional prudential regulation; and the possibility of different forms of moral risk, such as organizations considered too big to fail[3]/.

These vulnerabilities present a risk to financial stability, especially when they are transmitted to the regulated entities within the conglomerate, in particular the banks.

Regulatory and supervisory schemes

Given the sources of risk, at the international level a number of regulatory and supervisory schemes have been developed to address the problematic of financial conglomerates in different ways. These schemes are built around the institutional design and legal framework of supervision.

The institutional design of supervisors can be sectoral or integrated[4]/. Under sectoral supervision, specific authorities are defined by sector, whereas the integrated scheme features a single supervisory body for the entire financial industry.

The leaders in integrated supervision were Norway (1986), Denmark (1988), Sweden (1991) and the United Kingdom (1997). Many countries followed this trend: between 2002 and 2008, the number of countries with a single supervisor rose from 22 to 37, including 13 countries where the central bank acts as supervisor[5]/. There is no definitive consensus on this issue, however, in that some important jurisdictions have adopted different models. For example, the United States has a sectoral scheme, and several countries have adopted intermediate versions with a partial degree of integration of the supervisory

1/ Joint Forum (2012).
2/ Schmid and Walter (2009); Leaven and Levine (2007).
3/ Dierick (2004); MacDonald (1998).
4/ A related discussion involves supervision by objective; see box VI.1, *Financial Stability Report*, First Half 2011.
5/ Luna and Rose (2003); Reserve Bank of India (2008).

function: Belgium and Canada have a supervisor for banks and insurance; Peru has an entity in charge of supervising banks, insurance and pension funds.

The legal framework of supervision can be based on either a "silo" model or a consolidated model. Supervisory silos are usually combined with a sectoral institutional design, although some systems use partial supervisors or a single integrated supervisor. There are also different ways to implement consolidated supervision. One alternative is to establish an integrated authority, but there are also consolidated supervision schemes based on sectoral institutional designs, such as the lead supervisor model and the umbrella supervisor model. Under the lead supervisor model, the conglomerate is supervised by each of the sectoral supervisors, one of which takes on a coordinating role and to this end is vested with specific legal faculties. An example is the United Kingdom, where the Bank of England assumes the role of leader. Under the umbrella model, a separate supervisory body oversees the sectoral authorities, with specific faculties and functions for supervising conglomerates directly. This is the case in the United States, where the Federal Reserve Board is responsible for consolidated supervision.

Conglomerates in Chile

In Chile, conglomerates have a strong presence in the financial system, as noted by the IMF and the OECD in their respective 2011 reports[6]/.

Most of the main conglomerates have operations in the banking sector, and in some cases the commercial bank is the most important institution in the conglomerate (table V.4)[7]/.

The 15 main conglomerates, by size, in the financial sector account for 83% of the banking system's assets, 72% of the pension funds, 58% of insurance company assets and 77% of the nonbank credit card portfolio. Finally, some of the main financial conglomerates in Chile are constituents of mixed economic

TABLE V.4
Sectoral composition of the main conglomerates, December 2011 (1)
(percent assets; US$ billion)

Conglomerate		Bank	AFP	Insurance	Other financial	Cards (2)	Nonfinancial (3)	Total (US$ billion)
(US$ billion)	F,I	29.2	66.8	0.8	3.2	0.0	0.0	59
2	F,I	98.5	0.0	0.2	1.3	0.0	0.0	51
3	M	90.0	0.0	0.5	2.7	0.0	6.8	49
4	F	95.3	0.0	2.0	2.8	0.0	0.0	33
5	F	2.7	89.2	7.6	0.5	0.0	0.0	31
6	F	0.0	97.2	2.7	0.0	0.0	0.0	31
7	M,I	59.7	0.0	24.1	2.7	0.0	13.6	30
8	F,I	99.4	0.0	0.3	0.3	0.0	0.0	11
9	M	16.7	0.0	8.7	0.7	0.0	73.9	43
10	F	77.8	0.0	16.3	5.8	0.0	0.0	10
11	F,I	97.4	0.0	1.0	1.6	0.0	0.0	9
12	F	17.5	0.0	79.7	2.9	0.0	0.0	9
13	M,I	16.1	0.0	0.4	0.0	13.6	70.0	15
14	M,I	2.6	0.0	0.3	0.0	6.2	90.9	15
15	M,I	14.0	0.0	1.1	0.0	23.2	61.8	3
Total/Sector (4)		82.6	71.5	57.8	17.1 (5)	77.2		

(1) Ordered by total assets in the financial sector.
(2) Nonbank credit cards. Total portfolio of nonbank credit card issuers registered with the SBIF.
(3) Net of credit card portfolio.
(4) Share of the 15 main conglomerates over total assets, by sector.
(5) Share over total assets of the securities market.
F= Financial conglomerate; M=Mixed conglomerate.
I=Conglomerate with an international presence.
Source: Central Bank of Chile, based on data from the SBIF, SVS, SP and FECU.

6/ IMF (2011a); OECD (2011)
7/ Stephanou (2005) provides a detailed description of financial conglomerates in Chile, using data through 2003.

groups, and the local market includes financial conglomerates with an international scope, whether through foreign groups with a presence in Chile or through Chilean parent companies with a presence overseas.

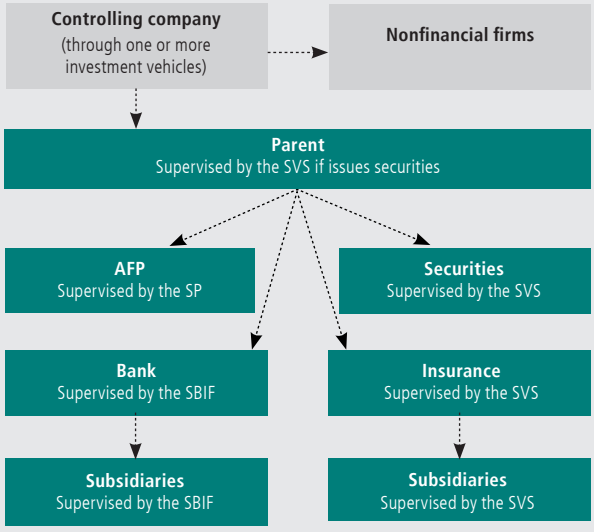
Regulation and supervision in Chile

The system of financial regulation and supervision that has been developed in Chile is essentially a silo model, based on a sectoral institutional design, with integration in supervision of securities and insurance. Thus, the Superintendence of Banks and Financial Institutions (SBIF) has supervisory authority over the banking sector, subsidiaries of banking entities, nonbank issuers of credit cards and a subset of cooperatives; the Superintendence of Securities and Insurance (SVS) supervises the insurance and securities sectors; and Superintendence of Pensions (SP) supervises the pension and unemployment insurance industry (table V.5).

This design incorporates strict legal or regulatory barriers to address the problematic of financial conglomerates. These barriers involve prudential restrictions on the permissible activities for each type of broker, limits on ownership of other companies, exposure or investment limits (both individual and combined for related parties) and corporate governance requirements. For example, Article 69 of the General Banking Law specifies the permissible activities for banks established in Chile; while Article 27 of the Securities Market Law establishes the operations that can be carried out by stock brokers. Article 96 of the Securities Market Law defines a related party for the purposes of exposure limits, which are applicable to both insurance companies and pension funds. These firewalls limit each company's exposure to risk from non-core business, reducing the opportunities for cross-leveraging and possible regulatory arbitrage and mitigating the risk of contagion with the conglomerate.

Historically, there have been instances of cooperation between the supervisors. In the 1990s, there was a Capital Market Committee that served to coordinate the financial policy agenda, albeit informally. In 2001 the Committee of Superintendents was created as a coordinating body for the sectoral supervisors. Like the Capital Market Committee before it, the Committee of Superintendents invites representatives of the Central Bank of Chile to participate, and it has created a space for effective regulatory coordination and the sharing of experiences. Thus, the MKII reform modified Article 18 of the General Banking Law to allow the Capital Market Superintendents (SBIF, SVS and SP) to share any information that is not subject to banking secrecy. Finally, the Financial Stability Board (FSB) was created in 2011 to provide a higher level of coordination among the supervisors. The members of the FSB are the Minister of Finance, the Superintendent of Securities and Insurance, the Superintendent of Banks and Financial Institutions and the Superintendent of Pensions. In addition, the Central Bank acts as a permanent consultant to the FSB on all matters related to its functions, and to this end the Governor of the Bank participates on the Board as a guest.

TABLE V.5
Structure of local conglomerates



Source: Central Bank of Chile.

Pending challenges

While Chile's sectoral supervisory system has historically functioned well, it is important to explore possibilities for strengthening the system, especially if the financial industry continues its trend toward increasing integration. In this sense, there are at least three alternatives for improving supervision[8]/.

The first option for strengthening financial supervision in jurisdictions with sectoral schemes is to transition toward consolidated supervision. This alternative, which implies structural changes at the legal level, is recommended by international organizations such as the BIS[9]/. However, the last financial crisis highlighted the complexity of implementing a consolidated supervisory system, as illustrated by the management problems experienced by the Financial Services Authority (FSA) in the United Kingdom.

A second option would be to strengthen the existing limits and restrictions so as to more efficiently contain the risks inherent to each sector within the financial conglomerates, but without creating obstacles for market development. However, the structural weaknesses of compartmentalized supervision would in all likelihood continue to be present, despite any advances along these lines.

A third alternative, which would complement sectoral supervision and thus would not require a structural change in the institutional structure of financial regulation and supervision in Chile, would be to limit the corporate structuring of the conglomerates. This scheme is being applied in the United States through the Gramm-Leach-Bliley Act governing financial holding companies.

The introduction of this type of limitation or requirement would contribute to establishing the stipulation that in a mixed conglomerate, the financial institutions must be completely separated from firms in the real sector, while all companies operating in a given financial business line (banking, insurance, securities, pensions, etc.) must also be separated from each other. These conditions have the advantage of reducing the complexity of corporate structures and improving the possibility for effective supervision, while avoiding the high costs of adjustment that would arise from drastically changing the financial supervision scheme in Chile.

8/ IMF (2004, 2011b).
9/ BIS (2012).

VI. PAYMENT SYSTEM

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

LARGE-VALUE PAYMENT SYSTEMS

The average daily settlements of the large-value payment systems (LVPS) have grown gradually over time.

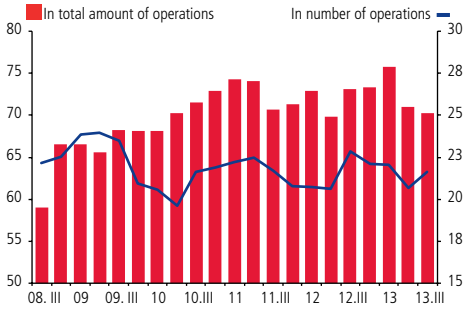
Since 2010, the share of the real-time gross settlement (RTGS) system[1]/ has averaged around 70% (figure VI.1). In the third quarter of 2013, the average daily payments cleared in the LVPS exceeded $13.4 trillion; this represents an increase of almost 30% since the third quarter of 2010 (table VI.1). A large share of the payments settled in the RTGS system are for Central Bank operations, which have recorded a stable trend over the years. Nevertheless, there have been sporadic episodes of growth above the average, mainly due to greater use of liquidity management tools—specifically, the standing deposit facility. This pattern is most often seen at the end of each year, when the banks' annual closing results in a sharp increase in liquidity balances (figure VI.2).

Starting in 2013, there was a change in trend in processing payments from the securities market.

Payments originating in the OTC securities market continue to show a growth trend. In the last quarter, the increase in the amounts settled from the Santiago Stock Exchange and the Chilean Electronic Stock Exchange stimulated transfers between banks due to client and broker transactions, with a direct impact on the increase in total OTC payments. In addition, some banks are operating near their multilateral limit in the large-value payment clearing house, so some of their payments are channeled through the RTGS system. Consequently, starting in the first quarter of 2013, the RTGS system processed more payments than the large-value payment clearing house system (*Combanc S.A.*) (figure VI.3).

[1]/ For details on the functioning of the RTGS system, see Central Bank of Chile (2012).

FIGURE VI.1
Share of the RTGS system in the large-value payment systems
(percent)



Sources: Central Bank of Chile and *Combanc*.

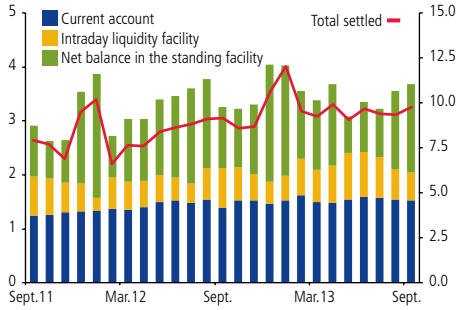
TABLE VI.1
Amounts cleared and processed in the large-value systems. (1)
(Ch$ billion)

	Third quarter	
	2010	2013
Payments settled in the RTGS	**7,479**	**9,485**
Interbank	2,348	4,515
Own account	871	1,623
Client account	698	1,418
Securities markets, CCLV (2)	403	428
Securities market, non-CCLV	375	1,046
Clearing houses (net)	318	317
Checks	98	59
ATMs	18	16
Combanc	520	241
Central Bank of Chile	4,813	4,653
Payments processed by *Combanc*	**2,993**	**4,012**
Own account	796	915
Client account	1,654	2,056
Securities market, non-CCLV	542	1,040

(1) Daily averages for each quarter.
(2) Trough August 2010, the data are from CCLV, the old securities clearinghouse.

Sources: Central Bank of Chile, *Combanc* and SVS.

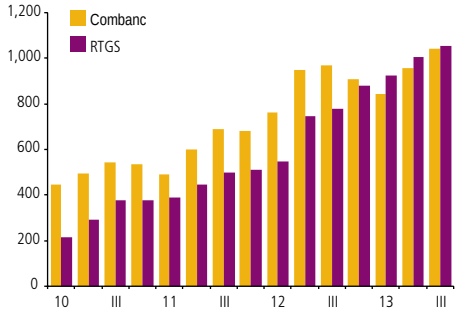
FIGURE VI.2
Liquidity in the RTGS system (*)
(Ch$ trillion)



(*) Monthly daily average.

Source: Central Bank of Chile.

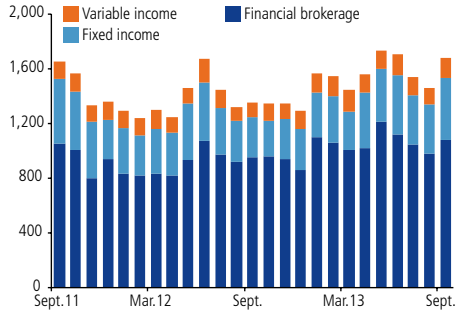
FIGURE VI.3
Settlement systems for securities market transactions (*)
(Ch$ billion)



(*) Quarterly averages.

Source: Central Bank of Chile.

FIGURE VI.4
Amounts processed in the CCLV by type of instrument (*)
(Ch$ billion)



(*) Daily averages.

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

FINANCIAL INFRASTRUCTURE

New instruments were incorporated into the securities clearing and settlement process through the CCLV.

In October 2013, following a favorable report by the Central Bank, the SVS authorized changes in the operating rules[2]/ of the Securities Clearing House (CCLV) to allow the clearing and settlement of a set of derivative instruments. This change is part of a gradual process of incorporating financial instruments in the CCLV, in an effort to provide a more robust financial infrastructure. In 2010, Law 20,345[3]/ authorized the CCLV to act as a clearing house for financial brokerage and fixed-income operations and as a central counterparty for variable-income operations; this authorization was extended to exchange-traded funds (ETFs) in 2012 (figure VI.4).

These changes are important steps in the ongoing process of modernizing the large-value payment systems, which began in 2004 with the introduction of the RTGS system.

Safeguards for derivatives clearing and settlement

The changes in the CCLV operating rules allow the clearing house to act as a central counterparty for the Derivatives Exchange, as it is known in the industry. It is also authorized to clear certain OTC instruments.

The safeguards for the clearing and settlement of derivatives through the CCLV, as laid out in the operating rules, are similar to those in effect for the variable-income central counterparty. The minimum requirements for clearing agents include operating capital and liquidity requirements[4]/ and are additive to the extent that they are applied to both variable-income and derivative instruments.

The guarantees required from agents are constituted with the objective of covering potential losses from operations, and the guarantee fund with the objective of covering extreme but plausible losses[5]/. Finally, clearing agents must have lines of credit dedicated to complying with the liquidity requirements on the amounts of derivatives cleared and settled, over and above the requirements for variable-income operations.

With regard to the CCLV safeguards, the Reserve Fund was increased to reflect potential losses from derivatives transactions (with a minimum increase of UF25,000) and the amounts of derivatives traded were incorporated into the required credit line amounts. Moreover, the operating rules specify the guidelines and procedures for the proper management of the risks arising from business operations.

[2]/ The operating rules regulate the incorporation of participants and their operations. They are issued by the CCLV and subject to approval by the SVS, pursuant to a favorable report from the Central Bank on issues within its area of competence.
[3]/ See the *Financial Stability Report*, Second Half 2010, for a discussion of its implementation.
[4]/ The amount is higher in the equity requirement for derivatives operations.
[5]/ Both are calculated analogously to the requirements for variable-income operations.

In comparison with variable-income operations, the main differences in the safeguards are the inclusion of following concentration limits: on stock exchange derivatives; by clearing agent/indirect clearing agent; by end client; on intraday risk; on price fluctuations; and on open contracts. The clearing and settlement model for stock exchange derivatives also includes the daily settlement of net balances to reduce the system's risk exposure.

Another benefit of this type of infrastructure, often mentioned in the international debate, is increased transparency, which facilitates the development of trade repositories. The existence of a trade repository can help investors correctly measure their exposures and improve the supervisory capacity of the regulators. Therefore, under the operating rules, the CCLV must develop a Trade Repository that includes both exchange-traded and OTC derivatives that are cleared and settled through the central counterparty. This Repository will include key contract information, such as the counterparty, maturity, type of product, prices, etc., which will be reported in detail to the regulators (mainly the SVS) and published on aggregate on a website that is open to the public and investors.

The benefits of using a central counterparty for clearing and settlement, such as the reduction of systemic risk and the increase in the robustness of the payment system, are only effective to the extent that there are appropriate prudential safeguards and adequate supervision. The CCLV operating model for derivative operations includes a detailed transaction log, to which the SVS has access, which will be an important tool for supervision. The public will have access to an aggregate transaction log, to promote transparency and market discipline.

Finally, important regulatory developments are underway at the international level to ensure compliance with the G20 commitment to use a central counterparty for the clearing and settlement of all sufficiently standardized OTC derivatives. The changes in the local market point in this direction. However, as discussed in chapter V, it is important to monitor how this commitment is implemented at the international level, especially with regard to potential cross-border effects.

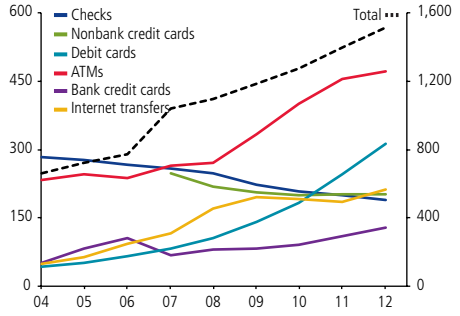
RETAIL PAYMENT SYSTEMS

Over the last decade, the use of different retail payment instruments has grown steadily.

On aggregate, the annual number of retail payment transactions grew continuously between 2004 and 2012. Behind this aggregate trend, there are important differences among the different payment instruments. Debit cards and automated teller machines (ATMs) recorded the fastest growth. Internet transfers grew sharply early in the period but then stabilized after 2009. Bank credit cards posted moderate growth, following a short-lived decline in 2007. In contrast, the use of checks (personal and business) showed a decreasing trend, which was also seen at the international level. The use of nonbank credit cards has also declined since 2007 (figure VI.5)[6]/

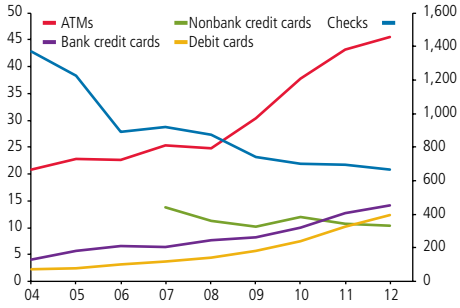
[6]/ Data on nonbank credit cards are not available before 2007. Information on nonbank credit card transactions only became available starting in 2007, with the entry into force of Chapter III.J.1 of the *Compendium of Financial Regulations* issued by the Central Bank of Chile and SBIF Administrative Directive 17.

FIGURE VI.5
Retail payment instruments
(millions of transactions)



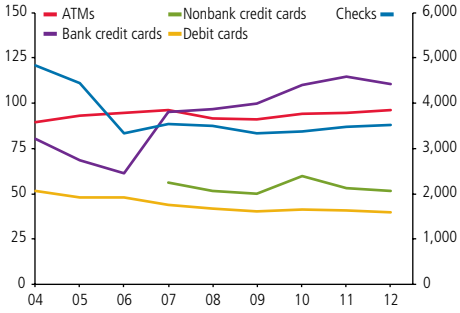
Source: Central Bank of Chile, based on data from the SBIF.

FIGURE VI.6
Retail payment instruments
(transaction value in billions of real 2012 dollars)



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

FIGURE VI.7
Retail payment instruments
(average transaction amount in real 2012 dollars)



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

In terms of amounts, the different retail payment instruments reflect the same trends described above (figure VI.6). Finally, the average annual amount of transactions has been relatively stable for all the different payment instruments (figure VI.7).

The association of nonbank credit card issuers and banks

Two important nonbank credit card issuers have announced changes in the ownership of their administrators, which will be controlled by banking entities, subject to approval by the SBIF (and in one case by regulators in other countries).

The participation of banks in this business is not unusual. In several countries, this business activity is carried out by, or in conjunction with, a bank. For example, in Australia, Brazil, India, and Mexico and the United States, retail credit cards are promoted as being associated with a retail company, but for operating and regulatory purposes, they are bank cards. In Peru, the credit business of Chilean retail companies with a presence there is conducted by the banking institution within the respective conglomerate. In contrast, France, Spain and Thailand use a scheme similar to the one in Chile, in which nonbank cards can be used as "open" payment instruments and the issuers are subject to regulatory requirements such as minimum capital requirements, risk management, etc.

In the case of the two issuers that are implementing changes, the association with banking institutions is consistent with the way they operate their business in other countries in the region. While idiosyncratic factors could be at work, both issuers stress that the benefits of these initiatives include the possibility of boosting their financial business by offering more services to their clients, while at the same time reallocating the financial resources used to finance the credit portfolios to other business areas. In one of the cases, the credit portfolio will be financed by the bank; in the other, the integration of the financial business will free up capital for the controlling group.

These changes in business strategy cannot be attributed solely to the new regulatory scheme governing nonbank issuers (see the last *Financial Stability Report*). While banks are subject to more stringent prudential and risk management requirements, the increased requirements of the new regulatory scheme narrow the gap between bank and nonbank issuers. However, internal estimates indicate that the majority of nonbank issuers should not have any problem complying with the new capital and liquidity requirements.

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GLOSSARY

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

American Depositary Receipts (ADRs): A negotiable security that is backed by shares of a company established outside the United States, which are deposited in a U.S. bank. Foreign shares do not trade directly in the U.S. market, but rather are represented by ADRs, which do trade freely in that market as equivalent to the actual shares.

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.

Basis point: Unit of measure of the volatility of a bond that is traded in financial markets, equal to one one-hundredth of one percent (0.01%).

Capital inflows: See gross capital inflows.

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

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

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

Commercial papers: Documents issued by corporations specially authorized by the Superintendence of Securities and Insurance (SVS), with the goal of attracting funds directly from the public to finance the short-term operations of the issuer (working capital).

Consumer divisions: Bank units oriented to a specific segment or group of the parent bank's clients, generally a lower-income segment. Several of these divisions are heirs to the old finance corporations.

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

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

Credit default swap (CDS): A derivative instrument that provides insurance against the credit risk of an underlying sovereign or corporate bond. The institution

that issues the CDS commits to covering the loss associated with a specified credit event before the bond maturity date.

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

Currency carry trade: An investment strategy in which an investor contracts debt in one currency at a low interest rate and invests the funds in instruments denominated in a different currency yielding a higher interest rate. When the instrument matures, the investor converts the funds into the original currency to pay off the debt.

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.

Deleveraging: Reduction in the leverage ratio, defined as liabilities over equity.

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

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

EMBI (Emerging Market Bond Index) spread: The most commonly used measure of an economy's risk. The difference between the return on a country's sovereign debt in dollars issued in international markets and U.S. Treasury bonds.

ESSF: *Economic and Social Stabilization Fund* (F*ondo de Estabilización Económica y Social, or FEES*). Created in 2007 by Statutory Decree N° 1, of 2006 issued by the Finance Ministry. The Fund's objective is to accumulate the surplus flows that are generated by the application of the structural balance rule, and it will serve as a source of financing in future deficit periods.

External debt: Includes bank debt, bonds and other overseas loans, as well as loans associated with foreign direct investment.

Factoring: A financing option oriented toward small and medium-sized enterprises, which allows such firms to obtain liquidity by selling or assigning their accounts receivable. The receivables are usually made up of invoices, checks and bills. The firm receives a cash advance in exchange for transferring the right to collect payment on the accounts to the factor, which could be either a bank or a specialized firm called a factoring company.

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

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

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

Forward: A contract between two parties, establishing a commitment to exchange a certain quantity of an asset on a future date, at a predetermined price.

Global depositary notes (GDN): A debt security created by a depositary bank, which establishes ownership of a debt instrument denominated in local currency. GDNs emulate the terms (interest rate, maturity date, credit quality, etc.) of a particular bond denominated in local currency. However, they are traded, settled and pay interest and amortization in U.S. dollars, and they are eligible to be settled and held in custody via Euroclear, Clearstream or DTC.

Gross capital inflows: Net purchases of domestic assets by nonresidents.

High grade: Generic name for low-risk bonds with a high credit rating. Their credit rating fluctuates between AAA and AA– (S&P Ratings).

High yield: Generic name for bonds with a low credit rating, corresponding to higher risk, which therefore offer a high return rate.

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

Institutional investors: The Securities Market Law defines institutional investors as banks, financial corporations, insurance companies, national reinsurance companies and legally authorized fund administrators.

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.

***IPSA*:** Selective Stock Price Index (*Índice de Precios Selectivo de Acciones*). An index of the 40 most traded shares on the Chilean stock market during the year.

Leasing: A contract through which a natural or legal person (the lessor) transfers to another (the lessee) the right to use a physical good in exchange for some compensation, usually a periodic payment for a specified period, at the end of which the lessee has the option to buy the good, return it, or renew the contract.

Leverage: Measured as the banks' debt 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.

Low for long: A term used to describe the risk that central bank rates will remain low for a long period.

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.

MPR: Monetary policy rate. The objective level for the nominal interbank interest rate, through which the Central Bank of Chile implements its monetary policy.

MSCI Index: An index created by Morgan Stanley Capital International to measure the stock market performance of different regions worldwide.

Multibanks, large: Banks with a large market share and a high degree of diversification in their operations (loans and derivative and nonderivative financial instruments).

Multibanks, medium-sized: Banks with a smaller market share than large multibanks, but as much diversification.

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

NIIP: Net international investment position. The difference between the economy's external assets and liabilities.

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

Nonresident investors: Natural or legal persons who invest in Chile but who do not have either domicile or residency in the country.

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

Offshore bonds: Bonds that are traded outside the territory of residence.

Onshore dollar rate: Estimate of the external rate relevant to the national foreign exchange market, which is, in general terms, derived from the covered interest rate parity.

Onshore dollar spread: The difference between the onshore rate and the Libor. It is therefore a proxy for the cost of financing in dollars in the national market vis-à-vis the international market.

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.

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.

Percentage point: Unit of measure equal to one out of a hundred, or 1% out of 100%.

Peripheral Europe: A term referring to the countries of the Eurozone that have experienced fiscal difficulties following the subprime crisis and that signed fiscal deficit agreements with the European Commission in 2010, through 2020. Specifically, the term encompasses Greece, Ireland, Italy, Portugal and Spain.

PRF: Pension Reserve Fund (*Fondo de Reserva de Pensiones*, or *FRP*). A fund created in 2006 under the Pension Reform, whose objective is to complement the financing of fiscal liabilities deriving from the state minimum pension guarantee on old age, disability, and survivor's pensions and welfare benefits. It thus complements the financing of future contingencies related to pensions.

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

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

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

QE: Quantitative easing. An unconventional monetary policy consisting in increasing the supply of money through the purchase of government, central bank or private assets in the market.

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).

Retail banks: Banks whose main business is consumer lending.

Retail companies: Companies whose main line of business consists in the mass commercialization of products or services. Their main distribution channels include commercial centers, supermarkets and so on.

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

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

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

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

Search for yield: An expression describing investors' tendency to seek out higher returns on their investments.

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

Sovereign bonds: Debt instruments issued by the government of a country in local or foreign currency. In the case of a foreign-currency-denominated sovereign bond, the selected currency generally corresponds to a more stable economy.

Standing deposit facility: *Facilidad Permanente de Depósito* (FPD). Operations through which the Central Bank contributes to banks' liquidity management by accepting deposits. The deposits collect interest on the agreed maturity date, as established in the Central Bank's financial regulations.

Stress test: The use of scenarios combining large shocks and key macroeconomic variables (output, interest rates and the exchange rate) to assess the impact on the banking system of extreme scenarios with a low probability of occurrence.

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

Subprime: A loan segment of the U.S. financial market. They are loans (usually mortgages) granted to debtors whose characteristics and payment history are below the average standards of the banking industry, such that they present a greater default risk than the average for other loans. The loans granted to debtors that satisfy the average standards of the banking industry are called prime.

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

Tier 1 capital: Paid-in capital plus bank reserves and period earnings, net of provisions for the distribution of dividends.

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

Trade repository: A central registry of transactions, with information at the individual contract level, whether cleared through bilateral or centralized settlement.

Trading: Net earnings from financial operations and foreign exchange transactions.

Treasury banks: Banks that are dedicated to investment in derivative and nonderivative financial instruments and that do not have loans.

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

ABBREVIATIONS

Achef: *Asociación Chilena de Empresas de Factoring* (Association of Chilean Factoring Firms).
ADR: American depositary receipt.
AFP: *Administradoras de Fondos de Pensiones* (Pension fund administrators).
BCS: *Bolsa de Comercio de Santiago* (Santiago Stock Exchange).
BCU: Central Bank bonds denominated in UFs.
BIS: Bank for International Settlements.
BP: Basis points.
CDS: Credit default swap.
CSD: Central Securities Depository.
ECB: European Central Bank.
EMBI: Emerging Market Bond Index.
ESSF: Economic and Social Stabilization Fund.
EU: European Union.
FDI: Foreign direct investment.
Fed: United States Federal Reserve.
FSR: Financial Stability Report.
FTD: Fixed-term deposit.
GDN: Global depositary notes.
GDP: Gross domestic product.
IMF: International Monetary Fund.
IPSA: *Índice de Precios Selectivo de Acciones* (Selective Stock Price Index).
MPR: Monetary Policy Report.
MSCI: Morgan Stanley Capital International.
NIIP: Net international investment position.
OECD: Organization for Economic Cooperation and Development.
PF: Pension funds.
PP: Percentage points.
PRF: Pension Reserve Fund.
QE: Quantitative easing.
RSTED: Residual short-term external debt.
SBIF: Superintendencia de Bancos e Instituciones Financieras (Superintendence of Banks and Financial Institutions).
SII: *Servicio de Impuestos Internos* (Internal Revenue Service).
SMEs: Small and medium-sized enterprises.
SOE: Small open economies.
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.
USA: United States of America.
USD: United States dollar
VIX: Volatility Index.

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